SSLA, **25**, 245–281. Printed in the United States of America.
DOI: 10.1017.S0272263103000111

THE TENSE-ASPECT SYSTEM IN PIDGINS AND NATURALISTICALLY LEARNED L2

J. Clancy Clements
Indiana University

The advantages and disadvantages of wider or narrower definitions of *pidginization* and *pidgin* are reviewed to determine the differences between pidgins and naturalistically learned second languages (L2s). It is argued that a wider definition is preferred because it avoids problematic counterexamples and captures generalizations that allow us to view the difference between naturalistic L2 varieties and pidgins as one of degree, not of type. In first language (L1) acquisition, Bates and Goodman (1999) showed the link between the development of vocabulary and grammar and argued that this may be explained by, among other things, logical and perceptual bootstrapping. It is suggested that these types of bootstrapping are also relevant for explaining the pace of grammar development in pidgins and naturalistic L2 varieties. The tense-aspect system of a Spanish variety spoken by a Chinese immigrant in Spain is examined in detail. The data, taken from a 90-minute interview that yielded 602 tokens, reveal several clear traits of the informant's verbal system: (a) All nonfinite, imperfective verb forms (gerunds) correspond exclusively to Vendlerian activities; (b) all but three of the perfective nonfinite forms (past participles) correspond to telic verbs or predicates; and (c) 81% of the stative verbs appear in the third-person-singular present form. The sensitivity to aspectual distinctions in the informant's variety of Spanish is not addressed by logical and perceptual bootstrapping. Furthermore, although this sensitivity can be partially explained by language-specific considerations (i.e., transfer from Mandarin), such an

My sincere thanks to Jenny for her willingness to participate in this project, for giving her time and sharing her experiences with me, and to Shu-Yuan Chen and Jesús Martin Carabuig for their assistance in the data collection. Thanks also to Peter Patrick for his detailed comments on an earlier draft of this paper and to the anonymous *SSLA* reviewers whose comments, criticisms, and suggestions have made this paper much better. Thanks also to Tom Ernst for his help with the Mandarin Chinese examples and to Richa Clements for her help with the proofreading.

Address correspondence to: J. Clancy Clements, Department of Spanish and Portuguese, Ballantine Hall 844, Indiana University Bloomington, 1020 East Kirkwood Avenue, Bloomington, IN 47405–7103; e-mail: clements@indiana.edu.

© 2003 Cambridge University Press 0272-2631/03 $12.00

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

explanation does not speak to precise form–function mappings found, which are best accounted for by appealing to the Primacy of Aspect and Distributional Bias hypotheses (Andersen, 1993; Andersen & Shirai, 1996).

When one thinks of pidginization and pidgins, what often comes to mind is the image of plantation pidgins involving many languages in contact and people under the yoke of slavery. However, manuals on contact languages (e.g., Bakker, 1995; Holm, 1988, 1989; Mühlhäusler, 1986; Sebba, 1997) generally observe that pidgins also form in various other language contact situations, such as those involving interethnic and immigrant communities or trade and tourist situations. In the latter two situations there are also cases of naturally learned L2 varieties instead of pidgins (e.g., Hinnenkamp, 1984), and it is at times difficult to distinguish between pidgins on the one hand and naturally learned L2 varieties on the other (see Blackshire-Belay, 1991; Heidelberger Forschungsprojekt, 1975). As I shall demonstrate, whether a particular variety is labeled a pidgin or an L2 variety depends on the definitions employed. Using Hall's (1966) definition, for example, the linguistic system resulting from a day-long interaction between a tourist and a tourist guide can be a pidgin. By Bakker's definition, however, a pidgin must be stable, have its own rules, and be a language one can speak to varying degrees of perfection.

Interethnic situations can often be bi- or multilingual situations in which a variety of one of the languages emerges as the lingua franca. In this type of situation, the L2 variety or pidgin can develop alongside its lexifier—for example, the pidgin Hiri Motu (HM), spoken in Papua New Guinea (Dutton, 1997). In such interethnic contact situations, short-distance displacement may be implicit, whereas long-distance displacement of one or more groups (e.g., displacement of a population hundreds or even thousands of kilometers for purposes of labor) may, but need not, be part of the definition of the situation type.

Immigrant situations involving workers with or without their respective families are defined by, among other things, long-distance displacement of one or more groups of people who need or want to live and work in another place. With respect to trade and tourist situations, the manuals almost exclusively speak of trade situations—that is, situations in which traveling traders develop a communication system with peoples living in the areas they visit. Short- or long-distance displacement of one or more groups is implicit in the definition of this situation type. However, for a pidgin to develop, long-distance displacement is not obligatory.

To distinguish an L2 variety of a given language from a pidgin lexified by a given language, one can examine the structure of the linguistic systems, the circumstances in which they formed, or both. In defining a given contact variety as a naturally learned L2 or a pidgin, I argue that, ultimately, one cannot rely on structure but must base the appraisal on the manner in which it was

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

Table 1. Continua relevant to the formation and development of naturally learned L2s and pidgins

Age of speakers	younger ↔ older
Typology of languages in contact (component by component)	similar ↔ dissimilar
Hierarchy in the relation between TL speakers and learners	symmetrical ↔ asymmetrical
Attitudes of TL-learning community (community-internal barriers to learning TL)	none ↔ total
Attitudes of the TL-speaking community (community-external barriers to access to TL)	none ↔ total
Leveling of variation, through mutual accommodation, in the emerging linguistic system	individual ↔ communities-wide

Note. TL refers to the target language.

formed and is used. Moreover, I argue that the difference between natural L2 varieties and pidgins is one of degree and not of type.[1]

The criteria relevant for distinguishing an L2 variety from a pidgin are perhaps best conceived of as forming part of multiple continua such as those shown in Table 1. The age of a person influences how well he or she learns a language: Generally speaking, the older one is, the less able one is to simply "absorb" a language. For example, adult L2 learners typically find it more difficult to achieve nativelike performance in an L2 than children between 4 and 10 years of age. If the target language of a speaker is typologically very different from his or her L1, it will be more difficult to find L1-L2 correspondences. English speakers learning Spanish, for instance, struggle more with the preterite-imperfect distinction than do French speakers learning Spanish because French has the corresponding distinction. In a pidginization situation with typologically very distinct languages, one would expect the mutual linguistic accommodation to be less successful and the dependence on universal tendencies to be greater.

The asymmetrical social status between different communities in contact lessens the access to the dominant language by speakers of the nondominant language group. For example, this occurred in Turkish and Greek immigrant communities in Germany in the 1970s and 1980s in which adult members often were blue-collar workers who tended to live in semiclosed communities and thus had limited access to the dominant language. Attitudes from the dominant and nondominant communities, or both, may also isolate communities in a contact situation. For example, the attitude of the Chinese toward the British in the eighteenth and nineteenth centuries kept the British virtually isolated from the Cantonese language and culture (Shi, 1991). The attitude of Chinese immigrant communities in Europe often prevents their integration into the culture of the host country (see Beltrán & García, 2001). These contact situations will be subsequently discussed in more detail.

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

Table 2. Phases in the formation and development of a pidgin

Phases	Examples
Jargon	Jargons: Early Tok Pisin; Hall's (1966) hypothetical Italian tourist pidgin
Stabilization	Stable pidgins: Chinese Pidgin English; Hiri Motu
Expansion	Expanded pidgins: Tok Pisin; West African Pidgin English

Finally, in naturalistic L2 acquisition each speaker of the nondominant community may develop individual mappings from the source language to the target language. Some of these may correspond to the generally accepted mappings, whereas others may be innovations. If there are various innovations in a community for a given mapping from the source language to the target language, one of them may spread through the L2 variety of the nondominant language speakers, or there may be a compromise between different innovations (i.e., leveling). In this way, features can emerge that are part of the nondominant members' variety of the target language but not part of the target language as spoken by its native speakers (NSs).

To the extent that adult speakers of two or more communities, in a situation of relative isolation due to attitudinal factors and social asymmetry, are obliged to create a common language to communicate with one another, these communities over time will produce a linguistic system that will range from a naturally learned L2 to a pidgin, depending on the circumstances. Crucial for understanding the differences and similarities between naturally learned L2 varieties and pidgins is the examination of the definitions of pidginization and pidgin. The definitions vary, and in discussing them a distinction emerges between narrower versus wider definitions.

THE NOTIONS "PIDGINIZATION" AND "PIDGIN"

The Range of Definitions

Most creolists agree that the notion of a developmental continuum must be included in the definition of pidgin. Mühlhäusler (1974, p. 15, as cited in Romaine, 1988, p. 116) distinguished various stages in the continuum of pidgin formation and development, as shown in Table 2. For some, such as Bakker (1995), "a definition of a pidgin should include that it has to be learnt, that it has structural norms and therefore that people can speak a pidgin more or less well" (p. 26). For him, then, the minimal criterion for a pidgin is that it be stable. As important as this is for defining a pidgin, it is an endpoint of the complex process of pidginization, the nature of which we need to understand better.

Many scholars have linked pidginization, explicitly or implicitly, with simplification strategies and L2 learning (Bloomfield, 1933, p. 472; Clyne, 1968; Hall, 1966, p. 5; Jespersen, 1921/1964, p. 225; Schuchardt, 1909; Schumann,

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

1978, p. 110). Clyne and Schumann as well as Andersen (1983), Bickerton (1977), Sebba (1997), and Siegel (1999) have viewed pidginization as synonymous with the initial stages of L2 acquisition in general.

Mühlhäusler (1986, pp. 135–136) defined jargons as individual solutions to the problem of crosslinguistic communication that are subject to individual strategies, some of the most common being reanalysis of phrases as words, pragmatic structuring, grammaticalization by transfer, and universals. Pidgins, by contrast, have a variably stable linguistic system with developed, socially accepted norms. Expanded pidgins have an expanded lexicon and syntactic structure and are used in many to all areas of social interaction. These definitions presuppose, of course, two or more language groups involved in the creation of a language variety to communicate.

The pidginization process most often involves a target language in the contact situation (Bakker, 1995, p. 29), from which an evolving pidgin receives most or virtually all of its lexicon. There are different interpretations of the targeting process in pidginization. Ferguson and DeBose (1977, p. 111) described pidginization as "the rapid structural modification of a language in certain contact situations in which it serves both as the target of broken language and the source of foreigner talk." Foreigner talk of a language X is defined as a modified register of language X oriented toward nonnative speakers (NNSs) with whom language X NSs need to communicate. Broken language is defined as "learners' productions of a target language" (Ferguson & DeBose, p. 109). Implicit in this definition is that broken-language speakers employ language-learning strategies also found in other types of L2 acquisition. Following this definition of pidginization, immigrant language varieties such as *Gastarbeiterdeutsch* "guest-worker German" may be seen as a rapid modification of German in a contact situation involving German on the one hand and Turkish, Greek, Italian, Portuguese, or Spanish on the other. Such immigrant varieties could be classified as jargons or incipient pidgins. Researchers such as Blackshire-Belay (1991), however, have considered *Gastarbeiterdeutsch* to be not a pidgin but rather an instance of broken language, even though Turkish, Greek, Italian, Spanish, and Portuguese adult workers used it to communicate with Germans and among themselves in some situations.

The situation of *Gastarbeiterdeutsch* is comparable in type but not in degree to one situation in Sweden in which foreign workers are reported to have developed a variety of Swedish to communicate among themselves, which they maintained even after they had learned standard colloquial Swedish (Kotsinas, 1988a, 1988b, cited in Bakker, 1995, p. 26). In terms of the continua in Table 1, the varieties of German and Swedish developed by the foreign workers to speak to NSs of German and Swedish as well as among themselves are comparable sociolinguistically. From a linguistic perspective, the two varieties are also comparable in many respects: Both exhibit a null copula, strongly reduced to nonexistent affixal marking for tense-aspect distinctions, multipurpose prepositions, and omission of auxiliaries and personal pronouns in cases where they are obligatory in German and Swedish (Blackshire-Belay, 1991; Kotsinas,

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

1989, 1996). Assuming a narrower definition such as Bakker's, foreign-worker Swedish is a pidgin and foreign-worker German is not. However, on the basis of a wider definition, such as Hall (1966), both would be categorized as pidgins.

Some researchers, such as Baker (1999), have viewed the pidginization process (with or without a target language) as fundamentally different from L2 acquisition. Baker stated:

> The fundamental difference is surely that pidgins result initially from the efforts of two (or more) parties to construct a means of intercommunication. They are the result of bilateral or multilateral efforts to intercommunicate. Only in contact situations where members of group A (groups A, B, C . . .) aim to acquire (sufficient of) the language of another group (T) to enable them to communicate with group T AND where members of group T make no effort to acquire anything of the language(s) of group(s) A (B, C . . .) are we dealing with SLA (as I see things). I am not aware that the latter situation ever produced a pidgin anywhere. To the best of my knowledge, ALL Pidgins were initially the result of bilateral or multilateral efforts to construct a means of intercommunication. (emphasis in original)

I argue that wider definitions of pidginization and pidgin allow us to capture certain generalizations that these processes have in common with those found in SLA. Moreover, wider definitions also enable us to avoid certain counterexamples, one of which will now be examined in detail.

Counterexample to the Narrower Definitions: Hiri Motu

Whereas the previously mentioned immigrant varieties of Swedish and German reveal some of the difficulties in defining pidginization and pidgins, another example—involving a language considered to be a bona fide pidgin in the literature—offers additional evidence of the dangers of defining too restrictively the process and result of pidginization. The case of HM demonstrates that pidginization can take place in a variety of ways and is thus better characterized by a wider rather than a narrower definition.[2]

A pidgin spoken in Papua New Guinea, HM emerged in a multilingual situation as a lingua franca alongside Motu, one of the languages of that area. Dutton (1997) made a solid case for the argument that HM

> most probably developed out of a special variety or register of Motu used by the Motu in talking to those who came to visit or trade with them in their own area, whether from linguistically unrelated areas or not. The variety was a simplified form of Motu, a kind of Motu Foreigner Talk, that was . . . taken up, used, and spread in a revised form by members of the first police force and others in British New Guinea, as Papua was called then, from the 1880s onwards. (p. 11)

Dutton added:

> Because of its wide distribution it comes as no surprise to find that there is no such thing as standard HM. Instead it exists as a series of varieties

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

> (distinguishable chiefly by their sound systems and vocabulary) representing varying degrees of difference within two dialects—a Central one and a non-Central one. (pp. 11–12)

HM's phonology is variable, depending on the phonologies of the L1s of its speakers. Regarding morphosyntax, Dutton (1997) examined 20 HM features, comparing them to corresponding features of four other language contact varieties, one of which is Motu simplified by NSs of Motu (i.e., Motu Foreigner Talk). Of the 20 features, there are only 4 that distinguish HM from Motu Foreigner Talk (see Appendix A). All but one of them—the reanalysis of *gwauraia* from a marker of intention to a marker of completed, continuous, and intentive or inceptive aspect—are easily derivable from universal principles of simplification, although Dutton pointed out that there is insufficient evidence to determine whether these four features are the result of contact-induced change, principles of simplification, or a mixture of both (p. 28). Nevertheless, it seems reasonable to accept Dutton's proposal that HM is a slightly modified version of Motu Foreigner Talk (with some non-Motu elements) developed by Motu speakers to communicate with non-Motu speakers of the area.[3]

One would not expect this outcome following the model of pidginization advanced by Baker (1999). In terms of the continua displayed in Table 1, it can be assumed that, in HM's formation, isolation and asymmetry were relatively slight compared to what was and is found in plantation or foreign-worker pidgins. Moreover, it would also be expected that the internal and external attitudes regarding HM and neighboring languages were and are significantly less restrictive than the attitudes involved in a plantation situation or in the case of immigrant populations in Germany or Sweden. The reason is that the people using HM, including the Motu themselves, are from many different socioeconomic classes, age groups, and educational levels. HM is one of three national languages, English and Tok Pisin being the others.

Given the wide range of situations in which pidgins have emerged, it is reasonable to assume that, when pidginization involves a target language, the definition has to be flexible enough to encompass a situation in which a certain community A does not drastically change its restructured output on the basis of the input it receives from communities B, C, and so on, but rather maintains its restructured variety relatively constant. This restructured variety is then taken in by the other communities, which in turn produce as an output a variable approximation of the restructured variety of language A that is close enough for communication to occur.

HM is modified Motu Foreigner Talk that has developed into a communal language variety in its use by Motu and non-Motu speakers. There is relatively less evidence of mutual accommodation in HM in that it contains only some elements from non-Motu languages in the contact situation. If HM had been the sole result of bi- or multilateral intercommunication (i.e., bi- or multilateral accommodation), it would have yielded a pidgin whose grammar was a mixture of those of the contact languages. In other words, one would not expect

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

to find a pidgin whose grammar was largely based on the foreigner talk of the lexifier language. HM, however, has precisely such a grammar (see Appendix A).

Pidgins such as HM suggest that defining the process or the result of pidginization is complex and tricky and that a wider rather than narrower approach, although less precise, may be preferable to capture the wider range of possible situations in which pidgins emerge. By defining pidginization more widely, SLA processes are included as part of the phenomenon, an aspect that I believe is integral to understanding the pidginization process as a whole. In a wider definition, certain commonalities to all situations involving pidginization are assumed, even those also found in situations of naturalistic L2 acquisition. Moreover, the initial stages of each phenomenon involve the same types of processes, constrained by the same principles, some of which, as it turns out, are also found in L1 acquisition. In this context, I will discuss perceptual and logical bootstrapping (Bates & Goodman, 1999), which accounts for the link between lexical acquisition and grammatical development in L1 acquisition. I speculate that these types of bootstrapping may play a role in pidginization and L2 acquisition as well. Although these types of bootstrapping speak to the rate of grammar development relative to the acquisition of vocabulary, they do not address the manner in which the form–function mapping takes place. For this, I appeal to the Primacy of Aspect (POA) and Distributional Bias (DBH) hypotheses (Andersen, 1993; Andersen & Shirai, 1996). First, however, it is necessary to discuss bootstrapping and then examine the tense-aspect system of a naturalistic L2 learner.

BOOTSTRAPPING, L1 AND L2 ACQUISITION, AND PIDGINIZATION

Levin and Rappaport Hovav (1995) noted that the hypothesis that the syntactic properties of verbs are determined by their meaning is traceable as far back as Pānini in the sixth century B.C.E. In the last 20 years, more researchers have acknowledged the strong relation between the syntactic structure and meaning of verbs as well as their argument structure (Bresnan, 1982, 2001; Goldberg, 1995, 1999; Langacker, 1987). Levin and Rappaport Hovav suggested that there is a causal relation between the regularities linking arguments bearing certain semantic roles and particular syntactic expressions:

> To the extent that the semantic role of an argument is determined by the meaning of the verb selecting it, the existence of linking regularities supports the idea that verb meaning is a factor in determining the syntactic structure of sentences. The striking similarities in the linking regularities across languages strongly suggest that they are part of the architecture of language. (p. 1)

Bates and Goodman (1999) offered substantial empirical evidence in support of this causal relation between the lexicon and grammar (comprising syntactic structure and also grammatical relation marking) in L1 acquisition. They

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

argued for a unified lexicalist approach to the processes involved in grammar acquisition. Numerous studies carried out by them and their colleagues have revealed the extremely close relation between the development of the L1 lexicon on the one hand and the development of L1 grammar on the other. That is, "the dependence of early grammar on vocabulary size is so strong and the nonlinear shape of this function is so regular that it approaches the status of a psychological law" (p. 51). They offered five explanations (perceptual bootstrapping, logical bootstrapping, syntactic bootstrapping, nonlinear dynamic of learning in a neural network, and lexically based grammar) as to why the development of the lexicon and grammar is so closely linked during this stage. The last of these (i.e., lexically based grammar) was just alluded to at the beginning of this section. Syntactic bootstrapping, as Bates and Goodman (p. 52) noted, can refer to many different aspects of a sentence frame, such as sentence-level semantics, morphological cues, word order, and prosody. Addressing these would take us too far afield, as would discussion of nonlinear dynamic of learning in a neural network. For the present study, the most relevant explanations are perceptual and logical bootstrapping.

Perceptual Bootstrapping

Studies by colleagues of Bates and Goodman have proposed that efficient word perception requires some top-down processing (see also Hawkins, 1994). In this way, the listener weeds out appropriate from inappropriate candidates in a large pool of items that (at least partially) overlap with the blurred word tokens that often occur in fluent speech. This would be even more true, Bates and Goodman (1999) argued, for the perception of grammatical function words and bound inflections. Such elements

> tend to be short and low in stress, even in speech that is produced slowly and deliberately. In informal and rapid speech, speakers have a tendency to exploit the frequency and predictability of function words and bound morphemes by giving them short shrift, deforming their phonetic structure and blurring the boundaries between these morphemes and the words that surround them. In fact, when grammatical function words are clipped out of connected speech and presented in isolation, adult native speakers can recognize them no more than 40% to 50% of the time (Herron & Bates, 1997). This is true of speech directed to children as well as speech directed to adults (Goodman, Nusbaum, Lee, & Broihier, 1990). Under these circumstances, we should not be surprised that young children are unable to acquire grammatical forms until they have a critical mass of content words, providing enough top-down structure to permit perception and learning of those closed-class items that occur to the right or left of "real words." (pp. 51–52)[4]

Logical Bootstrapping

Bates and Goodman (1999) suggested that the order of acquisition from words to grammar is logically necessary on the basis of the following assumption:

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

> Children cannot understand relational terms until they understand things that these words relate. One can argue about the extent to which this assumption holds for individual structure, but it may provide a partial explanation for the dependence of grammar on lexical growth. (p. 52)

In early L2 acquisition, Zobl (1982) found indications of perceptual and logical bootstrapping as well. In the initial state of L2 acquisition he discovered that, even when learners who have suffixal inflectional morphology in their L1 learn a language with comparable suffixal morphology, they initially start by omitting the functional items (i.e., the affixes) in the lexical items they acquire. Arguably, this is again because of the short shrift such functional markers receive (from a perceptual standpoint) as well as because of the logical necessity for the learner to learn content words before trying to relate the words (the logical standpoint). Klein and Perdue (1992, p. 315) discussed a basic variety in naturally learned L2 acquisition in which the development for all of their learners from various language backgrounds, though not identical, was remarkably similar. They considered this a stage of development and noted that it is transcended because of ongoing influx of language, which in the terms adopted here would translate into the learning of an increasing amount of vocabulary. This in turn would support the acquisition of more grammar (i.e., tense-aspect markers, grammatical relation markers, and other corresponding syntactic structures).

Perceptual and logical bootstrapping may be a way to account naturally for many commonly found features in pidgin languages. Indeed, many nonextended pidgins possess a relatively small vocabulary and a small number of function words. If we assume, then, that pidginization is a special subtype of L2 acquisition, perceptual and logical bootstrapping are also operative in the pidginization process. This would account, among other things, for why nonextended pidgins have relatively few functional markers such as adpositions. The number of adpositions in early and even stable pidgins could in this way be explained as a function of the size of their respective lexicons (see Koontz-Garboden & Clements, 2002).[5]

Assuming that the development of grammar depends on the development of vocabulary in language acquisition in general, it stands to reason that early L1 acquisition, the basic variety of an L2, and pidginization share a common basis, and this gives us the point of departure for comparing a pidgin with a naturally learned L2.

THE TENSE-ASPECT SYSTEM OF JENNY'S NATURALISTICALLY ACQUIRED SPANISH

As previously laid out, I assume that both perceptual and logical bootstrapping obtain in the initial stages of L1 and L2 acquisition as well as in pidginization, a unique type of L2 creation or construction. A key difference between L1 acquisition on the one hand and L2 acquisition and pidginization on the other is that, in the subsequent stages of the latter two, there is the issue of

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

transfer from the L1. In other words, in L2 acquisition and pidginization, conceptualizations and structure from the L1 find their way into the language being learned or constructed. The extent of transfer depends on a number of factors, one of which is the existence of concepts and structure to transfer from the L1 to the L2. For example, if the L1 of a given speaker does not have an evidential marker of any kind, it is relatively unlikely that this speaker, in learning an L2 naturalistically, will try to map the concept of evidentiality (i.e., knowing information firsthand as opposed to receiving it secondhand) onto some string in the language being learned or constructed unless it is absolutely necessary for successful communication.[6]

The case of naturalistic L2 acquisition at hand involves an adult, female speaker of Mandarin Chinese who has been living in Madrid, Spain, since 1986. To offer a more comprehensive picture of her variety of Spanish within the contact situation, I will begin by briefly describing the emergence of Chinese Pidgin English (CPE) and then proceed to describe the situation of the Chinese communities in Spain and particularly in Madrid. The reason for including a description of CPE is that it is structurally very similar to the variety of Spanish spoken by the informant in this study. The similarities, I believe, are not random.

Chinese Pidgin English[7]

Before discussing CPE, I will very briefly discuss the tense-aspect system of Cantonese Chinese, the L1 of the Cantonese CPE speakers. Matthews and Yip (1994, p. 5) stated that the differences between the Chinese dialects are similar to those that distinguish French from Spanish or Swedish from German. Both Mandarin and Cantonese, for example, share various features, such as comparable passive constructions and resultative particles. Neither language possesses tense marking, but both languages have a comparable aspect-marking system.[8] Although the tense-aspect system of Mandarin will be subsequently discussed in more detail, what is important here is that the tense-aspect systems of Cantonese and Mandarin are comparable.

CPE, a trade pidgin involving Cantonese and English, was formed in Canton, China, around 1715 and was maintained until the twentieth century. CPE's vocabulary is mainly from English, with a few words from Portuguese, Cantonese, and Hindi. The structures found in CPE are from Cantonese, are common to both English and Cantonese, or are considered simplified forms of structures common to both English and Cantonese. Shi (1991) did not identify any structures solely from English.

According to Shi (1991, p. 30), the factors that led to the formation of CPE were: (a) a stable group of substrate language speakers (the Hong); (b) a constantly changing and therefore unstable group of superstrate speakers; (c) the highly asymmetric relationship between the two groups; and (d) the very restricted need for communication. From this synoptic view of the circumstances in which CPE formed and developed, it is clear that there was a target

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

Table 3. Comparison of CPE and CIS traits

English and Chinese traits	Chinese Pidgin English	Chinese Interlanguage Spanish	Spanish and Chinese traits
English traits only	0% (0/29)	8% (2/26)	Spanish traits only
Shared English-Chinese traits	31% (9/29)	23% (6/26)	Shared Spanish-Chinese traits
Chinese traits only	45% (13/29)	54% (14/26)	Chinese traits only
Other	24% (7/29)	15% (4/26)	Other
Total	100% (29)	100% (26)	Total

Note: See Appendixes A and B for the list of traits. For CIS, 10 were not calculated because there was no equivalent.

language variety for the Chinese. That is, the Chinese clearly made efforts to learn enough English to enable them to communicate with the English traders. However, the English, having virtually no access to Chinese, used English and whatever else worked in creating a medium of communication with the Chinese traders.[9]

Although the tense-aspect systems of CPE and Chinese Interlanguage Spanish (CIS) will be subsequently addressed, it is important at this point to compare general CPE traits (taken from Shi, 1991, and included in Appendix B) with those of CIS, which I have compiled and included in Appendix C. Table 3 presents a numeric comparison of these traits. The significance of the comparison is that the general distribution of traits is similar in the two varieties, even though one is a pidgin and the other an L2 variety. Perhaps the most notable difference between the distribution of the CPE and CIS traits is that in CIS one finds traits only and unequivocally attributable to Spanish origin—namely, [s] in coda position and words equivalent to *yes* and *no*. In a comparison of the respective communities in which CPE and CIS are spoken, although there are several differences between the Cantonese Chinese community and the immigrant Chinese communities in the Spanish-speaking world, a key similarity comes to light when looking at the Chinese community in Spain, particularly in Madrid: Both communities exhibit or exhibited a strongly isolating tendency.

The Chinese Community in Spain[10]

The Chinese ethnic community in Spain is heterogeneous, breaking down along dialectal and extended familial lines. What they share, as Beltrán and García (2001) pointed out, is being Chinese in a foreign country. Spain has a history with the Chinese that spreads over several centuries. The Spanish en-

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

countered Chinese in their colonization of the Philippines in the sixteenth century. In the nineteenth century, Spain had Chinese workers in the mines and plantations of their territories in Peru and Cuba. In the twentieth century, Chinese peddlers sold small items on the streets of Spain's major cities in the 1920s and 1930s, Madrid had resident Chinese circuses in the 1950s, and in the last half of the century there was a substantial increase of the Chinese presence in Spain's service industry. As the Chinese restaurant industry has grown, services dependent on this industry have emerged: import companies, shops, travel agencies, Chinese vegetable farming, transport companies, skilled and unskilled construction labor for restaurant renovation, and so on. As their work involves predominately restaurants and restaurant-dependent services, the largest concentrations of Chinese are in urban areas, with Madrid and Barcelona having the two largest communities, respectively. Ninety-eight percent of this community works in the service industry. As of 2000, there were unofficially around 60,000 Chinese in Spain, though the official number is 10,816 (Beltrán & García, 2001, pp. 284–285). The families established in Spain are related to each other through multiple connections of kinship, economics, and place of origin.

Chinese communities, particularly among those from the People's Republic, come from a society in which the superiority of their own values is an accepted assumption. This, along with other factors, has a significant impact on the degree to which they assimilate. The Chinese in Spain are emigrants because they were seeking an economically and socially more prestigious life. Were they able to attain these goals in their own country, they would not emigrate to Spain or other countries. As the Chinese language is the pillar of education, and education is highly prized in Chinese culture, the learning and maintenance of Chinese within the immigrant communities are extremely important. Given that they set up their communities to isolate and protect themselves from the culture in which they live, the Chinese in Spain tend not to learn Spanish. Literacy data discussed by Beltrán and García (2001, pp. 289–290) reflect this tendency. Of the 264 Chinese immigrants who applied for legalization in 1991, only 27% (72 people) could read and write Spanish.

This tendency to isolate and protect is the key similarity that the Chinese community in Madrid shares with its counterpart in Canton two centuries earlier. Indeed, Beltrán and García (2001, p. 291) noted "wherever the Chinese immigrate, they build their own communities in isolation from mainstream society, with their own culture, values, and language." One result of this is that they do not take advantage of the assistance the government offers immigrants, preferring to be self-sufficient and unattached to the host country. Integration, then, is neither a need nor a desire. One of many strategies the Chinese use to preserve their culture is to send their children to study in China and then have them return as adolescents or young adults. Consequently, these children learn little Spanish because they are not educated in the Spanish primary or secondary education system.

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

The Informant

Of the Chinese immigrants currently residing legally in Spain, 86% have arrived since 1986. The informant of this study, Jenny, came to Madrid in 1985, in her late twenties. Born in Nanking, Jenny is a speaker of Mandarin Chinese. She knew she wanted to emigrate and thus learned Chinese massage and acupuncture before leaving her homeland. Upon arriving in Madrid, she knew no Spanish and had studied Russian and English for no more than 1 year. During her first 9 years in the Spanish capital, she worked in the Chinese restaurant industry in which she carried on most of her communication in Mandarin Chinese. Jenny has lived alone for the most part. Her main goal in Madrid has been to become financially stable, and she learned Spanish to the extent that it permitted her to do so. Currently, she works with Spaniards as a professional masseuse and acupuncturist. At present, she maintains little contact with the Chinese community in Madrid, preferring instead to spend her time with Spaniards, although she has some close Chinese-speaking friends in Madrid.

The data were collected during an interview that took place at the informant's residence. I was the interlocutor. The interview lasted approximately 90 minutes, and the topics covered were: birth place, education and professional life in China, her family, reasons for emigrating, likes and dislikes of Spanish society, food, professional life in Spain, and her future in Spain. A loose phonetic transcription of the interview was used for the analysis.

Due to her work and goals after arriving in Spain, Jenny developed a variety of Spanish that, by most criteria, would be called fossilized interlanguage Spanish. Although she is conscious of the fact that her Spanish is nonstandard, this does not prevent her from conversing freely and relatively fluently in her variety. Jenny's restructured Spanish reveals a total lack of Spanish noun and verb morphology, but she has developed what seems to be an aspectual marker. With no person, number, or tense morphology, and with only unbound elements used to mark aspectual distinctions, Jenny's linguistic system shares various features with both Chinese and a somewhat stable pidgin such as CPE. It is important to note that Chinese resembles many creoles and pidgins in its grammatical structure (Muysken & Smith, 1995, p. 5), a fact I will subsequently return to. Jenny's Spanish represents a case of natural L2 acquisition with restricted input and an individual solution to her communicative needs in Spain. Its structure suggests substantial transfer from her L1 but also reveals certain tendencies in form–function mapping that cannot be traced back to her L1 and that make her variety especially interesting from an SLA perspective. This case study focuses primarily on the tense-aspect system of Jenny's Spanish. However, before addressing her Spanish tense-aspect system, I need to briefly address lexical and grammatical aspect and the tense-aspect systems in Spanish and Mandarin Chinese.

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

Table 4. Features associated with the Vendlerian verb classes

Verb class	Static	Telic	Punctual
State	+	–	–
Activity	–	–	–
Accomplishment	–	+	–
Achievement	–	+	+

Lexical and Grammatical Aspect in Spanish and Mandarin Chinese

It is assumed here that a difference exists between grammatical aspect (perfective and imperfective) and lexical aspect (telic, punctual, static, etc.). Regarding the latter, verbs (and predicates) can be classified according to the four-part classification (states, activities, accomplishments, and achievements) proposed by Vendler (1967). Van Valin and LaPolla (1997, p. 93) posited the features listed in Table 4 for each class. To distinguish between states on the one hand and activities, accomplishments, and achievements on the other (as a group called "dynamic situations" by Comrie, 1976, p. 13), Van Valin and LaPolla used the question *What happened?* The question makes sense with verbs denoting dynamic situations (e.g., *John ran*, *the ice melted*, *the window broke*) but not with states (e.g., *John believed the world is round*).

The feature [±telic] distinguishes states and activities from accomplishments and achievements. Van Valin and LaPolla (1997, p. 93) noted that "this feature has to do with whether a verb depicts a state of affairs with an inherent terminal point or not." With a state such as *John believes the world is round*, or an activity such as *John is running in the park*, the believing or the running need not terminate. However, with an accomplishment such as *the clothes are drying on the line*, or an achievement such as *the window broke*, there is a terminal point at which the clothes are dry and the window is broken. The feature [±punctual] distinguishes states of affairs with internal duration (states, activities, and accomplishments) from those without internal duration (achievements). Thus, the accomplishments *the ice melted* or *the clothes dried on the line* take time to reach the endpoint, whereas achievements such as *the window broke* or *the balloon popped* happen instantaneously, for all practical purposes.

This classification applies not only to verbs but also to predicates. (The working definition I adopt for predicate here is a sentence minus the subject.) For example, the difference between achievement verbs and verbs denoting other states of affairs also holds for predicates of sentences: *Martha popped the balloon* is an achievement analogous to *the balloon popped*, and *John dried the clothes* is analogous to *the clothes dried*. These sentences possess an inherent endpoint—that is, they are [+telic]—but to determine this for the first

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

sentence of each pair, the whole predicate needs to be considered, not just the verb.

The interaction between activity and accomplishment predicates is also worth noting. The sentences *John ate the apple/rice* and *Martha ran one mile* have a terminal point at which the apple or rice is eaten and one mile is run. These are accomplishments in that they have internal duration and contain a natural endpoint. However, in *John ate apples/rice* and *Martha ran miles*, the eating or the running need not terminate—that is, these are activities. Semantically, the difference between the two sentence pairs resides in the difference between a count term (*the apple/rice* and *one mile*) and a noncount (i.e., mass or bare plural) term (*apples/rice* and *miles*). To be able to distinguish semantically between the sentence pairs, reference to the whole predicate, and not just to the verb, is essential. For my purposes, the Vendlerian classification will be used as it applies to verbs and predicates.

Tense-Aspect Marking in Spanish. Spanish distinguishes tense (past, present, and future) and grammatical aspect (perfective and imperfective), although they are not always overtly marked. In the present tense, Spanish has a simple present form (*Juanita canta* "Juanita sings") that can refer to habitual as well as progressive events. The progressive form (*Juanita está cantando* "Juanita is singing") usually refers to progressive events or activities. The present perfect form (*Juanita ha cantado* "Juanita has sung") is diurnal in Castilian Spanish—that is, it refers to past events within the same day in which they occur. Thus, it has perfective aspect, whereas the other two forms are imperfective. In the past tense, Spanish has a perfective-imperfective distinction in the preterite and imperfect forms (*Juanita cantó* "Juanita sang" vs. *Juanita cantaba* "Juanita used to sing" or "Juanita was singing"). Additionally, it has a past progressive (*Juanita estuvo cantando* or *Juanita estaba cantando* "Juanita was singing") and a pluperfect (*Juanita había cantado* "Juanita had sung"), both of which are roughly comparable to their English counterparts. Spanish marks the future morphologically, as in *Juanita cantará* "Juanita will sing," and periphrastically with *Juanita va a cantar* "Juanita is going to sing," the latter being generally more immediate than the former. The Spanish subjunctive is largely a subordinate clause phenomenon, but it can be used to mark future versus present habitual, as in *cuando venga Juanita, vamos al cine* "when Juanita comes, we're going to the movies" versus *cuando viene Juanita, vamos al cine* "when Juanita comes, we go to the movies."

As for incompatibilities between verb-predicate class and verb forms, many stative verbs generally do not appear in the progressive (e.g., **Juanita está sabiendo castellano* "Juanita is knowing Spanish"). Some quasi-aspectual verbs (e.g., *acabar* "finish" and *soler* "usually + verb") are incompatible with perfective morphology, as in *Juanita *acabó/acababa de llegar* "Juanita just arrived" and *Juanita *solió/solía llegar contenta* "Juanita usually arrived happy."

Tense-Aspect Markers in Mandarin Chinese.[11] Given that the tense-aspect system of Mandarin is quite different from that of Spanish or English, I will

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

describe it in some detail. Smith (1991, p. 370) noted that the Mandarin verb is simple in form and has many functions. For example, Mandarin has no morphological indication of an active or passive verb. Moreover, Mandarin does not mark tense morphologically, using instead adverbials and modal auxiliaries for this purpose. Grammatical aspect, however, is marked although it is syntactically optional.

The unbound element *zai*, shown in (1), appears with activity verbs in preverbal position and is a progressive marker.

(1) *Ta zai chang.*
3SG *zai sing*
"He/she is singing." (Tom Ernst, personal communication, December 23, 2000)

It can also occur with accomplishments, as in (2).

(2) *Zhangsan zai xie yifeng xin.*
Zhangsan zai write one-CL *letter*
"Zhangsan is writing a letter." (Smith, 1991, p. 357)[12]

Given that *zai* denotes an interval without an endpoint, it is incompatible with semelfactive, achievement, and stative verbs or predicates (Li & Shirai, 2000, p. 97; Smith, p. 357).

The suffix *-zhe* denotes a continuous and stable situation without regard to the endpoints, and in its basic meaning it is a resultative stative (Smith, 1991, p. 358). An illustration of the difference between *zai* and *-zhe* is given in (3).

(3) a. *Ta zai chuan pi xie.*
3SG *zai put-on leather shoe*
"He/she is putting on his/her leather shoes."
b. *Ta chuan zhe pi xie.*
3SG *wear zhe leather shoe*
"He/she is wearing his/her leather shoes." (Li & Thompson, 1981, p. 221)

According to Li and Shirai (2000, pp. 97–98), the predicate *chuan pi xie* "put on leather shoe" contains a mixed stative-telic verb (i.e., an accomplishment that adopts a different meaning depending on the aspectual marker).

Given that *-zhe* basically denotes resulting states, it is compatible with stage-level predicates but not with individual-level predicates, as shown in (4) and (5), respectively.

(4) *Men shang xie-zhe sige zi.*
door on write-zhe four-CL *character*
"Four characters are written on the door." (Smith, 1991, p. 359)

(5) **Ta conghui-zhe.*
he intelligent-zhe
"He is intelligent." (Smith, p. 360)

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

Additionally, *-zhe* is used in the first of a two-clause complex to signal that one event is the durative background for the other event, as exemplified in (6).

(6) *Xiao gou yao zhe weiba pao le.*
small dog shake zhe tail run CURRENT RELEVANT STATE
"The small dog ran away wagging its tail." (Li & Thompson, 1981, p. 223)

Smith (p. 361) noted that the distribution of *-zhe* is not always predictable: "It appears with Accomplishments of position and locative verbs, but is idiosyncratic with other Accomplishments of the Affected Object type, and with Achievements." The sentences in (7) and (8) illustrate this.

(7) a. *Kongqi zhong miman-zhe yigu jiaoqi.*
*air in fill-zhe one-*CL *scorched smell*
"The air is filled with a scorched smell."
b. *Yugan wan-zhe.*
fishing-rod bend-zhe
"The fishing rod is bent."

(8) a. **Fangzi qi-zhe.*
house paint-zhe
"The house is painted."
b. **Huaping puo-zhe.*
vase shatter-zhe
"The vase shattered." (Smith, pp. 361–362)

Mandarin has two perfective markers, *-le* and *-guo*. The morpheme *-le* appears with nonstative sentences, as in (9).

(9) a. *Tamen zuotian zai gongyan chao-le yi-jia.* (activity)
they yesterday in park quarrel-le one-fight
"They quarreled yesterday in the park."
b. *Wo zuotian xie-le yifeng xin.* (accomplishment)
*I yesterday write-le one-*CL *letter*
"I wrote a letter yesterday."
c. *Lisi guran kesou-le.* (semelfactive)
Lisi suddenly cough-le
"Lisi suddenly coughed."
d. *Zhangsan zai zhongwo dao-le shanding.* (achievement)
John at noon arrive-le hilltop
"John reached the top at noon." (Smith, 1991, pp. 344–345)

With stative sentences, the use of *-le* can invoke an inchoative reading, as in (10).

(10) *Wo bing-le.*
I sick-le
"I got sick." (Smith, p. 347)

This morpheme is also compatible with stative sentences containing a state-limiting time adverbial, as shown in (11).

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

(11) *Wo zai nali zhu-le liang-ge yue.*
*I at there live-le two-*CL *month*
"I lived there for two months." (Smith, p. 347)

Mandarin also possesses an experiential aspectual marker, the verbal suffix *-guo*. Li and Shirai (2000, p. 95) noted that *-guo* "indicates that an event has been experienced at some indefinite time, usually in the past, and that the resulting state no longer obtains at the time of speech." The sentences in (12), illustrate this contrastively.

(12) a. *Lisi da-po -le yi-ge beizi.*
*Lisi hit-break -le one-*CL *cup*
"Lisi broke a cup."
b. *Lisi da-po -guo yi-ge beizi.*
*Lisi hit-break -guo one-*CL *cup*
"Lisi once broke a cup." (Li & Shirai, p. 95)

The perfective *-guo* is often translated with the present perfect although this does not express the discontinuity contained in *-guo*, as shown in (13) and (14).

(13) *Wo chi -guo Riben fan.*
I eat -guo Japan food
"I've eaten Japanese food (before)." (Li & Thompson, 1981, p. 226)

(14) *Wo shuai duan -guo tui.*
I fall break -guo leg
"I fell and broke my leg once." (Li & Thompson, p. 227)

We would not necessarily expect a naturalistic learner with restricted input in the target language (as in Jenny's case, in which her L1 is Chinese) to be sensitive to tense-based distinctions in the target language. Rather, we would expect the learner to be sensitive to aspectual distinctions, and this is indeed what we find in Jenny's restructured Spanish.

The Tense-Aspect System in Jenny's Speech

Distribution of Verb Forms. To analyze the verb forms produced by Jenny, I categorized them as types and tokens according to verb-predicate class (i.e., state, activity, accomplishment, achievement), verb form (first-person-singular present, third-person-singular present, infinitive, gerund, third-person-singular preterite, past participle, other), and whether the forms were used in a context appropriate to their aspect and tense. Forms were judged to be appropriately used according to the context in which they were uttered. That is, present forms were judged correct in discourse contexts involving present events, activities, or states being referred to by Jenny at the time of speech. They were judged incorrect, however, in discourse situations involving past events, activities, or states referred to at the time of speech. Moreover, only

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

Table 5. Distribution of correctly and incorrectly used present-tense finite verb forms and nonfinite verb forms

	Type (%)[a]		Token (%)[b]	
Form	Finite	Nonfinite	Finite	Nonfinite
Correct	42 (56%)	17 (26%)	230 (61%)	48 (21%)
Incorrect	33 (44%)	49 (74%)	146 (39%)	178 (79%)
Total	75 (100%)	66 (100%)	376 (100%)	226 (100%)

[a]For type count, all values are significant at $p < .001$, $\chi^2 = 13.2$ (critical value = 10.83; $df = 1$).
[b]For token count, all values are significant at $p < .001$, $\chi^2 = 90.6$ (critical value = 10.83; $df = 1$).

tense and grammatical aspect were taken into account for classifying a verb as correctly or incorrectly used; correctness of person and number marking was not considered. The results clearly indicate that Jenny does not exhibit a preponderance of correctly used verbal forms.[13]

Of a total of 602 tokens and 141 types used by Jenny in the interview, only 4 types (*nació* "born," *murió* "died," *fue* (*a*[*l*]) "went (to [the])," *sacabó* "it finished") and 20 tokens were in the preterite, although a substantially greater percentage of the situations referred to by Jenny was in the past. Given that the finite forms Jenny used were almost exclusively present-tense forms, any past context referred to by a present-tense verb form was considered incorrect, as was any context referred to by using solely nonfinite forms (i.e., infinitive, gerund, past participle, or reanalyzed form). Table 5 displays, in raw numbers and percentages, the distribution of correctly and incorrectly used present-tense finite and nonfinite verb forms.

On the basis of this overview of Jenny's verb form use in Spanish, several observations can be made. Jenny exhibits no tendency toward approximating the target verbal system, but, as the chi-square values suggest, the distribution is not random. For referring to the present, she used present-tense finite forms correctly only 61% of the time (token count). She used nonfinite forms inappropriately nearly 80% of the time (token count).[14] As will be discussed, the DBH and POA (Andersen, 1993; Andersen & Shirai, 1996) account well for these data.[15] Jenny's verbal system reveals substantial sensitivity to lexical aspectual distinctions, and the distribution of her verb forms is summarized in Table 6. More specifically, what we see is the following: (a) Stative verbs occur with high frequency in the third-person-singular present form;[16] (b) activity verbs and predicates occur largely in gerund form and third-person-singular present; (c) accomplishment verbs and predicates, although occurring in all categories except for gerund, are most frequently found in the infinitive and the third-person-singular present form;[17] and (d) achievement verbs and predicates are distributed fairly evenly over all categories except first-person-singular present and third-person-singular preterite, which are notably lower than the rest.

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

Table 6. Verb forms in Jenny's speech

	Statives		Activities		Accomplishments		Achievements	
Verb form	Type	Token	Type	Token	Type	Token	Type	Token
1SG-present	5 (14%)	11 (4%)	2 (5%)	8 (7%)	1 (4%)	1 (1%)	1 (2.5%)	3 (2%)
3SG-present	24 (67%)	207 (81%)	14 (35%)	39 (34%)	6 (24%)	22 (22%)	11 (27.5%)	45 (34%)
3SG-preterite	—	—	—	—	2 (8%)	7 (7%)	3 (7.5%)	12 (9%)
Infinitive	3 (8%)	7 (2.5%)	12 (30%)	17 (15%)	11 (44%)	50 (51%)	11 (27.5%)	24 (19%)
Gerund	—	—	7 (17.5%)	44 (39%)	—	—	—	—
Past participle	1 (3%)	2 (0.5%)	3 (7.5%)	3 (2.5%)	2 (8%)	2 (2%)	9 (22.5%)	23 (17%)
Other	3 (8%)	31 (12%)	2 (5%)	3 (2.5%)	3 (12%)	17 (17%)	5 (12.5%)	24 (19%)
Total	36 (100%)	258 (100%)	40 (100%)	114 (100%)	25 (100%)	99 (100%)	40 (100%)	131 (100%)

Of note is the following: Although variable, we find a bias toward finite forms in reference to the present tense. The third-person-singular present, at 52% (313/602), is overall the most frequently used form, with the infinitival form, at 16% (98/602), a distant second. This is not surprising, given that in Spanish usage the present is twice as frequent as the preterite (Gili Gaya, 1960, as cited in Bybee, 1985, p. 121). Thus, the third-person-singular present is the default form, an observation made also for English L1 acquisition (Bloom, Lifter, & Hafitz, 1980; Shirai, 1991), in an L1 connectionist simulation (Li & Shirai, 2000, chap. 7), and for English L2 acquisition (Robison, 1995). Moreover, Jenny's stative verbs and predicates appear in this form 81% of the time. Although past-participial forms are infrequently used overall (30/602 or 5%), they occur 76% of the time with achievements in the token count (23/30) and are strongly represented by forms in *-ado* (13/15 or 87%) as opposed to ones in *-ido* (2/15 or 13%). Again, this is not surprising because the *-a* verb class (e.g., *cantar* "sing" vs. *beber* "drink" or *vivir* "live") is numerically by far the most strongly represented class in Spanish. In those cases in which the past-participial form does not appear with achievements, it marks anteriority (*pensado* "had thought") or a resultant state (*casado* "married").[18] The gerund form in Jenny's speech is only found in activities and never with achievements, accomplishments, or states. All the gerund forms are from the *-a* verb class (*cantando*), and none are from the *-e* or *-i* verb classes (*bebiendo* or *viviendo*).

Thus, Jenny's aspect system shows substantial signs of regularity. A significant correspondence obtains between lexical class and verb form: For type, $\chi^2 = 55.06$, $p < .001$; for token, $\chi^2 = 465.98$, $p < .001$ (the critical value for both is 42.31; *df* for both = 18). That is, Jenny has mapped the lexical classes onto the aspectually appropriate forms in a highly nonrandom manner. The reason for this is not only Jenny's sensitivity to aspectual distinctions but also the frequency with which Spanish speakers in interacting with Jenny use these forms. I will return to this in the Discussion and Concluding Remarks section.

Indications of Perfective Markers in Jenny's Speech. Jenny's speech contains one particle, *ya* "already," that appears to function often like a perfective aspectual marker. Some examples are given in (15)–(18), in which *ya* is not used with its adverbial meaning; this use of *ya* does not correspond to any usage in Spanish.[19, 20]

(15) *Yo luego a la cuatro, cuatro año ya volvé Sanghay.*
I after at the four four year PVF *return*-INF *Shanghai*
"I returned to Shanghai after four years."

(16) *Mil novesiento ochenta cuatro, de junio o julio ya coge*
thousand nineteen hundred eighty four LINK *June or July* PVF *get*-3SG-PRES
pasaporte.
passport
"I got my passport in June or July of 1984."

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

(17) *Primero estudio, ahora ya casado con una señor.*
first study now PVF *married*-PPART *with a*-FEM *man*
"She studied first; now she's married to a man."

(18) *Ya selado y selado lɔgo yo pensando, mehó negocio.*
PFV *close*-PPART *and close*-PPART *then* 1SG *thinking better business*
"It closed, and after it closed, I thought, better [to launch] another business."

It was previously mentioned that the past-participial forms in Jenny's speech occur more frequently with achievements and accomplishments. One possibility for this preference might be that Jenny has identified the Spanish past-participial suffix *-do* as another perfective marker. If we look at Mandarin Chinese translations of some of Jenny's Spanish utterances containing participial forms, the distribution of the Chinese perfective marker *-le* corresponds somewhat regularly to the Spanish *-do*. An example from a connected discourse segment is given in (19).

(19) Jenny: *Mi tio macha-do Estados Unido. . . . Tu sabe Yuan Taiwan veni-do?*
my uncle leave-PPART *United States* 2SG *know Yuan Taiwan come*-PPART
Chinese: *Wo yizhang likai-le Meiguo. Ni renshi Yuan Taiwan lai-de . . .*
my uncle leave-PFV *America you know Yuan Taiwan come*-REL
Jenny: *Yuan más detlás viene. Yo más temprano llega-do.*
Yuan more behind come-3SG-PRES 1SG *more early arrive*-PPART
Chinese: *Yuan yihou lai-le wo zao lai-le.*
Yuan afterwards come-PFV 1SG *early come*-PFV
"My uncle went to the United States. You know Yuan, who came from Taiwan? Yuan came afterwards. I came before her."

Of the verbs in (19) referring to the past—that is, *machado*, *venido*, *viene*, *llegado*—three are past participles. Although I have no explanation for why Jenny used the third-person-singular present *viene* instead of *venido*, the data suggest that she may have made a connection between the notion of perfectivity and the Spanish past-participial suffix. However, she has also extended the use of the past-participial suffix to telic verbs that do not refer to perfective contexts. One example occurred in a phone conversation Jenny and I had in which she gave me directions to get to her neighborhood by subway. In spite of being a generic statement, her explanation in (20) contains the past-participial form of *llegar* "arrive."

(20) *Aquí llegado línea uno o dos.*
here arrive-PPART *line one or two*
"One can get here by line one or two."

Thus, her usage of verb forms exhibits strong mapping tendencies but is still variable.

DISCUSSION AND CONCLUDING REMARKS

In the previous section, it was established that (a) Jenny's tense-aspect system is not constructed on tense but rather on aspectual distinctions and (b)

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

these aspectual distinctions are often mapped onto appropriate forms. There is a language-specific argument as well as a set of universal arguments that account for her tense-aspect system.

The language-specific argument for the structure of Jenny's tense-aspect system is based on transfer from Mandarin, Jenny's L1. As noted by Muysken and Smith (1995), Chinese resembles many creole languages in its grammar (p. 5); it has no person and number marking on verbs, and it possesses virtually no inflectional morphology and little derivational morphology (Li & Thompson, 1981, pp. 28–45). Additionally, it makes significant use of reduplication, and it is sensitive to aspectual rather than tense distinctions. As such, it is uncontroversial to define the Mandarin grammatical system as unmarked or underspecified. Thus, in learning Spanish it would be predicted that Jenny should be most sensitive to the distinctions she knows from her L1. As is apparent from (19) and the discussion in the preceding section, the Spanish word forms that Jenny uses, though variable, do not mark person, number, or tense. Moreover, they often correspond to Mandarin even with respect to word order. Although an examination of Jenny's word order or grammatical relation marking in Spanish is beyond the scope of this particular study, her speech exhibits Subject-Adjunct-Verb order, typical in Mandarin, and grammatical relations are often marked as in Mandarin, not as in Spanish. For example, to describe the notion of the military rank "general of China," Jenny uttered "*China de general*," employing the Mandarin order rather than *general de la China*, which is the typical order in Spanish.

On comparison with similar cases of L2 acquisition, we see that learners like Jenny draw considerably on the L1 grammar in learning the L2 grammar. For example, Schumann (1978) noted the following about Alberto:

> In terms of [Alberto's] morphological development the possessive and regular past tense generally went unmarked. Progressive *-ing* was correctly supplied about 60% of the time. Plural *-s* was supplied about 85% of the time, but this especially good performance is probably the result of positive transfer from Spanish. (p. 113)

Schumann (p. 76) stated that Alberto's variety of English seemed to be a pidginized variety. This was arguably due to a number of factors, including asymmetrical social relationships between Alberto and host-society interlocutors, the psychological distance between him and host-society interlocutors due to certain attitudes, the extent of learner-oriented speech used with Alberto by host-society interlocutors, structural features of his English, and so on. In Jenny's case, these factors also apply. Particularly in terms of structure, her speech exhibits no plural marking, only 5 of 44 correct uses of the gerund (11%), and no systematic tense marking whatsoever, although a new aspect-sensitive system has developed. In a language-learning situation with restricted availability to the target language, such a system would likely be predicted purely on the grounds of transfer. However, there are also more general ways

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

to account for the importance of aspectual distinctions and for the regularity of the form–function mapping in Jenny's Spanish variety.

There is ample evidence that Jenny's aspectual system follows what has been expressed as the POA by Andersen and Shirai (1996):

> It has been consistently observed that L1 and L2 learners, in the early stages of acquiring verbal morphology, use tense-aspect selectively according to the inherent lexical aspect of the verb to which the tense-aspect marker is attached or with which it is associated. (p. 529)

To account for these facts, Andersen and Shirai (p. 559) proposed the POA:

1. Learners will initially restrict past or perfective marking to telic verbs (achievements and accomplishments) and later gradually extend the marking to atelic predicates (activity and then stative predicates), with states being the last category to be marked consistently;
2. In languages with an imperfective marker, imperfective past appears much later than perfective past and then is initially restricted to atelic predicates (stative and activity verbs), then extended to telic predicates (accomplishments and then achievements);
3. Progressive marking is initially restricted to dynamic atelic predicates (activity verbs), then extended to telic predicates (accomplishments and then achievements);
4. Progressive marking is not incorrectly overextended to states.

The POA also accounts for the strong tendencies found in Jenny's speech. Recall that in her speech nearly all past-participial forms are from telic verbs, all gerunds correspond to activity verbs, and over 80% of states are encoded with the imperfective, third-person-singular present form. The POA also accounts for the near total absence of imperfect forms in Jenny's speech. In the data, there is only one imperfect form, *muría* "I/she/he was dying," and she used this form incorrectly in a context in which the preterite form, *murió* "he/she died," was called for as well as elsewhere in the interview. Jenny's speech shows little evidence of the extension of forms to other aspectual verb classes. Although there is evidence of a past participle being used with achievement verbs in a generic context (see [20]) and limited use of the past-participial form with activities (three cases; see note 18 for an example), gerunds do not appear with accomplishments and achievements, and, as the fourth point in the POA list predicts, Jenny does not extend the use of the gerund to refer to states.

There may be various reasons why the extension of forms to other verbs did not occur in Jenny's speech. First, she learned the variety of Spanish she now speaks in order to communicate her needs and wants, first in her job at the restaurant and then in her job as an acupuncture and massage specialist. For Jenny, the most important thing, as became clear during the interview, was to establish herself economically in Madrid. I suggest that by the time she

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

achieved economic stability she had already constructed her variety of Spanish, which met and continues to meet her needs and wants.

Although the POA predicts that perfective marking will appear first with telic verbs and predicates and extend from there, it does not address the exact form–function mapping. In Jenny's variety of naturalistically learned Spanish, I have discussed evidence suggesting that she sometimes uses *ya* "already" as a perfective marker. This is predicted by the POA, even though the use of *ya* in colloquial Madrid Spanish is unlike Jenny's use of the particle.[21] What then predicts that precisely the third-person-singular present form will match up with states, gerunds with activities, and past participles with achievements or resultative states? The DBH does this. Andersen (1993) described the DBH in this way:

> Native speakers will tend to use past or perfective inflections more with telic and punctual events than with states or activities, progressive inflections primarily with activities and imperfective inflections more with states and activities than with telic and punctual events. (p. 320)

Andersen and Shirai (1996) stated that:

> It appears that learner-directed speech is more consistent with the DBH than is NS-NS discourse. . . . However, it is not clear whether the topic of the conversation or the simplified nature of the learner-directed speech is the key determining factor. In other words, the question is whether the semantically restricted use of verbal morphology to L1 and L2 learners is due to speech modification (simplified input) or due to the context or topic (simple input, i.e., it is not "simplified"). (p. 553)

Be that as it may, it is apparent that in NS-to-NS speech there are certain distributional form–function biases that become more pronounced in learner-directed speech of NSs. I assume that such learner-directed, or in this case foreigner-directed, varieties influenced to some extent the input that Jenny received, especially during her first years in Madrid. If this accommodation on the part of the NSs interacting with Jenny took place, which is a reasonable assumption, it would have facilitated Jenny's task of mapping the aspectual functions onto the appropriate forms.[22]

As for evidence of the DBH in Spanish, Gili Gaya (1960) found that the present tense occurs twice as often as the preterite in Spanish. Bybee and Pardo (1981) offered evidence indicating that, in terms of frequency of use, the Spanish third-person-singular present form is the default form of the present-tense paradigm. In Jenny's speech, this form is the most frequently used form (313/602 tokens or 52%), which according to the DBH would reflect the input she receives. It was already noted that Jenny's stative verbs and predicates appear in the third-person-singular present, an imperfective form, over 80% of the time.[23] There are only two past-participial forms referring to states (0.75%), which turn out to be resultant states. Jenny encoded activities with imperfective

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

Table 7. Distribution of perfective and imperfective forms in token and type counts

	Token (%)[a]				Type (%)[b]			
Verb form	S	ACT	ACC	ACH	S	ACT	ACC	ACH
Imperfective	218 (59%)	83 (22%)	23 (6%)	48 (13%)	29 (41%)	23 (32%)	7 (10%)	12 (17%)
Perfective	2 (4%)	3 (6%)	9 (18%)	35 (72%)	1 (5%)	3 (15%)	4 (20%)	12 (60%)

[a]For token count, all values are significant at $p < .001$, $\chi^2 = 113.86$ (critical value = 16.27; $df = 3$).
[b]For type count, all values are significant at $p < .001$, $\chi^2 = 20.05$ (critical value = 16.27; $df = 3$).

forms 80% of the time (gerunds, the third-person-singular present, and the first-person-singular present) but rarely with past participles (2.5%); see Table 6. Accomplishments are encoded most frequently with infinitives—a grammatical aspect-neutral form—but are also encoded with imperfective forms (third- and first-person-singular present). We find with accomplishments a larger percentage of perfective forms (9% or 9/99 for past participle and the third-person-singular preterite), although not as well represented as might be expected. Among all the verb-predicate types, achievements are encoded most often with perfective forms but even then only 27% of the time (35/131). The most frequent forms found with achievements are imperfective forms (third- and first-person-singular present) and infinitival forms, which occurred 36% and 19% of the time, respectively; see Table 6. The high numbers of the present-tense forms can be accounted for by frequency of occurrence.

If we disregard the infinitival forms and consider solely the distribution of verbs with imperfective (gerund and first- and third-person-singular present) and perfective (third-person-singular preterite and past participle) morphology, we obtain the figures in Table 7. The distribution of these form–function mappings, found to be significant ($p < .001$) in the chi-square tests conducted, is predicted by the DBH: In both type and token counts, states and activities occur most frequently in imperfective forms and least frequently in perfective forms, whereas accomplishments and achievements occur most often in perfective forms and least often in imperfective ones.

Another interesting aspect of Jenny's tense-aspect system is that its forms correspond in revealing ways to the forms that mark tense and aspect in Spanish- and Portuguese-based creoles. Given this correspondence, shown in Table 8, the deduction is that the POA and the DBH can also account for the distribution of forms in pidginized or creolized varieties of Spanish and Portuguese. What most likely happened in these creoles is that the form–meaning mapping tendencies predicted by the POA and the DBH were present at the pidgin stage and then generalized across the respective tense-aspect systems of the creoles during the process of creolization—that is, during the nativization of

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

Table 8. Form–function correspondences between Jenny's speech and Spanish- and Portuguese-based creoles

Form	Jenny's speech	Chabacano	Palenquero	Papiamentu	Many Portuguese-based creoles	Spanish and Portuguese
ya (*já*, Portuguese)	Possible perfective marker	Perfective marker	—	—	Perfective marker	"already"
Gerund form	Activities	—	Dynamic verbs	Dynamic verbs (recently adopted)	Dynamic verbs	Dynamic and some stative verbs
Past participle	Achievements	—	—	Resultative states and passives	Perfective marker	All verbs
Third-person singular	Stative verbs	Stative verbs	Stative verbs	Stative verbs	Stative verbs (e.g., *ker, te, sab*)	All verbs

Note. Sources were as follows: Chabacano (Forman, 1972); Palenquero (Schwegler, 1998); Papiamentu (Maurer, 1998); and Portuguese-based creoles (Clements, 1996; Clements & Koontz-Garboden, 2002).

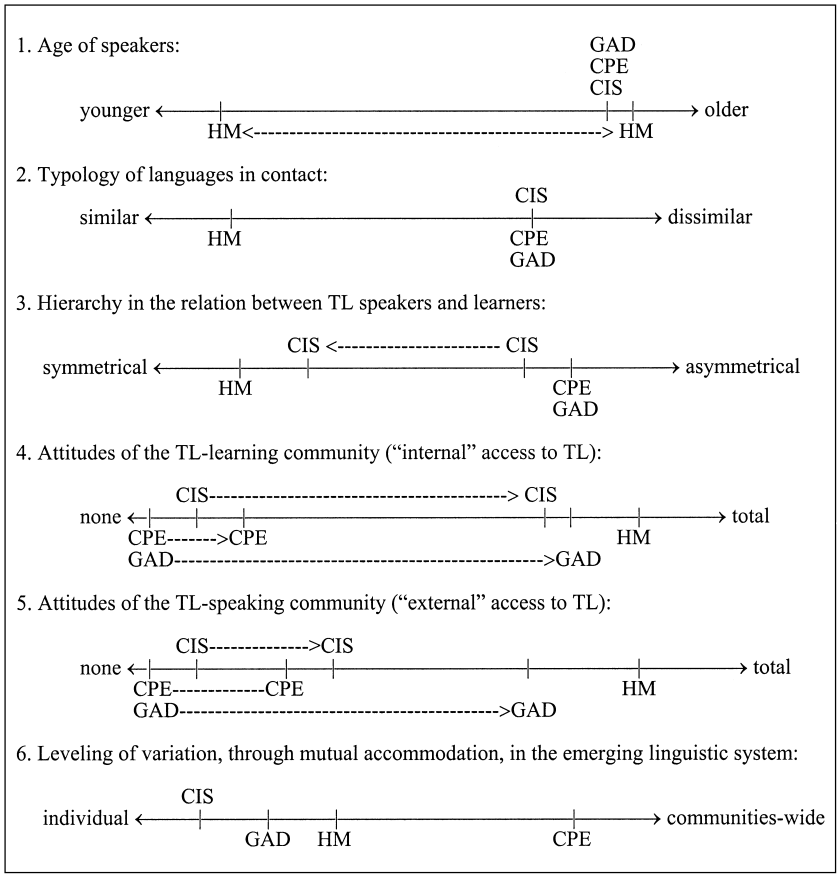


Figure 1. Relative position of Chinese Interlanguage Spanish (CIS), Chinese Pidgin English (CPE), *Gastarbeiterdeutsch* (GAD), and Hiri Motu (HM) on the continua relevant to the formation and development of a naturally learned L2 and pidgins.

pidgin Portuguese, which was the basis for all of these creoles (see Clements, 1996; Forman, 1972; Maurer, 1998; Schwegler, 1998).

Finally, I return to a comparison of Jenny's speech and the pidgins discussed in previous sections to highlight the differences and similarities between them. The positions given to CIS (Jenny's speech), CPE, *Gastarbeiterdeutsch*, and HM in Figure 1 should be seen as relative to one another on the respective continua. Figure 1 shows that HM is spoken: (a) by a wide segment of the population (cline 1); (b) in a situation in which the contact languages are relatively similar typologically (cline 2); (c) with relatively little asymmetry in the situation (cline 3); and (d) where the populations have relative open access to one another (clines 4 and 5). HM is largely based on Motu Foreigner Talk, the

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

lexifier language, and not on a variety constructed from equal parts of all the languages in the contact situation. CIS is similar to HM in that it reflects the input Jenny received from NSs (learner-oriented speech, which adheres to the DBH more than NS-NS speech). HM could be considered, at least initially, a foreigner-directed variety of Motu that has become stabilized and expanded considerably. Cases such as HM support the view that the difference between naturalistic L2 varieties and pidgins is one of degree and not of kind.

In most other respects, Jenny's speech is similar to *Gastarbeiterdeutsch* in that both were and are spoken by adults, in situations of typologically dissimilar languages (Turkish, Greek, Serbian, and German for *Gastarbeiterdeutsch*; Mandarin and Spanish for CIS), with strong initial asymmetry and restrictions on internal and external access to the target language. CPE and CIS share the traits that the speakers are adults, with typologically dissimilar languages in contact in an asymmetrical situation, although for Jenny the situation has become more symmetrical and less restricted internally and externally. The key difference between CPE and CIS speech is that CPE was a community-wide communication solution, whereas Jenny's solution is an individual one.

In sum, I have adopted the position, on the basis of Bates and Goodman's (1999) research, that the development of grammar in the process of language learning—be it L1, L2, or pidginization—depends at least on perceptual and logical bootstrapping. As such, all types of language learning have, at least initially, much in common. From this perspective, one finds that certain cases of language learning, such as naturalistic L2 acquisition and pidginization, may differ in degree rather than in kind, depending on factors such as age, hierarchical relations, and attitudes. To account for the tense-aspect system of Jenny's variety of Spanish, I have appealed to the POA and the DBH, which have shed light not only on the form–function mapping of her system but also on those of the Portuguese- and Spanish-based creoles. This again suggests that language learning, regardless of the circumstances in which it occurs, is constrained largely by the same principles.

NOTES

1. An example of how close an L2 variety of a given language is to a pidgin lexified by the same language is found in Hinnenkamp (1984), who distinguished a tourist L2 variety from a tourist pidgin in the situation of German tourists in Turkey.

2. This information has been taken from Dutton (1997).

3. Dutton (1997) noted that

> even though . . . Hiri Motu is most probably a continuation of a simplified form of Motu that was used for communicating with visitors to the Motu area, it has developed its own structure which has to be learned just as does that of other well-recognized pidgins. Thus Motu speakers cannot produce Hiri Motu by ad-hoc simplification. . . . It is, moreover, not immediately intelligible to Motu speakers who have not been previously exposed to it. In other words, Hiri Motu is a language in its own right and is not some debased or broken form of Motu. (p. 13)

The use of the adverb "immediately" is revealing, leading one to believe that a Motu speaker would have little trouble understanding HM after some exposure to it.

4. An anonymous *SSLA* reviewer pointed out that in agglutinating languages, such as Turkish,

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

both content word and morphology are acquired together. Bates and Goodman (1999) did not contain studies on this type of language.

5. An anonymous *SSLA* reviewer correctly pointed out that, although vocabulary may be needed to support grammatical development, it does not guarantee it—that is, the acquisition of vocabulary is necessary but not sufficient for grammatical development.

6. L2 learners can, of course, learn new concepts and how to mark them. Jenny, the informant in this study, developed case distinctions in her pronominal system even though they do not exist in her native Mandarin (see Clements, in press). Such a distinction was arguably necessary to make herself understood.

7. The information in the section is taken from Shi (1991) as well as from Philip Baker (personal communication, February 8, 2002).

8. The aspectual markers in Cantonese and Mandarin are given in (i) and are from Matthews and Yip (1994, p. 198).

(i)

	Mandarin	Cantonese
Perfective	verb-*le*	verb-*jó*
Experiential	verb-*guò*	verb-*gwo*
Progressive	*zài* verb	verb-*gán*
Continuous	verb-*zhe*	verb-*jyuh*
Delimitative	verb-*yī*	verb-*háh*
Habitual	—	verb-*hōi*

9. Given that in the development of CPE the British cannot be said to have ever targeted Chinese, as Baker's (1999) definition of pidginization requires, CPE would also be a counterexample to his notion of pidginization.

10. Unless otherwise indicated, the information on the Chinese community in Spain is taken from Beltrán and García (2001).

11. The information on Mandarin Chinese is taken from Li and Thompson (1981, chap. 6 & 7), Smith (1991, chap. 11), and Li and Shirai (2000, chap. 5).

12. For purposes of consistency, the diacritics and labels for function words have been adapted from their sources.

13. A verb type is considered a member of one verb class or another on the basis of how it is used. For example, *pasa Australia* "went (to) Australia" is an accomplishment (telic), but *no pasa nada* "there is no problem" is stative (atelic). Some verb types were difficult to categorize. For example, *vivir* "to live" can be argued to be a state or an activity. The verb-token ratio is calculated per category. For instance, *sabe* "know" in the cell of third-person-singular present correct forms and *sabe* in the corresponding incorrect forms are counted as two types.

14. The term *gerund* is used here to refer to the Spanish forms in *-ndo*, as in *cantando* "singing" and *bebiendo* "drinking."

15. In general, the forms that were used correctly with regard to tense assignment were correct because they were present-tense forms used in reference to the present tense. That is, with the exception of the preterite forms, the correct forms largely referred to the present, and the incorrect forms to the past.

16. States and activity-states (i.e., forms of *vivir* "to live") are calculated together here.

17. The "other" category includes nonverbal or chunked lexical items, such as the use of *alquiler* "rental," *fuera* "out(side)," and *conóselo* "be acquainted with," which have been reanalyzed as verbs. This last item is most likely a reanalyzed form from *conoce lo que* "is acquainted with that which." It seems that Jenny parsed this structure as *conóselo* + *que* because she uses *que* "that" or "which" as a complementizer. There is also one instance of an imperfect form, *muría* "I/she/he was dying," which Jenny used in a preterite context.

18. The example containing a past participle marking anteriority is given in (i):

(i) *Yo pensa muchisima, antes nunca no pensado.*
I think a-lot before never NEG *think*-PPART
"I think about it a lot, before I had never thought about it."

19. Note that *ya* here does not have the distribution of the Chinese perfective suffix in (9)–(11). *Ya* tends to occur immediately before the verb and seems to mark perfectivity in many cases in Jenny's speech, although it displays somewhat variable order relative to the verb; see (i) and (iv). It also appears in contexts where it does not mark perfectivity such as (ii)–(iv). Some of these uses are similar but not identical to the ways in which Spanish speakers also use this adverb.

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

(i) *Ya conmigo dise . . .*
*ya with-me say-*3SG-PRES
"[She] said to me . . . "

(ii) *Tú puede ya fuera China, trabajando . . .*
2SG-FAM *can-*3SG-PRES *ya out China working*
"You can leave China to work [out of China] . . . "

(iii) *Vale, tú quiere fuera, ya fuera.*
OK 2SG-FAM *want-*3SG-PRES *out ya out*
"OK. If you want to leave [China], you can leave."

(iv) *Y ya inglés poquito, no mucho.*
and ya English a little NEG *much*
"And English, [I knew] a little, not much."

The use of equivalents of "already" as perfective markers is not uncommon, as Bybee, Perkins, and Pagliuca (1994, pp. 63–64) noted. There are languages, such as Malay, Inuit, and Buli, in which the equivalent of "already" serves as both an adverb and a perfective marker. I thank an anonymous *SSLA* reviewer for this observation.

20. It is interesting to note that CPE also has the perfective marker *hab*, shown in (i).

(i) *My no sabbee fookee hab catchee wifoo, Tooloo?*
I NEG *know* PVF *get wife true*
"I didn't know you got a wife (had gotten married)." (Shi, 1991, p. 23)

21. Specifically, Jenny uses *ya* most with accomplishments and achievements, often unidiomatically. In token counts, there were a total of 33 instances of *ya* with the following breakdown: 48% for accomplishments and achievements together (18% and 30%, respectively), 34% for states, and 18% for activities. In type counts, there were a total of 18 types with the following breakdown: 56% for accomplishments and achievements together (22% and 34%, respectively), 22% for states, and 22% for activities. The use of *ya* with stative verbs refers to a change of state in Spanish. Jenny seems to have learned them as chunks, such as *ya está* "it's ready/done," *ya puede* "X can (do it now)," *ya sabe* "X already know(s)," *ya conóselo* "X have/has known (a person for a long time)."

22. One of the various arguments that a naturalistic L2 variety is not different from a pidgin in type but in degree has to do precisely with the nature and extent of mutual accommodation between the target language speaker and learner. In a naturalistic setting, it is assumed that the target language speaker will accommodate through various means (repetition, heightened articulation, heightened speech volume, circumlocution, different varieties and degrees of restructured speech, etc.) to facilitate communication. In this accommodation process, a certain set of registers is used that over time can become an agreed-on variety between a target language speaker and a learner. Although such a variety is not yet a pidgin in Bakker's (1995) sense, the mutual accommodation process is essentially the same. A pidgin emerges when the accommodation process extends to various target language speakers and learners, who over time develop a common, though variable, variety among themselves. See also Hinnenkamp (1984) for an interesting discussion of foreigner-directed speech in naturalistic settings.

23. In studies on English L1 acquisition by Bloom et al. (1980) and Shirai (1991), on English L2 acquisition by Robison (1995), and on an L1 acquisition connectionist simulation by Li and Shirai (2000), the third-person-singular present was also found to be the default form.

REFERENCES

Andersen, R. W. (Ed.). (1983). *Pidginization and creolization as language acquisition*. Rowley, MA: Newbury House.

Andersen, R. W. (1993). Four operating principles and input distribution as explanation for underdeveloped and mature morphological systems. In K. Hyltenstam & A. Viborg (Eds.), *Progression and regression in language* (pp. 309–339). New York: Cambridge University Press.

Andersen, R. W., & Shirai, Y. (1996). The primacy of aspect in first and second language acquisition: The pidgin-creole connection. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 527–570). San Diego, CA: Academic Press.

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

Baker, P. (1999, August 31). Pidginization. Message posted to CREOLIST mailing list, archived at http://listserv.linguistlist.org/archives/creolist.html.
Bakker, P. (1995). Pidgins. In J. Arends, P. Muysken, & N. Smith (Eds.), *Pidgins and creoles* (pp. 25–39). Amsterdam: Benjamins.
Bates, E., & Goodman, J. C. (1999). On the emergence of grammar from the lexicon. In B. MacWhinney (Ed.), *The emergence of language* (pp. 29–79). Mahwah, NJ: Erlbaum.
Beltrán, J., & García, C. (2001). The Chinese community. In M. T. Turell (Ed.), *Multilingualism in Spain* (pp. 282–300). Clevedon, UK: Multilingual Matters.
Bickerton, D. (1977). Pidginization and creolization: Language acquisition and language universals. In A. Valdman (Ed.), *Pidgin and creole linguistics* (pp. 49–69). Bloomington: Indiana University Press.
Blackshire-Belay, C. (1991). *Language contact: Verb morphology in German of foreign workers*. Tübingen: Gunter Narr.
Bloom, L., Lifter, K., & Hafitz, J. (1980). Semantics of verbs and the development of verb inflection in child language. *Language, 56,* 386–412.
Bloomfield, L. (1933). *Language*. New York: Holt, Rinehart, & Winston.
Bresnan, J. (1982). *The mental representation of grammatical relations*. Cambridge, MA: MIT Press.
Bresnan, J. (2001). *Lexical-functional syntax*. Oxford: Blackwell.
Bybee, J. (1985). *Morphology*. Amsterdam: Benjamins.
Bybee, J., & Pardo, E. (1981). On lexical and morphological conditioning of alternations: A nonce-probe experiment with Spanish verbs. *Linguistics, 19,* 937–968.
Bybee, J., Perkins, R., & Pagliuca, W. (1994). *The evolution of grammar*. Chicago: University of Chicago Press.
Clements, J. C. (1996). *The genesis of a language*. Amsterdam: Benjamins.
Clements, J. C. (in press). On classifying language-contact varieties. In L. Sayahi & M. Westmoreland (Eds.), *Selected proceedings of the First Workshop on Spanish Sociolinguistics*. Somerville, MA: Cascadilla Press.
Clements, J. C., & Koontz-Garboden, A. J. (2002). Two Indo-Portuguese creoles in contrast. *Journal of Pidgin and Creole Languages, 17,* 191–236.
Clyne, M. (1968). Zum Pidgin-Deutsch der Gastarbeiter [On pidgin-German of immigrant workers]. *Zeitschrift fuer Mundartforschung, 1,* 40–55.
Comrie, B. (1976). *Aspect*. New York: Cambridge University Press.
Dutton, T. (1997). Hiri Motu. In S. G. Thomason (Ed.), *Contact languages: A wider perspective* (pp. 9–43). Amsterdam: Benjamins.
Ferguson, C. A., & DeBose, C. (1977). Simplified registers, broken language, and pidginization. In A. Valdman (Ed.), *Pidgin and creole linguistics* (pp. 99–125). Bloomington: Indiana University Press.
Forman, M. (1972). *Zamboangueño texts with grammatical analysis: A study of Philippine Creole Spanish*. Ithaca, NY: Cornell University Press.
Gili Gaya, S. (1960). *Funciones gramaticales en el habla infantil* [Grammatical functions in child speech]. Rio Piedras: University of Puerto Rico.
Goldberg, A. E. (1995). *Constructions: A construction grammar approach to argument structure*. Chicago: Chicago University Press.
Goldberg, A. E. (1999). The emergence of the semantics of argument structure constructions. In B. MacWhinney (Ed.), *The emergence of language* (pp. 197–212). Mahwah, NJ: Erlbaum.
Hall, R. (1966). *Pidgin and creole language*. Ithaca, NY: Cornell University Press.
Hawkins, J. (1994). *A performance theory of order and constituency*. New York: Cambridge University Press.
Heidelberger Forschungsprojekt, P. D. (1975). *Sprache und Kommunikation auslandischer Arbeiter* [Language and communication of foreign workers]. Kronberg, Germany: Scriptor Verlag.
Hinnenkamp, V. (1984). Eye-witnessing pidginization? Structural and sociolinguistic aspects of German and Turkish foreigner talk. In M. Sebba & L. Todd (Eds.), *York papers in linguistics: Vol. 11. Papers from the York Creole Conference, September 24–27, 1983* (pp. 153–166). Heslington, UK: University of York.
Holm, J. A. (1988). *Pidgins and creoles: Vol. 1. Theory and structure*. New York: Cambridge University Press.
Holm, J. A. (1989). *Pidgins and creoles: Vol. 2. Reference survey*. New York: Cambridge University Press.
Jespersen, O. (1964). *Language: Its nature, development, and origin*. New York: W. W. Norton and Co. (Original work published 1921.)
Klein, W., & Perdue, C. (1992). *Utterance structure: Developing grammars again*. Amsterdam: Benjamins.

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

Koontz-Garboden, A. J., & Clements, J. C. (2002, January). *Some theoretical implications of adpositions in Spanish- and Portuguese-based creoles*. Paper presented at the annual meeting of the Society of Pidgin and Creole Languages, San Francisco, CA.
Kotsinas, U.-B. (1989). Come, stay, and finish: On the development of aspect markers in interlanguage and pidgin/creole languages. In L.-G. Larsson (Ed.), *Proceedings of the Second Scandinavian Symposium on Aspectology* (Vol. 19, pp. 33–48). Uppsala, Sweden: Acta Universitatis Upsaliensis.
Kotsinas, U.-B. (1996). Aspect marking and grammaticalization in Russenorsk compared with Immigrant Swedish. In E. Håkon Jahr & B. Ingvild (Eds.), *Language contact in the Arctic: Northern pidgins and contact languages* (pp. 123–154). Berlin: Mouton de Gruyter.
Langacker, R. (1987). *Foundations of cognitive grammar*. Stanford, CA: Stanford University Press.
Levin, B., & Rappaport Hovav, M. (1995). *Unaccusativity: At the syntax-lexical semantics interface*. Cambridge, MA: MIT Press.
Li, C., & Thompson, S. (1981). *Mandarin Chinese: A functional reference grammar*. Berkeley: University of California Press.
Li, P., & Shirai, Y. (2000). *The acquisition of lexical and grammatical aspect*. Berlin: Mouton de Gruyter.
Matthews, S., & Yip, V. (1994). *Cantonese: A comprehensive grammar*. London: Routledge.
Maurer, P. (1998). El papiamentu de Curazao [The Papiamentu of Curazao]. In M. Perl & A. Schwegler (Eds.), *América negra: Panorámica actual del los estudios lingüísticos sobre variedades hispanas, portuguesas, y criollas* (pp. 139–217). Madrid: Iberoamericana.
Mühlhäusler, P. (1986). *Pidgin and creole linguistics*. Oxford: Blackwell.
Muysken, P., & Smith, N. (1995). The study of pidgin and creole languages. In J. Arends, P. Muysken, & N. Smith (Eds.), *Pidgin and creoles: An introduction* (pp. 3–14). Amsterdam: Benjamins.
Robison, R. E. (1995). The aspect hypothesis revisited: A cross-sectional study of tense and aspect marking in interlanguage. *Applied Linguistics, 16,* 345–370.
Romaine, S. (1988). *Pidgins and creoles*. London: Longman.
Schuchardt, H. (1909). Lingua Franca. *Zeitschrift fuer romanische Philologie, 33,* 441–461.
Schumann, J. H. (1978). *The pidginization process: A model for second language acquisition*. Rowley, MA: Newbury House.
Schwegler, A. (1998). El palenquero. In M. Perl & A. Schwegler (Eds.), *América negra: Panorámica actual del los estudios lingüísticos sobre variedades hispanas, portuguesas, y criollas* (pp. 219–291). Madrid: Iberoamericana.
Sebba, M. (1997). *Contact languages: Pidgins and creoles*. New York: St. Martin's Press.
Shi, D. (1991). Chinese Pidgin English: Its origin and linguistic features. *Journal of Chinese Linguistics, 19,* 1–40.
Shirai, Y. (1991). *Primacy of aspect in language acquisition: Simplified input and proto-type*. Los Angeles: University of Southern California.
Siegel, J. (1999, August 9). SLA and pidgins. Message posted to CREOLIST mailing list, archived at http://listserv.linguistlist.org/archives/creolist.html.
Smith, C. (1991). *The parameter of aspect*. Dordrecht: Kluwer.
Van Valin, R. D., & LaPolla, R. J. (1997). *Syntax: Structure, meaning, and function*. New York: Cambridge University Press.
Vendler, Z. (1967). *Linguistics in philosophy*. Ithaca, NY: Cornell University Press.
Zobl, H. (1982). A direction for contrastive analysis: The comparative study of developmental sequences. *TESOL Quarterly, 16,* 169–183.

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

APPENDIX A

Table A1. Pidgin features of Hiri Motu compared with those of simplified Motu[a]

Features of Hiri Motu	Features of simplified Motu
No irregular verbs	Yes? Most common ones like "come, go" appear in simple form as in HM
"Have" and "have not" expressed by *dekenai* + *noho* or by POSS + N + *noho*	Uses both full and short forms of Motu construction with postposition *mai* "with"
Uses *ese* and *be* as subject markers or focus elements	No subject or focus markers (although evidence is very limited)
Restricted dual pronoun form	Yes, same as in HM
No bound pronoun subjects or objects on verbs (except in Central dialect); uses free pronouns derived from "true" Motu	Yes, same as in HM
Transitive verbs are marked by final *-a*	Yes, same as in HM
No noun classes based on possession (e.g., alienable vs. inalienable)	Yes, same as in HM
Dekena(i) a generalized postposition	No, uses Motu postpositions
Generalized forms for "like this," "like that," "how"	?–no evidence
Restricted forms for "all" and "the whole"	?–available evidence suggests same as HM
Restricted adjective agreement	?–no evidence
Simple imperative	Yes, as in HM
Dohore and variants used before verb to indicate future	?–no evidence of such use in available materials
Uses *vadaeni, noho*, and *gwauraia* after verb to indicate completed, continuous, and intentive or inceptive aspect	No evidence of use of *noho*, but *vada* is used before verbs to indicate completed action (as in Motu), and *gwauraia* after verb (as in HM) to indicate intention
Uses *lasi* as generalized negative: after verbs, and after adjectives	Yes, same as in HM: *lasi* after verbs, and *lasi* after adjectives
Reflexivity expressed by *sibana* (no special verb forms)	Yes, same as in HM
Temporal clauses marked by *negana(i)*	?–no evidence in available materials. Juxtaposition is the main relating device
Uses *bema* as conditional clause marker	?–evidence in available materials. Juxtaposition the main relating device
Uses *vadaeni* "enough, okay" as sentence connective	Some use of *vadaeni* similar to HM
Flexible word order depending on whether subjects and objects are nouns or pronouns	?–invariable SOV like Motu although no evidence for pronouns available

[a]Taken from Dutton (1997, pp. 35–37)

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

APPENDIX B

FEATURES OF CPE

The lexicon of CPE is largely English, with some Portuguese (e.g., *savy* "know" and *pikinini* "little [one]") that came through English and some items from Indo-Aryan languages (e.g., Hindi) such as *tiffin* "lunch" and *lac* "100,000." The CPE traits presented in Table B1 yield a total of 29 altogether with this breakdown: 0 English only, 9 Chinese-English, 13 Chinese only, and 7 Other.

Table B1. Phonological, morphological, syntactic, and discourse traits of CPE

Traits	Language attributed to
Phonological traits[a]	
r → *l*	Chinese
[v] → [b]	Chinese
b, d, g devoicing	Chinese
š → *s* (more common) and *s* → *š* (more rare)	Other
Three syllabic simplifications: vowel epenthesis, cluster simplification (especially syllable-finally), or both	Chinese
Morphological traits	
No case, number, gender, or person marking (except in pronouns)	(English), Chinese
No evidence of verbal inflection	Chinese
Syntactic traits	
SVO word order	English, Chinese
No passive voice	Other
Classifier *piece*	Chinese
N + N (with genitive or modifier relation)	English, Chinese
No prepositions as such	Other
Adv + Adj	English, Chinese
V + IO + DO order with no marking for IO or DO	English, Chinese
V + DO + IO with no marking is also found	Other
Adv + V + NP	Chinese
V + N + Adv	English, Chinese
Hab "have" completive	English, Chinese
Other than *hab*, there are no TMA markers	Other
Belong copula with Ns, absent with Adjs	Chinese
No articles (*the, an, a*); instead there are demonstratives	Chinese
In-situ and fronted *wh*-words	(English), Chinese
No equivalents of *yes* and *no*	Chinese
V + NEG + V (*savee, no savee* "do you understand?")	Chinese
Bimorphemic *wh*-words	Other
Negation: *no* before the predicate	Chinese
No relative clauses	Other
Abundant complement clauses	English, Chinese
Discourse traits	
Arguments can be omitted if recoverable by context	Chinese

[a]The traits θ → t and δ → d listed by Shi (1991) may well be due to dialectal influence of the English supercargoes. Thus, they have been excluded from the list. My thanks to Philip Baker for this observation.

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press

APPENDIX C

FEATURES OF CIS

The lexicon of CIS is exclusively Spanish. The CIS traits presented in Table C1 yield a total of 37 traits altogether with this breakdown: 2 Spanish only, 6 Chinese-Spanish, 14 Chinese only, 4 Other, and 11 Not present.

Table C1. Phonological, morphological, syntactic, and discourse traits of CIS

Traits	Language attributed to
Phonological traits	
r → *l*	Chinese
[v] → [b]	Not present
b, d, g devoicing (*b* → *p*)	Chinese
Occasional lack of fricative [β]	Other
δ → *d*	Not present
š → *s* (more common) and *s* → *š* (more rare)	Not present
Five types of syllabic simplification strategies	
vowel epenthesis	Chinese
cluster simplification	Chinese
both vowel epenthesis and cluster simplification	Chinese
deletion of syllable coda	Chinese
retention of closed syllables in *-s*	Spanish
Voicing	Not present
Morphological traits	
No case, number, gender, or person marking (except in pronouns)	Chinese
No evidence of verbal inflection	Chinese
Syntactic traits	
SVO word order	Spanish, Chinese
No passive voice	Other
Classifier *piece*	Not present
N + N (with genitive or modifier relation)	Chinese
No prepositions as such	Not present
Adv + Adj	Spanish, Chinese
V + IO + DO order with no marking for IO or DO	Not present
V + DO + IO with no marking is also found	Not present
Adv + V + NP	Chinese
V + N + Adv	Spanish, Chinese
ya completive	Chinese
Other than *ya*, there are no TMA markers	Other
Copula with Ns, absent with Adjs	Chinese
No articles (*the, a, an*); instead there are demonstratives	Chinese
In-situ and fronted *wh*-words	Spanish, Chinese[a]
No equivalents of *yes* and *no*	Spanish[b]
V + NEG + V (*savee, no savee* "do you understand?")	Not present
Bimorphemic *wh*-words	Not present
Negation: *no* before the predicate	Spanish, Chinese
No relative clauses	Other
Abundant complement clauses	Spanish, Chinese
Discourse features	
Arguments can be omitted if recoverable by context	Chinese

[a]fronted
[b]there are

https://doi.org/10.1017/S0272263103000111 Published online by Cambridge University Press