Formal Instruction and Language Contact in Language Variation: The Case of *ser* and *estar* + Adjective in the Spanishes of Limón, Costa Rica

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1. Introduction

Various studies of copula (i.e., *ser* and *estar*) choice in Spanish in contact situations among Spanish-English bilinguals, in contexts where Spanish is not an official language (i.e., Southwestern United States) have shown that copula selection is undergoing change. The change from traditional usage is that the copula *estar* is becoming more accepted in an extended pre-adjectival context, especially with adjectives of size, physical appearance, age, and description and evaluation: this change was initially attributed to contact with English (Silva-Corvalán, 1986). This claim has been extended to monolingual Spanish by Gutiérrez (1992, 1994, 2003) because he found that monolingual Mexicans from the same social class as those studied by Silva-Corvalán (1986) showed the same behavior with regard to copula choice. Furthermore, Díaz-Campos & Geeslin (forthcoming) found evidence of this phenomenon in an analysis of the spoken Spanish of Caracas, a context where Spanish is the official language and has no contact with English. Previous studies on the Spanish copula have mostly investigated settings where either Spanish is the only language spoken and the variety has been categorized as monolingual (e.g., Caracas, Venezuela), where Spanish is not the official language (e.g., Los Angeles), or in contexts where Spanish is spoken widely, but English has an important role in formal education (e.g., Puerto Rico). Another context in which copula choice in Spanish has been investigated is the acquisition of Spanish as a foreign or second language. These second language acquisition studies have been conducted in settings where Spanish is not an official language (e.g., United States). There is a lack of evidence related to copula choice in geographical contexts in which Spanish is spoken as a native language and it holds official language status and English, spoken as a native language, does not.

Even though Costa Rica has been traditionally categorized as a monolingual society, the linguistic situation in this country is not different from most multilingual societies in the world (Aguilar-Sánchez, 2005a, 2005b). Due to the fact that Costa Rica’s official language is, according to the present Costa Rican constitution, Spanish, other languages spoken in the country are neglected for the most part. Linguistic phenomena within Costa Rica have not yet been investigated from a multilingual perspective. This being the case, it is important to highlight that the language situation in Costa Rica is indeed more complex than what is normally believed, because more than three different languages are spoken natively in the country. As a result, Costa Rica’s linguistic situation cannot be categorized as that of a monolingual society. Like most of the countries in Central America, Costa Rica is a country with native English speakers in a small percentage (about 2 percent) of its population (Aguilar-Sánchez, 2005a, 2005b).

Thus, situated on the Atlantic coast of Costa Rica, the province of Limón represents one of the most complex language settings in Costa Rica. English was introduced to the territory by the construction of the railroad to the Atlantic. It was built by the United Fruit Company, an enterprise...
attracted by the blossoming of banana plantations in the region in the late 19th and early 20th
centuries. Workers were brought from Jamaica and other islands of the Caribbean not only for the
construction of the railroad but also because of the opportunity to work on the plantations (Aguilar-
Sánchez, 2005a, 2005b; Herzfeld, Carrington, Craig, & Dandare, 1983; Meléndez Chaverri & Duncan,
1974; Palmer, 1986; Purcell, 1993; Viales Hurtado, 1998; Winkler, 1998). English has been the main
language of intra-racial communication and a representative icon of the Afro-Caribbean ancestry for
the population of the region (Aguilar-Sánchez, 2005a, 2005b; Viales Hurtado, 1998).

Spanish and English are not the only languages that are present in the province of Limón. In this
area, we also find Chinese and Bribri languages, among others. I will abstain from detailing their
development because the main purpose of the current study is related to the contact situation between
Spanish and English.

2. Previous studies on the study of copula + adjective variation in Spanish

2.1. Spanish in Contact with English

Silva-Corvalán (1986) represents the first and most important study to explore the extension of
estar. She studied the speech of 27 bilinguals of different generations and degrees of Spanish language
proficiency. Data were collected through recordings of conversations between the researcher and the
participants. There were three groups of participants, those who were born in Mexico and migrated to
the U.S.A. after the age of eleven (Group I); those who were born in the U.S.A. or migrated to the
U.S.A. before the age of six (Group II); and those born in the U.S.A. whose parents were of Mexican
ancestry who fit the definition of the second group (Group III). She states that the choice between ser
and estar does not depend only on syntactic or lexical constraints, but that the extended discourse and
shared knowledge among the interlocutors must be considered.

In her study, Silva-Corvalán (1986), with the use of cross-tabulations, examined data using
variables such as adjective class which divides adjectives according to their semantic categories, class
and individual frame of reference (Falk, 1979). This variable distinguishes whether the adjective used
to describe a subject classifies this subject as part of a class of subjects with the same characteristics or
not. Another variable used was susceptibility to change which categorizes attributes of the subject as
susceptible to change or not. Animacy also was included. This variable divides subjects into animate
beings and inanimate objects. Semantic transparency, which classifies adjectives depending on how
transparent their meaning is to the speaker, is another category of interest. The last category contains
four subcategories of different modality which refers to instances in which there is no semantic
difference in the adjective. One of these subcategories is apparent synonymy which states that there are
no differences in the proposition with either copula, the choice is not allowed in standard language,
and there is a clear difference.

She found that adjectives differ with respect to the innovation. Adjectives of size, physical
appearance, age, and evaluation favor innovative uses. The innovative use of the first three classes
correlated with animacy of the subject; that high frequency of estar with certain attributes may be
promoting its extension to less frequent class frame contexts in which the same attributes are used. She
also found that contexts where the contrast between ser and estar is transparent with a group of
adjectives that have different meanings associated with the choice of copula were more resistant to the
extension of estar. Furthermore, she found that in contexts where the copula choice is not associated
with a semantic difference in the adjective, but rather with a subtle difference in the verb, the context
favors the extension of estar; that apparent synonymy favors the extension of estar; and that the
innovative uses of estar increase as the level of proficiency in Spanish decreases.

She concludes that the innovation present in her study represents part of an evolutionary trend in
Spanish and other Romance languages and that language contact accelerates this trend. She states that
the condition of reduced access or lack of access to formal varieties of the language must be met in
order for this diffusion to happen and that internally motivated changes which involve generalizations
across languages are also accelerated in a situation of extended contact. With regard to the copula
choice, Silva-Corvalán (1986) suggests that “the extension of estar in progressives [estar + present
participle] and its frequent association with be in those constructions [be + v-ing] may favor the rapid
diffusion of estar in the context of predicate adjectives, where Spanish has evidenced a slow process of
change independent of any language-specific influence’ (p. 604). She suggests that there is no noticeable movement toward a steady functional specialization; but that the continuous renovation of Spanish due to the arrival of other immigrants keeps Los Angeles Spanish from changing entirely. She concludes by saying that the Spanish copula opposition with attributes is lost to a large extent among speakers in her Groups II and III, but that these speakers are unlikely to pass on Spanish to their descendants. This led her to assume that the system described in her study which maintains a limited amount of meaningful variation will persist as a defining feature of English-dominant bilinguals.

Ortíz-López (2000) studied another variety of Spanish in contact with English. His study focused on the Spanish of Puerto Ricans. He followed Silva-Corvalán’s (1986) approach taking into account semantic transparency, age, education and adjective class as factors. He studied the responses to a 47-linguistic-context questionnaire by 122 participants and 20 interviews by another group of participants. The participants were 41 males and 81 females for the questionnaire group and eleven males and nine females for the interview groups. They were sixteen balanced bilinguals, sixty-seven with intermediate domain of English and thirty-nine participants with poor domain of English. He used cross-tabulations to analyze his data. His results showed that innovative use accounted for nineteen percent of this sample on the questionnaire and twelve percent on the interviews. He studied the innovative form of estar with one linguistic variable: adjective class. He found that innovative uses are more common with adjectives of status, followed by adjectives of size and evaluation for the questionnaire. For the interview data, he reported that innovation was found more with adjectives of age followed by adjectives of size. He reported that men use more estar than women in the questionnaire, but that differences were not as evident as in the interview. In the interview, he found that women are more resistant to change (i.e., they use estar less). One important finding of this study is that Puerto Rican bilinguals used ser more than those that were not total bilinguals. He states that in the case of Puerto Ricans, contact with English is not a variable that leads to change, which is different from the bilinguals from Los Angeles (Silva-Corvalán, 1986, 1994). They are also different from those of speakers from Houston (Gutiérrez, 2003). Ortiz-López (2000) explains this difference by stating that Puerto Rican Spanish has been acquired as an L1 and its acquisition has been supported by formal education in Spanish. The support from formal education in Spanish, he states, neutralizes or stops the force that English could have as a conditional factor. He proposes that semantic transparency aids the extension of estar especially with adjectives that imply a constant change. These adjectives are adjectives of age, size, physical appearance, evaluation, among others. He adds that semantic transparency is heightened if we incorporate syntactic elements such as temporal adverbs like ahora ‘now’, which add a semantic function of temporality when choosing the verb. He concludes that this change is caused by internal linguistic constraints such as the type of adjective and by syntactic and pragmatic factors such as contact and age.

Similar to the studies mentioned above, Salazar (2007) studied the extension of estar from an innovative-prescriptive approach. Unlike previous studies of this type, Salazar used variable rule analysis in her data. Her data came from the New Mexico Colorado Spanish Survey (Bills & Vigil, 1999). She chose twenty participants (8 male and 12 female). Their ages range between 50 and 70+. Seven of her participants had eight years or less of formal education and the rest eight or more. Her dependent variable was the use of ser or estar. Her independent variables include conservative or innovative use, verb tense, adjective type, presence or absence of an intensifier, presence or absence of a time adverb, and code-switching after the copula (i.e., the adjective was said in English). She found that contact varieties show higher percentage of innovative use of estar when compared to other studies in monolingual Spanish. She also found that adjective type, especially adjectives of age, was the strongest predictor of estar. The second strongest predictor was presence or absence of a time adverbial followed by code-switching, and the presence or absence of an intensifier. Her variable verb tense was not selected as significant. Among the social factors that showed to be significant predictors of estar was education. Gender was not significant and she eliminated age as a variable because she found incoherent results and states that more data would be needed to evaluate this factor group. She concludes that despite being categorized as an isolated and archaic variety of Spanish, New Mexico Spanish exhibits innovative use of the copular verb estar in combination with adjectives and participles and that adjective type and the presence of an adverbial are the factors most likely to cause a speaker to choose estar.
Salazar’s (2007) findings are important in three ways. First, they validate the hypothesis that contact with English accelerates the rate of change and adds to the body of knowledge already established for varieties in contact with English. Second, she provides empirical evidence to Ortiz-López’ (2000) hypothesis, discussed below, that the presence of a time adverbial would contribute to the presence of *estar*. However, these findings contradict Schmitt and Miller’s (2007) hypothesis that adverbs would be needed with *ser* and not with *estar* because *ser* is semantically empty for aspect, but *estar* is not. Because of this discrepancy between a theoretical account and an empirical study, more studies are needed to further test these two hypotheses. Third, it is the first to use variable rule analysis in a variety of Spanish in contact with English.

### 2.2. Monolingual Spanish

Gutiérrez (1992, 1994, 2003) found, in the Spanish of Michoacán, Mexico, patterns similar to those found by Silva-Corvalán (1986). He studies the speech of twenty-six monolingual Mexicans from the same social class as those studied by Silva-Corvalán (1986). He used percentages of use as a point of comparison. He found that the frequency of innovation was lower in monolingual Spanish, but that the fact that innovation was present supports the presence of a change. He found similar comparative patterns to those of Silva-Corvalán (1986). This finding contrasts with that of bilingual communities he compared them to in that these adjectives are found with the innovative form alongside *moral characteristic*, *social status*, *perception* and *color*. He concludes that although innovative *estar* is still competing with *ser* in several areas, evidence from the Michoacán case points to a very significant movement towards innovation (p.175) and that this innovation is not adding a new meaning. He also concludes that evidence from the bilingual communities of Los Angeles (Silva-Corvalán, 1986, 1994) and Houston (Gutiérrez, 2003) give further evidence in favor of the extension of *estar*. He found this extension in higher frequencies which allowed him to state that language contact accelerates changes that have originated in monolingual environments in agreement with Silva-Corvalán’s (1986) findings.

Cortés-Torres (2004) studied a new variety of monolingual Spanish: Cuernavaca Spanish. She studied the extension of *estar* through a variable rule analysis of the data collected from thirty-six participants. She collected data of two sorts. The first one was oral data and the second one was a questionnaire. She coded her variables as innovative or not innovative use. Her variables included the linguistic variable *adjective class* and she included adjectives of *age*, *size*, *physical appearance*, *evaluation* and *personal characteristics*. She also included social variables such as *level of education*, *age*, *gender* and *style*. Data for the variable *style* came from both oral data and from the questionnaire. She found that adjectives that favor *estar* are adjectives of *physical appearance*, *age* and *evaluation* whereas adjectives that disfavor it are adjectives of *size*, and personal characteristics. Social variables that favor *estar* are *education* and *style*. Participants with a lower level of education favor the use of *estar* whereas the ones with higher levels of education disfavor it. Conversation style disfavors the use of *estar* while questionnaire favors it. She concludes that there is an innovative use of *estar* in the Spanish of Cuernavaca. Cortés-Torres’ (2004) findings regarding style, in particular the ones from the questionnaire, seem problematic because she reports that all contexts in the questionnaire “were framed as a framework of class” (p. 790) (Falk, 1979) and that adjectives that favor the use of *estar* were used predominantly to construct the questionnaire (Cortés-Torres, 2004, p. 793), which makes the results from this instrument be highly favorable of *estar* while the conversation was less biased towards one of the copulas. However, her findings regarding the presence of an ongoing change in Cuernavaca, Mexico are an important contribution to the study of copula choice in Spanish because it adds a new variety of monolingual Spanish.

Díaz-Campos and Geeslin (forthcoming) applied the multi-feature model proposed in Geeslin’s line of work (2002a, 2002b) to study the copula choice in a variety of Spanish said to have no contact with English: Caracas, Venezuela. They used the Estudio Sociolingüístico de Caracas¹ (1987) [financed by the Consejo de Desarrollo Científico y Humanístico de la Universidad Central de

¹ Sociolingüístico Study of Caracas
Venezuela\textsuperscript{2}] which includes half-hour interviews, conducted in 1987 and 1988 of 160 speakers born and raised in Caracas, with parents also from Caracas. Each interview was divided evenly among four age groups, both genders and five socioeconomic groups. The authors studied data from four age groups: 14-29, 30-45, 46-60, 61 and above, three social classes (low, middle and upper); and they were evenly divided between men and women (2 participants per cell). They concluded that the multivariate analysis they proposed showed that the factors, both linguistic and non-linguistic, included in their analysis are relevant in describing variation in copula use in Caracas Spanish. These variables were predicate type, susceptibility to change, experience with the referent, resultant state, adjective class, copulas allowed, age, and social class. They also found that older speakers tended to favor the use of estar, a pattern of behavior that is an indication of the stability of this phenomenon in Caracas Spanish.

Díaz-Campos and Geeslin (2005a) investigated whether the extension of estar was a change in progress or a stable change. They researched how copula use differed between older and younger speakers by studying the frequency of use of estar and its predictors. They also studied how frequency of occurrence of the predictors of estar would vary across age groups. In a re-analysis of the 2004 data, the authors found that older generations tended to favor the use of estar and there were no prominent differences between female and male speakers. In their predictor analysis by age group they found that predicate type, resultant state, adjective class and copulas allowed were common predictors for all age groups. However, there were different predictors that were significant for specific age groups. These predictors were susceptibility to change for age group 14-29; experience with the referent for groups 14-29, 46-60, and 61 and above; and socioeconomic class for group 46-60. They concluded that a sociolinguistic interview does not elicit the same types of contexts from all speakers, and that three of the variables showed a greater proportion of the categories that favor estar for older speakers. Their results on age and gender seem to indicate that the extension of estar is a stable phenomenon, but they also found that types of contexts were not equally represented among age groups and that a comparison across age groups must also take these differences into account. Their results revealed that discourse factors such as predicate type, resultant state, adjective class, and copulas allowed are more important predictors than age and gender.

Díaz-Campos and Geeslin (2005b) studied the extension of estar with adjectives and its relationship to language contact. They examined the individual categories of the adjective class variable to determine their relationship with the use of estar. Their intention was to relate adjective classes to the innovative use found in previous work. They stated that the classes that are the best predictors of use of estar may not actually represent innovation. They were guided by questions such as what categories of the adjective class variable show the most frequent use of estar; what categories of the adjective class variable show innovation; and how their results relate to previous studies on adjectives and copula choice. In a subsequent analysis of the data, they found that adjective classes with highest use of estar were mental state, size, physical appearance, color, status, and age. The distribution of estar with each adjective class across the variable copulas allowed showed more tokens of estar in the both allowed category than were required. Their results revealed uses of estar in contexts formerly reserved for ser for all age groups. A high frequency of use of estar is especially noticed with adjectives of age, size, and status. Furthermore, when both copulas are allowed speakers tended to favor estar, evidence that innovative uses are emerging. They concluded that the monolingual Caracas Spanish shows similarities to US/Mexican Spanish in the innovative use of estar with adjectives of age, size, physical description, evaluation, color for certain age groups, for adjectives of status and size for all age groups, and age and description of personality for the older speakers.

2.3. Spanish in contact with other languages

Guijarro-Fuentes and Geeslin (2006) studied the responses of 37 bilinguals from Galicia, Spain to a contextualized questionnaire where they were required to select the appropriate copula according to the discourse context that was provided to them. The authors searched for the linguistic features that

\begin{itemize}
  \item \textsuperscript{2} Scientific and Humanistic Development Council of the Universidad Central de Venezuela
\end{itemize}
best determine copula for Galician speakers of Spanish, to what degree bilingualism determines copula choice, and compared how Galician speakers of Spanish compare to other Spanish-speaking populations, more specifically those studied by Guijarro-Fuentes and Geeslin (2003). To achieve their goal, the authors collected social data via a background questionnaire and linguistic data via a written contextualized preference task that contained 28 items, each of which is preceded by a paragraph-length context. Three data analysis procedures were conducted. The first one was a set of Chi-square tests used to determine which linguistic variables, in isolation, were strong predictors of copula choice. The results showed that all linguistic variables proved to be strong predictors of copula choice when taken in isolation. The second analysis was a regression analysis conducted to test which of these variables were strong predictors of copula choice when embedded in a regression model. The results of this regression showed that predicate type, frame of reference, susceptibility to change, adjective class, and copulas allowed were strong predictors of copula choice. Social variables were analyzed in the same fashion as the linguistic variables. However, when in isolation, none of the social variables turned out to be strong predictors of copula choice. When embedded in the regression model, only two social variables were strong predictors of copula choice: native language and age. The authors conclude that Galician bilinguals respond to the same linguistic contextual features in using estar as monolinguals. They also found that few of the social variables related to bilingualism were good predictors of copula choice and suggested that more research should be done to account for their influence in copula choice.

A large-scale study on Spanish in contact with four languages of the Iberian Peninsula was conducted by Geeslin and Guijarro-Fuentes (2008). They set out to address estar selection in situations of language contact in Spain in order to extend the body of research beyond contact situation between Spanish and English. The first of its kind, Geeslin and Guijarro-Fuentes (2008) provided a large-scale, multi-group comparison of copula selection in Spanish in contact with Catalan, Galician, Valencian, and Basque. They were guided by the questions of how and with what frequency copulas are selected in each of the five language regions. They also explored to what degree speakers within a single group respond unanimously in their selection of estar. They continue the line of research by asking what the linguistic predictors of estar were and whether there were differences between the monolingual variety and each of the bilingual varieties. Their data comes from five different groups. The speaker groups were eighty-three Spanish monolinguals, seventy-three Galician-Spanish, sixty-six Valencian-Spanish, one-hundred and forty one Catalan-Spanish, and seventeen Basque-Spanish speakers. All the participants in the study filled out a background questionnaire that elicited information about social characteristics, their language learning histories, and current patterns of language use. They completed a contextualized questionnaire in Spanish which contained 28 items. Each item was preceded by a context and asked the participants to choose between ser, estar or both copulas. All contexts were part of a single story.

The authors used three types of statistical analysis on their data. The first one was a Chi-square to determine whether the frequency of estar selection was different for each bilingual group as compared to the monolingual group. Second, a cross-tabulation of response type for each given item was conducted for each population in order to identify those responses where members of a particular group are unanimous and those where variation within a single group occurs. Third, a binary-logistic regression analysis was done for each group in order to determine which factors are the best predictors of estar selection when considered in a single model. Their dependent variables were ser, estar or both. Independent variables included predicate type, frame of reference, experience with the referent, animacy, susceptibility to change, adjective class and copulas allowed. Extra-linguistic variables included residence, education, gender, second language(s), age, first language(s), mother’s first language, father’s first language, childhood first language, language of education, work language, home language, and social language. They excluded the variable profession because of the high number of academic-related participants in their sample. They divided age into ten-year increment groups in order to capture a wide range of age groups. The authors found that speakers of Catalan and Valencian had lower rates of use of estar while speakers of Basque and Galician showed higher rates of use than the monolinguals. Each bilingual group was statistically significantly different than the monolinguals and all groups showed variation in copula selection. After conducting the regression analysis, they found that the variables predicate type, adjective class and copulas allowed were strong
predictors of *estar* for all groups. *Susceptibility to change* was a strong predictor for Catalans, Valencians and monolinguals. *Dependence on experience* was significant for Catalans, Galicians and monolinguals. For monolinguals, variables that were strong predictors also included *animacy* which makes monolinguals the group with more strong predictors of *estar*. They found that bilingualism does not have the uniform effect of increasing the frequency with which *estar* is selected. They found that *animacy* seems to have irregular effects across group and that *dependence on experience* appears to be linked to the size of the participant group where larger groups show a statistically significant effect and smaller groups do not. They conclude that no single variable or combination of variables can distinguish variable contexts from categorical ones. In other words, that additional factors, or simply individual variation, are as likely to be relevant in further predicting copula selection.

3. The present study

This study is part of a larger study (Aguilar-Sánchez, 2009) that searched for answers to the following questions:

1. What linguistic variables predict the use of *ser* and *estar + adjective* in the Spanish spoken by Costa Ricans in Limón?
2. What social variables predict the use of *ser* and *estar + adjective* in the Spanish spoken by Costa Ricans in Limón?
3. Can the pattern of variation in the use of *ser* and *estar* be considered a change in progress or a stable change?

This study explores Ortíz-López’ (2000) hypothesis related to the role of formal instruction (i.e., education) in language change with respect to *ser* and *estar + adjectives*. He states that in contexts of language contact (English-Spanish), where a linguistic imbalance is found and formal instruction is geared mostly or exclusively to the teaching of one of the languages (usually English), language change will be said to expand quantitatively and qualitatively until the extension is generalized. He states that this hypothesis would support Silva-Corvalán's (1994) findings of the extension of *estar* to contexts of *ser* in Spanish.

3.1. The participants

To achieve a power of .8 (i.e., to have an 80% probability of rejecting the null hypothesis when the null hypothesis is not true in the population) with a *p*-value set at 0.05 for all analyses, the sample size for this study needed to be around 60 speakers. A total of 58 speakers participated in this corpus. Their ages ranged between 16 and 91 years old. Twenty-six were males and thirty-two females. All have completed at least three years of primary education. Eighteen were monolingual speakers of Limonese Spanish, thirty-five spoke two languages, and five reported speaking at least three languages (English, Spanish, Cantonese, Bribri, French, or Arabic). Nineteen have restricted contact with English (at school only or on TV) and thirty-nine reported non-restricted contact with English (i.e., use it on everyday situations and they are exposed to the English media). All but three reported a positive attitude towards keeping indigenous languages such Limonese English. Five were retired, one unemployed, thirty one work in the service industry, six at home, eight in education, one in agriculture and six were students.

3.2. Procedure
3.2.1. Instruments

Based on Ladegaard’s (2000) call for the use of eclectic methods that include qualitative and quantitative research and on Hyrıkstedt & Kalaja’s (1998) call for a change in the collection of data and its analysis, I used a data collection method that includes both a background questionnaire with qualitative and quantitative data and discourse data via Labovian interviews. This was done in order to collect a corpus that allows for generalization of findings. These interviews were based on questions regarding cultural traditions including food, dance, music, language use, childhood memories, school years stories, current social and political situation, and significant personal experiences. They included
open ended questions such as “Could you describe your childhood in full detail?” These interviews have been used in the field of sociolinguistics and they have proven to be excellent sources of linguistic data (Aguilar-Sánchez, 2007; Bentivoglio & Sedano, 1993; Diaz-Campos, 2003; Diaz-Campos & Geeslin, in press; Labov, 1972; Labov & Dingwall, 1978; Sankoff, 1988; Silva-Corvalán, 2001). Specific instances of the copula were not elicited; in fact, they were avoided to provide the corpus with a more naturalistic and generalizable number of instances of copula use. The researcher started with a question and asked follow up questions to keep the informant talking. The researcher tried to minimize his speaking time by acknowledging understanding of the message and by asking short follow up questions. Each major question asked was followed by normal conversation assent signs such as “umhum”, “de verdad?” seriously, “que bien” good, among others. If the participant was not very talkative the researcher asked more questions to elicit enough data. At the end of each interview the researcher made sure that the interview had been recorded, then thanked the participant and provided him/her with a small compensation. The interviews ranged between 20 and 30 minutes in duration.

3.2.2. Data Coding

Data coding for the present investigation was done following Diaz-Campos and Geeslin’s (forthcoming) and Aguilar-Sanchez’ (2007) coding schema, with slight modifications, for instances of copula + adjective. The term copula is used to represent instances of ser and estar only. All other copular verbs (e.g., parecer ‘seem’) are excluded. Aguilar-Sanchez’ (2005a) scales of socioeconomic status and contact level were used to assure comparability between studies and for generalization of the findings to the field of study. The dependent variable is the use of ser or estar. Variables from more recent studies on copula choice were also included and are introduced below (see Table 1-3 for the coding of Social and Linguistic Variables).

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Coding of Independent Social Variables for the Study of Copula Choice</th>
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<tbody>
<tr>
<td>Variable</td>
<td>Categories</td>
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<td>Gender</td>
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<td>Age</td>
<td>16-91</td>
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<tr>
<td>Level of formal education</td>
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<td>Bilingualism</td>
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<td>Level of contact</td>
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</table>
3.3. The Statistical Test and Data Analyses

A modification of the Variable Rule Analyses performed by GoldVarb (Tagliamonte, 2006) was conducted. This analysis is a multi-level analysis of variance that uses the log-likelihood coefficients to determine whether the independent variables are significant predictors of copula choice. In this modification of Aguilar-Sánchez (2009) the variance explained by the social variables is kept separate from the linguistic variables. This modification is done due to the hierarchical nature of the data. Linguistic data is said to be at Level 1: the linguistic level. Sets of tokens at this level are highly correlated because they come from the same speaker. Social variables are said to be at Level 2: the individual level. Tokens at this level are limited by the number of speakers and cannot be included at Level 1. This modification is done in order to avoid violating the statistical assumptions of logistic regression analysis. Multivariate logistic regression assumes that the data comes in a non-hierarchical/non-grouped manner; therefore this statistical analysis is not appropriate for data collected for a sociolinguistic study. Sociolinguistic data is hierarchical in nature (i.e., speakers produce X number of tokens, speakers belong to X group, etc.); therefore, it should be analyzed as such. This separation between social variables and linguistic variables, to my knowledge, and as evident from the review of the previous literature, has not been done in sociolinguistic studies using logistic regression that study this particular phenomenon.

### Table 2

**Coding of Independent Linguistic Variables: The Sentence**

<table>
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<tr>
<th>Variable</th>
<th>Categories</th>
<th>Example</th>
<th>Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Sentence</td>
<td>Predicate reading</td>
<td>[+ stage-level] Hoy Elena está enferma [Today Elena is sick]</td>
<td>Is the interpretation limited in time?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[- stage-level] Elena es amable [Elena is polite]</td>
<td></td>
</tr>
<tr>
<td>Susceptibility to change</td>
<td>[+ susceptible] El niño es bajo [The boy is short]</td>
<td>Can the quality of the referent change?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[- susceptible] La montaña es alta [The mountain is tall]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience with the referent</td>
<td>[indirect] En Limón los carnavales son bonitos [In Limón the festivals are nice]</td>
<td>Does the speaker have first-hand knowledge?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ongoing] El problema de la basura es preocupaante [The garbage problem is worrisome]</td>
<td>Is it on-going perception?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[immediate] La sopa está mortal! [The soup is wonderful]</td>
<td>Is it an immediate reaction?</td>
<td></td>
</tr>
<tr>
<td>Adverbs</td>
<td>[+ overt] Hoy el clima está muy bonito [Today the weather is very nice]</td>
<td>Is the predicate modified by an overt temporal adverb?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[- overt] El restaurante está lleno (hoy)! [The restaurant is full (today)!]</td>
<td>Is the predicate modified by a covert temporal adverb recovered from the discourse?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[absent] El clima está muy bonito [The weather is very nice]</td>
<td>There is no overt or covert adverb related to the predicate</td>
<td></td>
</tr>
<tr>
<td>Subject</td>
<td>[+ first order] Juan es joven [Juan is young]</td>
<td>Does the subject referent exist as an entity?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[- first order] La situación está mala [The situation is bad]</td>
<td>Is the subject an abstract concept or an idea?</td>
<td></td>
</tr>
</tbody>
</table>
3.4. Results

Because the focus of this paper is on the implication of social factors such as bilingualism and education, results of the larger study are summarized and those related to such variables are presented in full. For a full explanation of the results for question one and three, the reader is directed to Aguilar-Sánchez (2009).

After fitting the model, five predictors were statistically significant at the Linguistic Level (i.e., Level 1). These predictors were experience with the referent, adverb, subject, resultant state and adjective class. Three of these predictors, experience with the referent, resultant state and adjective class, have proven to be very strong in the prediction of estar in different social and geographical contexts (Díaz-Campos & Geeslin, 2004; Geeslin & Díaz-Campos, 2005a; 2005b; Geeslin & Guijarro-Fuentes, 2008).

At the Individual Level (i.e., Level 2) the results show that age, education, bilingualism, and gender are statistically significant predictors of estar due to the level of variance explained. In order to answer question number two, I will change from talking about statistical significance to talk about variation and its role in the explanation of variance in the prediction of estar because Level 2 predictors provide only information regarding how the groups vary (i.e., standard deviation). The findings at Level 2 help us to see patterns of a social nature regarding a syntactic phenomenon that could not be seen utilizing other statistical analyses (i.e., significance testing) or the results of the analysis at Level 1 (i.e., linguistic variables).

With regard to the social variables education, bilingualism, and gender, four hypotheses are explored in search of an explanation for the variance found due to social variables. The first three hypotheses help to reveal that in this particular geographical region two different varieties of Spanish coexist and are constrained by different linguistic and social factors. The first three hypotheses seem to find support in the data; however, this support is due to the fact that the aggregation of data has obscured the results. Only hypothesis four finds support in this data as shown in the following paragraphs and in the discussion section of this paper.

A first look at the results seems to suggest that the production of estar is higher in females than in males. This trend seems to be normal in sociolinguistic terms because women are usually ahead in adopting change when this change does not carry a stigma (Labov, 1974).

The results seem to shed light on the gender issue because education shows a pattern previously suggested by Ortiz-López (2000). I call this the education hypothesis. In the Spanish of Limón the pattern is that the higher the level of education, the lower the use of estar and vice versa. This finding supports Ortiz-López’ (2000) claim that level of education is related to copula choice.

Table 3
Coding of Independent Linguistic Variables: The Adjective

<table>
<thead>
<tr>
<th>Resultant State</th>
<th>Adjective Class</th>
<th>The Adjective</th>
<th>Is the adjective a resultant state?</th>
<th>Which semantic class best describes the adjective (in the sense it is used in the given predicate)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+ resultant]</td>
<td>[age]</td>
<td>El restaurante está lleno hoy [The restaurant is full today]</td>
<td></td>
<td>Grande [large]</td>
</tr>
<tr>
<td>[- resultant]</td>
<td></td>
<td>El rice'n'beans es barato [The rice'n'beans is cheap]</td>
<td></td>
<td>Dificil [difficult]</td>
</tr>
<tr>
<td>Adjective Class</td>
<td></td>
<td>Joven [young]</td>
<td></td>
<td>Inteligente [intelligent]</td>
</tr>
<tr>
<td>[size]</td>
<td></td>
<td>Grande [large]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[nationality/origin /religion]</td>
<td>Limonense [Limonese]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[description/evaluation]</td>
<td>Dificil [difficult]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[description of a person(nality)]</td>
<td>Inteligente [intelligent]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[color]</td>
<td></td>
<td>Azul [blue]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 1 shows that at higher levels of education the sample of speakers is somewhat balanced; however, it is not between participants with 6 to 9 years of schooling (i.e., primary school complete and secondary school incomplete). We find more women in this group than men. This may be evidence that lack of access to formal education allows for more overall production of estar in all contexts and it seems to accelerate change.

Figure 1. Distribution of gender by level of education

Figure 2. Distribution of speakers by bilingualism and level of education
Figure 2 shows that higher levels of education reported higher numbers of bilinguals whereas the lowest levels of education reported the lowest numbers of bilinguals. This piece of evidence becomes relevant for the discussion presented below.

A second possible hypothesis aside from the education hypothesis (Ortiz-Lopez, 2000) that may be formulated with a first look at the results is through a purely sociolinguistic point of view. I call it the stigma hypothesis. The fact that education is triggering the use of one copula more than the other, in this case *ser*, seems to be a case where stigma is being attached to the other, in this case *estar*. In other words, participants are avoiding the use of *estar* consciously because it is regarded as stigmatized and just because of their level of formal instruction (i.e., education). If this is the case, the explanation of the variation found in gender seems to be in one direction. Attaching stigma to the copula *estar* might be a recent phenomenon and women are beginning to reduce their use of *estar* while men are not reducing their use of it despite their level of education.

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Figure 3 shows what seems to be support for the sociolinguistic hypothesis because women are more conservative with the use of *estar* as their education level moves up, the use of *estar* decreases (i.e., they are more conservative). On the other hand, males seem to increase the use of *estar* as their education level increases, which means that behavior is not altered by formal education in Spanish (i.e., they are not as conservative as women in terms of a stigmatized form).

A third hypothesis regarding the behavior of social predictors can also be formulated after a more careful analysis of the data. Because some of the participants are either bilingual in Spanish and English, or multilingual in Spanish and two or more other languages (e.g., English, Cantonese, Arabic, Bribri, or French), the context in which this Spanish is found is one where languages are in contact. The predictor bilingualism showed variation in this sample. The pattern that can be observed seems to explain the phenomenon from a different perspective: the contact perspective alone. Bilinguals or speakers that speak more than one language use *estar* more than monolinguals; and monolinguals use *ser* more than bilinguals. This pattern allows me to set a different hypothesis. This one is the contact hypothesis. Let us remember that bilingual speakers in Limón have limited access to formal education in English, but have full access to formal education in Spanish. Limonese English has one copula *be*. Even though they omit it in certain contexts, the acrolect of this language does not (Herzfeld, 2004; Winkler, in progress). Therefore, another hypothesis that can be formulated is that bilinguals who have limited access to formal instruction in English might be using the copula that most resembles the English “be” which is *ser* (*is = es*) and that gender (there are more female than male monolinguals) and education level influence the impact of these predictors in the use of *estar*; therefore, the higher the level of contact with formal instruction, the higher the use of *estar* or that because there are more female monolinguals than males; they are producing less instances of *estar* due to stigma.

Figure 4 shows that there are more monolingual women than men in the sample, but their numbers are somewhat balanced among bilinguals and multilinguals.
Figure 5 shows that monolinguals’ use of *estar* decreases as their education level increases while bilinguals’ use of *estar* increases. All three hypotheses (education, stigma, and contact) seem to find support in the data. The fact that all three seem plausible means there is more to be found regarding these three non-linguistic predictors in this variety of Spanish. A fourth and final hypothesis is formulated. This hypothesis is a mixture of the education hypothesis set forth by Ortiz-Lopez (2000) and the contact hypothesis presented in this paper. After careful analysis of the data, it was found that two distinct varieties of Spanish coexist in the same geographic region. These varieties are a contact variety spoken by bilinguals and multilinguals and a monolingual variety. These varieties have different patterns with respect to the production of *estar*; therefore, producing interactions that obscure the data. Only a thorough analysis at the Individual Level allows us to see tease out these two varieties. These interactions are the reason why hypotheses 1 through 3 seemed to be supported by the data and why the results at the Linguistic Level need to be reconsidered in future studies. I call this final hypothesis the coexistence hypothesis.
Figures 6 and 7 show the evidence to support this hypothesis. The use of *estar* decreases as education level increases for most monolinguals speakers of Limonese Spanish.

In a very different fashion, bilinguals’ use of *estar* increases as education level increases. Figure 7 shows evidence to support the education hypothesis while Figure 6 shows evidence to support the contact hypothesis. The evidence for the contact hypothesis is increased by the fact that the higher the education level, the higher the number of bilinguals found in the sample (see Figure 2 above). The contact with all realms of the English language increases with access to formal instruction as a mean social mobility (Aguilar-Sánchez, 2005b).

Figure 8 shows the interaction of these variables. In other words, it explains how contact with English prompts higher use of *estar* in the linguistic environment *copula + adjective*. This data supports this claim because bilinguals (Spanish-English) use more *estar* as their contact with
all realms of the English language increases due to access to formal instruction in that language while monolingual Spanish speakers’ use of *estar* decreases as the access to formal instruction in that language increases. This also supports the claim that it is the contact with English that accelerates change (Gutiérrez, 1992, 1994, 2003; Ortiz-López, 2000; Silva-Corvalán, 1986, 1994) in bilingual varieties of Spanish and not the contact with other languages as demonstrated by Geeslin and Guijarro-Fuentes (2008), and that access to formal education in Spanish decelerates it (Ortíz-López, 2000). It is also evidence that two different varieties of Spanish coexist in the same geographical area and that both of these varieties are constrained by different linguistic factors.

In sum, social factors such as *gender*, *education*, and *bilingualism* help to explain the phenomenon beyond what linguistic factors can explain.

4. Discussion and conclusion

A multilevel analysis (i.e., a modification of Variable Rule Analysis) of variance at Level 1 (i.e., linguistic predictors) allowed me to determine that linguistic predictors that have been found to be strong predictors of *estar* in other varieties of Spanish are strong predictors of *estar* in Limonese Spanish. These predictors are *experience with the referent*, *adverb*, *subject*, and *adjective class*. These predictors are only strong predictors of *estar* when they are in conjunction with predictors such as *predicate reading*, *susceptibility to change*, *resultant state*, and *gradiency*. Because most of the variance explained, from a statistical point of view, came from linguistic factors, a multilevel analysis allowed me to determine that variation of copula choice in Limonese Spanish is first and foremost a syntactic phenomenon constrained by discursive and pragmatic features in accord with previous studies of copula choice in Spanish.

Moreover, a multilevel analysis at Level 2 (i.e., social predictors) and exploration of the different hypotheses that could be formulated from the data allowed me to discover that two varieties of Spanish can live in the same geographical area and be constrained by different linguistic and social factors. Despite the fact that four different hypotheses could be formulated to explain the results of these data, only one was shown to be plausible for the explanation of the phenomenon under study.

A multilevel analysis of variance allowed me to see how the variance found in the variables *formal education*, *levels of bilingualism*, and *gender* led me to this finding. Monolingual Spanish behaves differently than bilingual Spanish because of access to formal education, or lack thereof. The former allows for more contact accelerating linguistic change while the latter restricts such contact and decelerates it (Ortíz-López, 2000). Furthermore, the results presented in this paper and that presented in previous studies by Geeslin and Guijarro-Fuentes (2008) show strong evidence that it is the contact with English that accelerates the extension of *estar* and not the contact with other languages due to the differences found between the monolingual (lower use of *estar*) and the contact variety (higher use of *estar*) in contexts of *copula + adjective*.

Because the results and the interactions of social factors showed that there are two varieties (i.e., two populations in the data), future studies should focus on finding what linguistic factors are strong predictors of copula choice in order to shed more light at the Linguistic Level and on the understanding of copula choice in the two different varieties of Spanish (i.e., monolingual and bilingual) that are found in Limón, Costa Rica. Further research is needed to tease out the different linguistic features that help predict copula choice for each of these varieties of Spanish. The influence of language policies and how they have affected language change deserve attention from researchers, as well. In other words, we need to look for further evidence of the influence of formal instruction in the processes of language change.

References


