Second-Language Development of Variable Future-Time Expression in Spanish

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Research on second-language (L2) variation in Spanish has grown considerably in recent years (see Geeslin, 2011 for overview). One issue that has received attention is the variable use of morpho-syntactic structures among advanced non-native speakers (NSSs) (e.g., Geeslin & Gudmestad, 2010). This research is important because linguistic phenomena that vary according to linguistic and social contexts are acquired late, so a comprehensive theory of L2 acquisition must account for these later phases of development. Additionally, variationist approaches to second language acquisition (SLA) have contributed to our understanding of how interlanguage evolves. Documenting the developmental stages of grammatical structures for classroom learners (e.g., Gudmestad, 2012) and tracing the acquisition of geographic variants during a study-abroad experience (e.g., Geeslin, García-Amaya, Hasler-Baker, Henriksen, & Killam, 2012) are two overarching advances. Despite the wealth of emerging knowledge about L2 variation, many unanswered questions remain. For example, sociolinguists have demonstrated that the forms used to express future-time reference among native speakers (NSs) are constrained by social and linguistic factors (e.g., Blas Arroyo, 2008), but research on learners has only begun to explore the acquisition of these forms. Research has shown that NSs and highly advanced NNSs use a similar range of verb forms in contexts of future-time reference and that the use of these forms is related to a range of linguistic and extra-linguistic features (Geeslin & Gudmestad, 2010; Gudmestad & Geeslin, 2011). Nevertheless, to our knowledge no study has investigated the developmental process of acquiring variable future-time expression in Spanish, nor has it analyzed how several variables simultaneously impact selection of forms. Thus, building on our previous research, the goals of the current study are to explore the developmental path of acquiring variable future-time reference in Spanish by including learners at several proficiency levels and to offer predictive accounts of how multiple linguistic factors influence verb selection for NSs and learners.

1. Background

Research on language variation and change has demonstrated that NSs vary their speech according to internal and external factors and such variation can be dynamic (e.g., Chambers, Trudgill, & Schilling-Estes, 2002). Likewise, sociolinguistic accounts of SLA have addressed how speakers learn to vary speech according to linguistic and social features and empirical research has identified many factors related to the use and acquisition of variable structures (e.g., Tarone, 2007). In L2 Spanish, for example, linguistic factors such as semantic category have been shown to influence mood use (Gudmestad, 2012) and external factors such as location of study-abroad experience was shown to be related to learners' ability to perceive /s/-weakening (Schmidt, 2011). Studies examining the development of variable structures across proficiency levels have demonstrated that the path to becoming nativelike is not always linear, such that learners can move from targetlike to non-targetlike use of a given variable structure before approaching nativelike norms (e.g., Gudmestad, 2012). Thus, the process of acquiring a variable structure is not unlike that of categorical constructs (e.g., see Gass & Selinker, 2008, for a discussion of the U-shaped curve). Another important observation that has emerged from variationist research on L2 development is that learners simultaneously modify two characteristics of their developing grammars. They modify the frequency with which they use or select each variant (e.g., the subjunctive and the indicative for mood use) as well as the constraints (i.e., internal and external factors) that impact the use or selection of these variants (e.g., Geeslin, 2000;

Gudmestad, 2012). A final pertinent observation related to L2 development is that despite being late-acquired, adult L2 learners can become (near) nativelike in their use of variable structures (e.g., Gudmestad, 2012).

In addition to furthering our knowledge of how learners acquire the ability to vary language use as NSs do, variationist approaches to SLA have made methodological advances. Four key improvements influence research on future-time expression. In Geeslin and Gudmestad (2010) we argued that because variability can occur in interlanguage where it does not exist for NSs, examinations of L2 variation should begin with a broadly and objectively defined dependent variable. This is generally accomplished by identifying a function fulfilled by all forms, rather than analyzing all instances of a form. Secondly, to establish consistency across studies, the independent variables applied in analyses of empirical data must be defined objectively (Gudmestad & Geeslin, 2011). Thirdly, in light of extensive research on task variation, it is important for a single linguistic phenomenon to be studied through multiple tasks (cf. Geeslin, 2010). Lastly, quantitative sociolinguistic studies tend to limit statistical analyses to binary dependent variables, but since some variable structures have more than two variants, variation research has begun to conduct regression analyses that allow for dependent variables with multiple variants (e.g., Gudmestad, House, & Geeslin, in press).

Turning to future-time reference, Spanish has a morphological (synthetic) future verb form (MF) and a periphrastic (analytic) future verb form (PF). The present indicative (PI) can also be used in future-time contexts. Other forms like the conditional and past subjunctive can occur in contexts of future-time reference (e.g., Gutiérrez, 1995). Similarly, in Geeslin and Gudmestad (2010) we showed that NSs and advanced NNSs produced a range of verb forms in contexts of future-time reference during a sociolinguistic interview. We defined a context of future-time reference as any context where reference was made to the future; our coding included each finite verb produced in that context. Each group used the MF, PF, PI, conditional, and present subjunctive, and the NSs also used the periphrastic subjunctive. The MF, PF, and PI constituted the majority of verb forms used, making about 97 percent for the NNSs and about 88 percent for the NSs. The PF was the most frequently used form for both groups. Whereas the NNSs used more PI than MF, the reverse was true for the NSs.

Sociolinguistic research has shown that NSs tend to use the PF more often than the MF in future-time contexts. Regions where the PF has been shown to be the dominant form are Colombia (Orozco, 2005, 2007b), Venezuela (Sedano, 1994), Puerto Rico, Venezuela, Dominican Republic, and Chile (Silva-Corvalán & Terrell, 1989), New York (Orozco, 2007a, 2007b), and the Southwest of the United States and Mexico (Gutiérrez, 1995). Variation has been also been found in Peninsular varieties where the MF occurs more frequently than the PF (Almeida & Díaz Peralta, 1998; Blas Arroyo, 2008; Díaz Peralta & Almeida, 2000). Each study demonstrated that verb-form use in contexts of future-time reference is variable and related to several linguistic and extra-linguistic features. We briefly synthesize the general findings from sociolinguistic research for the linguistic variables that are directly related to the present investigation.[1]

Perhaps the most widely studied factor is **temporal distance**, which measures how far in the future an event will occur (Blas Arroyo, 2008; Orozco, 2005, 2007a; Sedano, 1994). The categories of this variable are not uniform across studies but collectively the investigations cited here indicate that the MF is more likely to occur in the distant future and the PF and the PI tend to be used in the near future.[2] Secondly, the role that **lexical temporal indicators (LTIs)** play in future-time expression has been examined in various ways. Despite differences in operationalization, Blas Arroyo (2008) and Orozco (2005, 2007a) showed that the presence of a lexical marker of time tends to favor the MF and the PF and the absence of this kind of marker favors the PF in NS speech. **(Un)certainty** is the third factor that has been explored. Sedano (1994) showed a categorical relationship between verbs that express certainty and the PF. Use varied with verbs and interrogatives of uncertainty but the MF was more frequent. Rather than focusing on verbs of (un)certainty, Blas Arroyo (2008) analyzed speaker attitude. This variable included categories related to how certain the speaker was that the event would

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[1] This literature review focuses on the sociolinguistic research on Spanish that is most closely connected to the goals of the current study. We recognize, however, that there is a substantial body of scholarship on verb forms that express future-time reference in Romance languages (e.g., Aaron, 2010; Fleischman, 1982; Poplack & Malvar, 2007; Poplack & Turpin, 1999).

[2] Only Orozco included the PI in his analysis. Blas Arroyo and Sedano only examined the PF and the MF.

occur. His data indicated that the PF was connected to certainty and the MF uncertainty. Taken together these studies suggest that expressions of certainty couple with the PF, whereas the MF is linked with expressions of uncertainty. Neither study included the PI in the analysis. Fourthly, two variables characterize syntactic factors related to **clause type**. What we refer to as contingency focuses on conditional statements. Orozco (2005, 2007a) revealed that, for his type of clause variable, negative and interrogative statements favored the PF, conditional and declarative statements favored the PI, and this variable did not predict use of the MF. In contrast, one category of Blas Arroyo's (2008) speaker attitude variable (uncertainty-contingency) favored the MF. The other syntactic factor distinguishes between subordinate clauses and other clause types. Almeida and Díaz (1998), Díaz Peralta and Almeida (2000), and Blas Arroyo (2008) showed that the PF and the PI occurred more often in subordinate clauses, while the MF was more frequent in other types. Fifthly, Blas Arroyo (2008) showed that **negation** may be related to future-time reference. His interview data indicated that negative statements favored the PF and disfavored the MF. Lastly, **grammatical person and number** have been analyzed in different ways. Orozco (2005, 2007a) demonstrated that animacy was more important than grammatical person for future-time reference and that plural subjects favored the PI and MF but did not impact the PF. Blas Arroyo (2008) incorporated grammatical person into his analysis but did not find significant results.

In response to the range of ways in which these variables have been applied to analyses of empirical data, in Gudmestad and Geeslin (2011) we operationalized each one so that they could be coded objectively and replicated. In our comparison of NSs and advanced NNSs, we focused exclusively on the PF, MF, and PI, since they are the dominant forms, and we analyzed each independent linguistic variable separately. Our findings showed that the presence of a LTI, temporal distance, and clause type are related to future-time expression for both groups, and grammatical person/number is connected to use for NSs. Our results for LTIs differed from previous research; both NSs and NNSs used the PI more and the MF and PF less with a LTI. Our participant groups showed some similarities to previous research with regard to temporal distance, because the PI and the PF appeared predominantly in the proximate contexts and the use of the MF was more frequent in more distant contexts. The NSs were more similar to the peninsular varieties reported in the literature. They produced the MF at a lower rate in subordinate clauses but the opposite occurred for the NNSs. For (un)certainty, unlike prior studies, our NSs exhibited no strong link between the MF and uncertainty markers. They did, however, use the PF more frequently with certainty than uncertainty markers. Even though grammatical person/number was significantly related to future-time form use for the NSs, the results did not reveal noticeable trends across categories of that variable. Lastly, the variables contingency and negation were not significantly related to future-time expression for either group.

The existing literature on L2 variation of future-time expression is limited to data from sociolinguistic interviews. Because the knowledge we gain about a grammatical structure can vary depending on the data-elicitation instrument (see Geeslin, 2010), in the current study we build on our dataset by analyzing data from a controlled, written-elicitation task. This enables us to take a closer look at how certain linguistic constraints operate in the selection of verb forms in contexts of future-time reference. If it is the case that MF use is now limited to certain linguistic contexts, one might predict that MF selection would be more frequent on an instrument of this type because the frequency of occurrence of all linguistic factors (including those linked to use of MF) is controlled and distributed evenly. We would also predict that the linguistic features that condition use or selection of this form may vary across elicitation tasks (cf., Geeslin & Gudmestad, 2008). Nevertheless, previous research suggests that comparisons of differences across participant groups hold, regardless of the elicitation instrument and we anticipate that this will be the case in the current study as well (Geeslin & Gudmestad, 2008). With our demarcation of a context for analysis defined independently by function (instead of making a priori decisions about where variation between future-time verb forms can occur in a sociolinguistic interview) and with our objective definitions of the independent linguistic variables, our previous work advanced not only our understanding of NS variation but also L2 use. Although there is a rather substantial body of research on NSs from various speech communities across the Spanish-speaking world, investigations on the L2 acquisition of future-time reference in Spanish are less common. Thus, the current study, which constitutes the first analysis of L2 development of variable future-time expression, stands to make a clear contribution to our understanding of how learners' acquire the ability to vary their selection of the MF, PF, and PI as proficiency increases.

2. The Current Study

The current study was guided by the following research questions:
1. How does the frequency of selection of the three verb forms most commonly associated with future-time reference change across proficiency levels and how do learners' rates of selection compare to those of NSs?
2. How do the linguistic factors that are related to the rates of selection of the PF, the MF, and the PI change across proficiency levels and how do these factors compare between NSs and learners?

2.1. Participants

The participants were learners from five proficiency levels (N=151) and a group of NSs (N=22), so L2 development was assessed through cross-sectional data and targetlike verb choice was measured by comparing L2 data to that of NSs. We collected data from the first four proficiency levels in intact undergraduate Spanish classes. Level 1 consisted of learners (N=28) in a second-semester language course. They scored an average of 9.04 (range=3-15) of a possible 25 on a proficiency test (see *Data-elicitation Tasks* for details) and no participant had studied or worked in a Spanish-speaking country. Level 2 was comprised of learners (N=26) in a fourth-semester language class. They scored an average of 11.54 (range=9-16) on the proficiency test, and two had studied abroad in a Spanish-speaking country, but for less than a semester. Level 3 was enrolled in a seventh-semester, introductory literature course (N=29). Their mean score on the proficiency test was 13.97 (range=5-23). Seven had studied abroad in a Spanish-speaking country, four for less than a semester, one for less than a year, and two for more than a year. Level 4 consisted of learners in two fourth-year linguistics courses. Students at this level are generally Spanish majors and have completed nearly all of their degree requirements prior to data collection (N=35). Their average score on the proficiency test was 17.31 (range=10-23). Twenty-three had studied in a Spanish-speaking country, nine for less than a semester, 12 for less than a year, and two for more than a year. The remaining two participant groups were graduate students or instructors of university-level Spanish. The NNSs in Level 5 (N=33) averaged 23.03 (range=20-25) on the proficiency test. All but one had lived in a Spanish-speaking country, eight for less than a semester, six for less than a year, and 18 for over a year. Grouping the L2 proficiency levels according to class enrollment was confirmed by a series of additional characteristics including amount of time abroad and proficiency test score. The NSs (N=22) averaged 23.82 (range=21-25) on the language-proficiency test. They grew up in Argentina, Chile, Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, Mexico, Puerto Rico, Spain, and Uruguay but were residing in the United States. The rationale for including such a diverse NS comparison group is that this best represents the range of targets and learning experiences of our learners, who often have varied social contacts and have spent time in several Spanish-speaking countries.

2.2. Data-elicitation Tasks

Each participant completed a WCT, proficiency test, and background questionnaire. The data for future-time reference came from the WCT. This task provided contextualized items that built on a single story line. The items (N=30) represented every combination of the categories of the three independent linguistic variables (see *Data Coding and Analysis* for details). We controlled for all other variables that have been shown to be related to future-time reference; all items were sentences that contained only one finite verb (i.e., no subordination, the verb was in the first-person singular, and no verb was negated). Following a paragraph-length context, the participants were provided with three sentences that differed only in verb form (i.e., MF, PF or PI) and were asked to choose one. The proficiency test was a 25-item, contextualized, multiple-choice test that covered a range of grammatical structures in Spanish. The background questionnaire elicited information regarding education level and experience with languages.

2.3. Data Coding and Analysis

The dependent variable was the verb form selected to express the function of futurity on the WCT; the three variants were the MF, PF, and PI. These three forms were selected because Gudmestad and Geeslin (2011) showed that they were the dominant forms in contexts of future-time reference. There were three independent linguistic variables that were manipulated for each item on the WCT: LTI, temporal distance, and (un)certainty markers. We examined the presence or absence of a LTI. When a LTI was present (e.g., *en dos años* 'in two years'), it was located in sentence-final position. Temporal distance measured the distance of the future event from the moment of speaking. There were five categories: immediate, today, less than a week, less than a month (but more than a week), and greater than a year. Due to empty cells in the Level 2 dataset, we collapsed the less-than-a-month and more-than-a-year categories for the analysis of this participant group. Regardless of whether or not there was a LTI in the target sentence, information for the time of event was available in the brief context that preceded the target sentence. The task was originally designed to examine three categories of the variable of (un)certainty markers, which occurred in sentence-initial position when present: presence of a certainty marker (e.g., *sin duda* 'without a doubt'), presence of an uncertainty marker, and no marker. Because a preliminary analysis revealed that some NSs preferred the subjunctive with some uncertainty markers, all items with uncertainty markers were excluded from further analysis. Thus, the current study consisted of an analysis of 20 items from the WCT and the variable will henceforth be referred to as 'certainty'. The only extra-linguistic variable was participant group.

We conducted a quantitative analysis to determine the frequency of verb-form selection and the factors that conditioned this selection. We began with cross-tabulations to examine the rates of selection for each group. Secondly, we carried out a multinomial logistic regression, which allows for a dependent variable with more than two categories, for each participant group. This statistical test compared two categories of the dependent variable individually (MF and PI) against another, base category (PF) and considered multiple independent variables in a single model.[3] To our knowledge, the present investigation is the first to perform a regression analysis with a multinomial dependent variable on future-time expression in Spanish.

3. Results

Table 1 summarizes the distribution of verb-form selection for each participant group. Similarities and differences were observed among participant groups in the distribution of the three verb forms. Levels 2 through 4 and the NSs selected the PF most frequently and the PI least frequently. Level 5 was only similar to these participant groups in choosing the PF most often. The MF was their least frequent form. Level 1 selected the PI most often, a noticeable contrast to most participant groups who chose this form least frequently. However, by selecting the MF least often, they were partially similar to Level 5. In general, what one notes is that there are notable changes in the distribution of these forms as proficiency increases and that no learner group selected all three forms at the same rate as the NS group.

Table 1. *Distribution of Verb Forms Selected across Participant Groups*

Participant Group	PI		PF		MF		Total
	#	%	#	%	#	%	
Level 1	269	48.3	220	39.5	68	12.2	557
Level 2	73	14.1	235	45.3	211	40.7	519
Level 3	112	19.3	246	42.4	222	38.3	580
Level 4	178	25.5	322	46.1	199	28.5	699
Level 5	174	26.5	353	53.8	129	19.7	656
NSs	59	13.8	246	57.3	124	28.9	429

[3] This statistical test does not provide factor weights in the same way that a VARBRUL-type analysis does. Instead it provides output tables that compare each category of the dependent variable against a base. These results are summarized in tables in the next section and are also provided in the appendix.

Another way to examine learners' acquisition of future-time reference and to make assessments of targetlike behavior is to evaluate how the frequency of selection of each verb form changes as learners become more proficient. For the PI, frequency decreased from Levels 1 (48.3%) to 3 (19.3%) and then increased from Levels 3 to 5 (26.5%). Level 2's selection rate (14.1%) was most similar to that of NSs (13.8%). Frequency of selection of the PF gradually increased as proficiency level improved (the slight decrease from Level 2 to 3 was not significant). Level 1 selected the form 39.5 percent of the time and Level 5 chose it 53.8 percent of the time. Level 5 was most similar to the NSs (57.3%). Frequency of the MF increased from Level 1 (12.2%) to Level 2 (40.7%) and decreased from Levels 3 (38.3%) to 5 (19.7%). Level 4 (28.5%) chose this form at the same rate as NSs (28.9%). Thus, in terms of frequency, the developmental path appeared to be linear for the PF and non-linear for the PI and MF. The data also suggested that learners can show targetlike rates of selection temporally (i.e., Level 2 for the PI and Level 4 for the MF) and then become non-targetlike (i.e., Level 3 selected the PI more often than the NSs and Level 5 chose the MF less frequently than the NSs) as the frequency with which verb forms are chosen in contexts of future-time reference is modified.

In a multinomial logistic regression with a dependent variable that has three categories, the model compares two categories of the dependent variable separately against the base category. In our analysis the PF is the base category, so we compared the MF against the PF and the PI against the PF in a single model. For each independent variable in this type of regression, the categories of each variable are compared to a base category in that variable. If the upper and lower limits of the 95% confidence interval contain the value of one, then the category is not different from the base category. If the values for the upper and lower limits are greater than one, than the odds of choosing a category other than the base (i.e., MF or PI) are greater than the odds of choosing the base category (i.e., PF). If the values for the upper and lower limits are less than one, then the odds of selecting a category other than the base are less than the odds of selecting the base category. In our analysis, the base categories for each independent linguistic variable were the presence of a LTI, today, and the presence of a certainty marker for the variables of LTI, temporal distance and certainty, respectively. Tables 2 and 3 provide a summary of the results for the six multinomial logistic regression models, one for each participant group. Even though the comparison of MF versus PF and the comparison of PI versus PF appear in separate tables for ease of presentation, it is important to recognize that only one regression test was performed on each participant group's data. Specific information regarding each multinomial regression is available in the Appendix.

Table 2. *Results for the Multinomial Logistic Regression: MF vs. PF*

Group	LTI		Temporal distance					Certainty	
	+	-	Immed.	Today	<wk	<mth	>yr	+	-
Level 1	Base	NA	>	Base	=	>	>	=	Base
Level 2	Base	NA	=	Base	=	=		>	Base
Level 3	Base	NA	=	Base	=	=	=	>	Base
Level 4	Base	NA	=	Base	=	=	=	>	Base
Level 5	Base	=	=	Base	=	>	>	>	Base
NSs	Base	=	=	Base	=	>	>	>	Base

Note. '>' denotes odds of choosing MF over PF are higher. '=' denotes odds are not different. 'NA' denotes a result that is not significant.

Table 3. *Results for the Multinomial Logistic Regression: PI vs. PF*

Group	LTI		Temporal distance					Certainty	
	+	-	Immed.	Today	<wk	<mth	>yr	+	-
Level 1	Base	NA	=	Base	=	=	=	>	Base
Level 2	Base	NA	<	Base	<	<		>	Base
Level 3	Base	NA	=	Base	<	<	<	>	Base
Level 4	Base	NA	=	Base	<	<	<	>	Base
Level 5	Base	<	=	Base	<	<	<	>	Base
NSs	Base	<	<	Base	<	=	<	>	Base

Note. '<' denotes odds of choosing PI over PF are lower.   '>' denotes odds are higher. '=' denotes odds are not different. 'NA' denotes result that is not significant.

By looking at Tables 2 and 3, we see that temporal distance and certainty were predictors of verb selection for every group but that LTI was only a predictor for Level 5 and the NSs. For the LTI variable, the patterns of selection were similar for Level 5 and the NSs. The odds of choosing the MF over the PF were the same when a LTI was absent as when it was present. The odds of selecting the PI instead of the PF were lower when a LTI was absent than when it was present. In other words, it appears that the PI, a form which carries no morphology that signifies the future, is linked with the use of a LTI that signifies a future point in time. The results for the certainty variable are similar for all groups with one exception. Each group, except for Level 1, showed a higher probability of choosing the MF over the PF when a certainty marker was present. Likewise, all groups were more likely to select the PI over the PF with a certainty marker present.

For temporal distance, we observed changes across proficiency levels and each L2 group exhibited targetlike and non-targetlike patterns. When the event occurred immediately instead of today, the odds of choosing the MF over the PF were the same for Levels 2 through 5 and the NSs, whereas the odds were greater for Level 1. In the same context, the odds of selecting the PI over the PF were the same for Levels 1, 3, 4, and 5. Level 2 was similar to the NSs, who showed lower odds of choosing the PI over the PF. When the event was less than a week away compared to today, the odds of selecting the MF over the PF were not different for any group. However, the odds of choosing the PI instead of the PF were lower for all groups except Level 1, whose odds were the same. When the event was less than a month away instead of today, the odds of selecting the MF over the PF were greater for Levels 1 and 5 and the NSs but not for Levels 3 and 4. In the same context, the odds of choosing the PI over the PF were the same for Level 1 and the NSs, while Levels 3 through 5 showed lower odds of choosing the PI over the PF. When the event was greater than a year away instead of today, Levels 1 and 5 and the NSs exhibited higher odds of selecting the MF over the PF; we observed no difference for Levels 3 and 4. Levels 2 through 5 and the NSs showed lower odds of selecting the PI over the PF. No difference was observed for Level 1. Level 2, whose data were collapsed for the less than a month and greater than a year categories, showed the same odds of selecting the MF over the PF and lower odds of selecting the PI over the PF.

In terms of L2 development, learners appeared to first apply the certainty constraint in a nativelike manner in future-time reference. The only L2 group who did not perform like NSs was Level 1 in the comparison of the MF and the PF. Beginning at Level 2, learners were targetlike by showing greater odds of selecting the MF and the PI than the PF when a certainty marker was present than when absent. This nativelike constraint persisted as acquisition progressed. The fact that, for this variable, Level 1 was targetlike with the comparison of the PF and PI and not the comparison of the PF and the MF seems to suggest that, when a variable structure consists of more than two variants, the acquisition of a single constraint can occur in stages. Regarding temporal distance, each L2 group showed targetlike and non-targetlike patterns and the path toward becoming more nativelike differed within the categories of this variable. Only in the less-than-a-week contexts was L2 acquisition not characterized by a change from targetlike to non-targetlike verb selection. All groups were targetlike for the MF versus PF comparison, and learners moved from non-nativelike selection at Level 1 to nativelike selection at each higher proficiency level. For all other contexts, learners moved from showing a nativelike tendency to a non-nativelike one. For example, Level 1 was nativelike in contexts of less

than a month for both comparisons (MF vs. PF and PI vs. PF). In the case of the former comparison, L2 selection was targetlike again at Level 5, but for the latter non-nativelike selection persisted from Levels 2 through 5. In the immediate contexts, learners moved from being non-targetlike (Level 1) to targetlike (Levels 2 through 5) for the MF and PF comparison. However, for the PI over PF comparison learners were only temporarily nativelike at Level 2. Level 5 was the most nativelike of all L2 groups. They diverged from the NS target only in the immediate and less than a month contexts for the comparison between the PI and the PF. Interestingly, though, these are contexts in which lower-level learners showed nativelike behavior (Level 2 in immediate contexts and Level 1 in less-than-a-month contexts). LTI did not predict verb choice until Level 5 and this L2 group responded to the variable in a nativelike way.

Three observations can be made after comparing the six multinomial logistic regression models. First, because learners showed nativelike patterns with the certainty factor before temporal distance and LTI, it appears that this constraint is not as challenging in L2 acquisition as the others. Second, the findings for temporal distance suggest that learners apply this constraint on future-time reference early in the developmental process and gradually modify the way it impacts their verb-form selection. Finally, it seems that the LTI constraint takes longer to develop than the other two factors and is consequently a characteristic of advanced interlanguage, since it did not influence future-time reference until Level 5.

4. Discussion

The current study is the first investigation of L2 development of future-time reference in Spanish and the first to employ a variationist framework. It is also the first to analyze the PF, MF, and PI in a single predictive model for both NSs and learners, so the findings inform both sociolinguistic and SLA research. The first research question dealt with the frequency with which learners and NSs chose each verb form in contexts of future-time reference. We observed linear and nonlinear changes as proficiency level improved for each form. Selection of the PF slowly increased, selection of the PI decreased then increased, and selection of the MF increased then decreased. There are likely external explanations for these patterns. For example, the sharp increase in selection rates of the MF between Levels 1 and 2 may demonstrate an instructional effect in that learners are likely to receive formal instruction on the MF in the time that transpires between these two levels. This would explain why rates of selection at Level 1 appear to favor the PI (i.e., the form that has been taught extensively at this level) and why Level 2 shows a sharp drop in selection of the PI and sharp increase in the selection rate of the MF. Likewise, these patterns likely have internal causes, such as the widely attested strategy of connecting a single form to a single meaning at early stages of development (e.g., Andersen, 1984). Although we do not see a categorical selection of one form, we can hypothesize that there is a tendency for learners to connect the PI with present-time events and the MF with future-time events, which is shown in the drop in rates of selection of the PI in favor of the MF at Level 2. As proficiency increases, learners demonstrate a gradual easing of MF selection rates. This trend demonstrates a growing understanding on the part of the learners of two facts: (1) the PI can refer to events in the future, rather than only to present-time events, and (2) the PF and MF are both acceptable targetlike forms for expressing future-time events and the choice between all three of these forms is conditioned by a host of linguistic and extra-linguistic factors. This developing knowledge is likely a reflection of learners' increasing ability to detect nativelike patterns in the input and incorporate these into their own developing grammars. Our finding that there is variability (i.e., selection of several forms) at each stage of development is consistent with studies that have shown evidence of variation as learners test hypotheses and gradually move toward NS norms (Ellis, 1999). Our results also introduce the possibility that there is developmentally related variability en route to the acquisition of nativelike variation. Moreover, while it is possible that the associations among learners at lower levels are categorical (one form used always for one meaning) and that the variability reported here occurs across individuals, research suggests that despite differences between learners, individual results do tend to pattern like those of the group of participants to which they belong (Bayley & Langman, 2004).

The selection rates of each form also allow us to identify a hierarchy of form preference for each participant group. Although no L2 group selected the three verb forms at the same rate as the NSs, Levels 2 through 4 exhibited a similar hierarchy of selection (in descending order: PF>MF>PI). Level

5's hierarchy differed in that while the PF was the most frequently selected, the PI was preferred over the MF. In other words, this group seemed to overshoot the NS norm in allowing the PI to indicate future-time events, but they were the closest to the NS group in their rates of use of the PF. In comparison to Gudmestad and Geeslin (2011), the hierarchy of rates of use of the PF, MF, and PI on the sociolinguistic interview and the hierarchy of rates of selection of these three forms on the WCT was the same for the two NSs groups and for the NNSs in our previous work and Level 5 in the current study. For the NSs in each study, the PF was the most frequent, followed by the MF, and, lastly, the PI. For the NNSs and Level 5, the PF appeared most often, then the PI, and, finally, the MF. This similarity is interesting because it contrasts to some degree with previous research on other variable structures which showed, for example, greater differences across tasks than between groups in selection/use of forms in the copula and mood contrasts (Geeslin & Gudmestad, 2008). It may be the case that for future-time reference, task-based variation is not as great as for other variable structures or that this structure is particularly late-acquired and, thus, the differences in frequency between NSs and advanced learners are greater than those found across elicitation tasks. A third possibility is that our WCT was particularly effective in capturing narrative structure and therefore these tasks differ inherently to a lesser degree than those in other studies.

The second research question addressed the factors that predicted verb selection. Each of the three linguistic factors investigated was relevant in the prediction of L2 verb selection, although LTI was not a significant factor until Level 5. Learners were largely targetlike with certainty, with the odds of selection of PI or MF over the PF being higher in the presence of a certainty marker for all groups except for Level 1. In contrast, developmental patterns across each category of temporal distance were more complex and varied, with the contrast between the MF and the PF showing relatively late acquisition in that only Level 5 applied this constraint in the same manner as NSs and the contrast between the PI and the PF showing little change across levels of proficiency but also a key difference between Level 5 and the NSs. In terms of targetlike abilities, Level 5 and the NSs only differed in the comparison of the PI versus the PF and only in two contexts (immediate vs. today and less than a month vs. today). The other L2 groups exhibited more non-nativelike tendencies than Level 5. Thus, as with rates of selection, the analysis of factors constraining selection between the PI, the PF, and the MF demonstrates a move toward more targetlike selection as well as a failure to reach nativelike patterns by the highest proficiency level included in our study.

Taking these results together, we see that learners modify frequency and predictors of use/selection of a form as acquisition progresses. We further note that differences between proficiency levels can be subtle. For instance, the frequency with which Levels 2 and 3 selected the verb forms was not significantly different. Level 2's rates were closer to NSs' frequencies for the PI and the PF, but Level 3 was more nativelike in their frequency of MF selection. The comparison of their predictive models was similar but not identical. Their selection differed in the immediate as opposed to today contexts for the PI over the PF, and Level 2 was more targetlike. Additionally, learners at the highest proficiency level were similar to NSs but not completely targetlike. Thus, acquisition can be characterized as the gradual integration of relevant contexts of selection/use (e.g., LTI) and these linguistic contexts demonstrate different patterns of change toward variable but appropriate contextually-conditioned selection of forms that express a given function (e.g., future-time reference). This characterization is consistent with previous research (e.g., Geeslin, 2000; Gudmestad, 2012).

In connecting these findings with previous research on the L2 acquisition of variable structures, we see further evidence that learners are able to modify their frequency of selection of a form and the constraints on that selection. We see that learners often begin with a tendency to associate one function with a single form and that they move toward the selection of two or more forms to fulfill a given function by adjusting rates of choice, the independent linguistic variables that influence that choice, and the direction of the effects across categories of those variables. Previous research on the copula contrast demonstrated that the learners adjusted frequency of *estar* selection prior to acquiring nativelike constraints on that use (Geeslin, 2011). However, Gudmestad (2012) found that NSs and advanced NNSs only showed subtle differences in the constraints predicting mood use and no difference in their frequency of use. The current study showed that constraints on verb-form selection were actually more nativelike than the hierarchy of rates of selection and, thus, these findings lend support to the idea that frequency of use/selection and constraints on use/selection develop simultaneously but there is little evidence that one must precede the other in the path toward nativelike use.

5. Conclusions and Future Directions

The current study is the first to provide an account of the development of future-time reference in English-speaking learners of Spanish. This account demonstrates that learners are able to modify the frequency with which they choose grammatical forms to indicate future-time reference, as well as the constraints on this selection in the direction of NSs norms. Nevertheless, the findings also indicate that this variable structure is late-acquired and there are key differences between the most advanced NNSs in our study and our NS comparison group. Because our analysis includes three different grammatical forms, the PI, the PF and the MF, all of which are targetlike means of expressing future-time reference, our study is also the first to provide a predictive model that identifies the simultaneous role that several linguistic factors play in the prediction of rates of selection of these forms. In this way, the study also advances sociolinguistic research on the same structure.

Despite these findings, there remains much work to be done. Expanding the analysis to include a wider range of linguistic and extra-linguistic variables would provide a more detailed account of language development and a more thorough account of how NSs employ these forms. Likewise, it is worth examining selection rates among participants in the same participant group to gain an understanding of inter-group variability. As mentioned in the original description of the WCT, several NSs in our pilot test indicated a preference for the subjunctive with some of the markers of uncertainty and, thus, these items could not be analyzed. Consequently, a new WCT that allows for the investigation of uncertainty markers will be important so that we can account for the lexical effects of the presence or absence of certainty and uncertainty markers on future-time reference, given the importance of this factor in previous sociolinguistic research. Finally, the findings on task variation suggest that further study of the ways in which this structure varies across tasks can provide information about the role of task variation in late-acquired variable structures.

Appendix: Multinomial regression models

Details of the Multinomial Logistic Regressions

Participant group	-2 Log Likelihood	Chi-square	*df*	p value
Level 1	88.6	27.5	10	0.002
Level 2	75.1	106.7	8	0.000
Level 3	84.6	130.8	10	0.000
Level 4	97.2	186.7	10	0.000
Level 5	236.0	379.5	12	0.000
NSs	122.4	189.4	12	0.000

Note. The figures in this table show the statistical measure for each regression model as a whole, rather than for individual linguistic factors within the model.

95% Confidence Intervals for the Multinomial Logistic Regression: MF vs. PF

Participant group	LTI			Temporal distance										Certainty		
95% confidence interval	Present	Absent		Today	Immed.		<Week		<Month		>Year		Present		Absent
		Lower	Upper		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	
Level 1	Base	NA	NA	Base	1.2	10.3	0.7	6.6	1.5	12.9	1.1	9.0	0.9	2.8	Base
Level 2	Base	NA	NA	Base	0.5	1.8	0.6	2.0	0.9	3.0	-------	-------	1.2	2.6	Base
Level 3	Base	NA	NA	Base	0.4	1.5	0.3	1.2	0.7	2.5	0.6	2.1	1.4	3.0	Base
Level 4	Base	NA	NA	Base	0.7	2.6	0.5	1.6	0.9	3.1	1.0	3.2	1.3	2.7	Base
Level 5	Base	0.9	2.0	Base	0.4	2.6	0.3	1.7	1.7	7.8	1.5	6.9	1.1	2.7	Base
NSs	Base	0.7	1.7	Base	0.3	2.0	0.5	2.8	2.3	11.8	1.7	8.3	1.3	3.4	Base

Note. <Month and >Year are collapsed for Level 2. If the upper and lower limits of the 95% confidence interval contain the value of one, then the category is not statistically different from the base category. If the values for the upper and lower limits are greater than one, than the odds of choosing a category other than the base (i.e., MF or PI) are greater than the odds of choosing the base category (i.e., PF). If the values for the upper and lower limits are less than one, then the odds of selecting a category other than the base are less than the odds of selecting the base category.

95% Confidence Intervals for the Multinomial Logistic Regression: PI vs. PF

Participant group	LTI			Temporal distance										Certainty		
95% confidence interval	Present	Absent		Today	Immed.		<Week		<Month		>Year		Present		Absent
		Lower	Upper		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	
Level 1	Base	NA	NA	Base	0.5	1.7	0.4	1.3	0.5	1.6	0.3	1.0	1.2	2.5	Base
Level 2	Base	NA	NA	Base	0.2	0.7	0	0.3	0	0.2	-------	-------	2.4	8.1	Base
Level 3	Base	NA	NA	Base	0.3	1.2	0.1	0.3	0.1	0.4	0	0.2	3.2	9.2	Base
Level 4	Base	NA	NA	Base	0.5	1.7	0.1	0.3	0.2	0.6	0.0	0.2	4.7	11.6	Base
Level 5	Base	0.2	0.5	Base	0.8	3	0.1	0.4	0.1	0.3	0.0	0.1	20.3	73.2	Base
NSs	Base	0.2	0.8	Base	0.2	1.0	0.1	0.4	2.3	0.2	1.5	0.2	19.6	1106.7	Base

Note. <Month and >Year are collapsed for Level 2. If the upper and lower limits of the 95% confidence interval contain the value of one, then the category is not statistically different from the base category. If the values for the upper and lower limits are greater than one, than the odds of choosing a category other than the base (i.e., MF or PI) are greater than the odds of choosing the base category (i.e., PF). If the values for the upper and lower limits are less than one, then the odds of selecting a category other than the base are less than the odds of selecting the base category.

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