

L1 Child Acquisition of Future Expression in *Madrileño* Spanish: A Variationist Study

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1. Introduction

In Spanish, as in many other Romance languages, a morphological (or synthetic) future (MF) and a periphrastic (or analytic) future (PF) may be used to refer to events and states that are to occur after speech time, such that (1a) and (1b) can both acceptably be used to refer to future actions:

(1a) *Pero, nosotras, las de mi clase, queremos hacer un baile pero es que no sé si nos dejarán...*
“But, we, the ones from my class, want to do a dance but it’s that I don’t know if they will let (MF) us...” (8 y.o. female, *Becacesno* corpus, Benedet, Cruz, Carrasco, & Snow, 2004)

(1b) *Un niño que se llama Vicente, que es mi vecino, se va a disfrazar de Papá Noel.*
“A boy who is named Vicente, who is my neighbor, is going to dress up (PF) as Santa Claus.”
(5 y.o. female, *Becacesno*)

Additionally, as with English and many other languages, the use of the present indicative (PI) (2) (usually accompanied by a temporal adverbial) to convey the near future is also quite common:

(2) *El avión sale en tres horas.*
“The plane departs (PI) in three hours.”

The majority of the investigations on Spanish future expression have focused on the first two forms, the morphological and periphrastic futures, and have analyzed data from both Latin America (e.g., Orozco, 2005; Sedano, 1994; Silva-Corvalán & Terrell, 1989) and Spain (e.g., Aaron, 2006, 2007; Almeida & Díaz, 1998; Blas Arroyo, 2000, 2008). Additionally, future expression by native speakers from across the Spanish-speaking world was analyzed in the sociolinguistic interviews of Gudmestad and Geeslin (2011). Further, variationist studies have analyzed similar phenomena in other Romance languages, such as French (King & Nadasdi, 2003; Poplack & Dion, 2009) and Portuguese (Poplack & Malvar, 2007). In general, the PF has been shown to be more common than the MF in most dialects of Spanish (e.g., 66% PF, 34% MF in the spoken contemporary Peninsular data of Aaron, 2006).

While claims have been made in descriptivist studies that young children produce the morphological future very infrequently (e.g., Brisk, 1972; Gili Gaya, 1972; González, 1970; Kernan & Blount, 1966), the present study aims to test these claims empirically and to apply variationist methods to the study of the first language (L1) acquisition of future expression in Spanish. The analysis is based on the speech of a subset of 40 children from the *Becacesno* corpus (Benedet et al., 2004) of the CHILDES database (Macwhinney, 2000). The children engaged in one hour conversations with an adult and ranged from three to twelve years of age, which enabled the comparison of multiple age groups. The current study includes an analysis of not only the overall distribution of the forms used by the child speakers in future-time contexts, but also of the individual linguistic and extra-linguistic factors that favored the use of one form over the other. The paper begins with a review of relevant

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research on L1 and second language (L2) future expression in both Spanish and other Romance languages. Next, we offer a detailed description of our participant group, our linguistic and extra-linguistic variables, and the analysis conducted. Finally, we present our findings and consider the implications of these results for both L1 acquisition and variationist sociolinguistics more generally.

2. Review of the literature

For the purposes of the current study, relevant prior literature on future expression can be divided among variationist studies of Romance language future expression, investigations of the adult L2 acquisition of future expression in the Romance languages, and descriptivist studies of the acquisition of L1 child Spanish future expression. We begin with an overview of variationist studies of future expression in other Romance languages.

2.1. Future expression in Spanish and other Romance languages

In the current section, variationist studies of future expression in the Romance languages will be reviewed. First, studies that have analyzed Romance languages other than Spanish will be presented, followed by an overview of studies that have focused on Spanish.

2.1.1. Future expression in Romance languages other than Spanish

Before considering studies of futurity in Spanish, a few recent studies on other Romance languages (i.e., French and Portuguese) bear mentioning, due in large part to some similarities that these languages share with Spanish with regard to future expression.

Poplack and Dion (2009) analyzed future expression (via the MF, PF, and PI) in Canadian French by comparing two spoken corpora, *Récits du français québécois d'autrefois* (data from the 19th Century) and the Ottawa-Hull French Corpus (contemporary data) (in addition to a corpus of grammars which is beyond the scope of the current paper). The researchers noted that the PF has been the most common variant since at least the 19th Century and that its use has continued to increase. They also found four statistically significant linguistic factors: polarity (negation nearly categorically favored the MF in each corpus), speech style (formal registers favored the MF in both corpora), adverbial specification (the presence of adverbs favored the MF for both groups), and temporal distance (distant temporality favored the MF in the older corpus, but was not significant in the newer). The authors concluded that polarity is the most important factor, that the MF continues to decrease in occurrence, and that the MF is increasingly relegated to negative contexts and formal registers.

Investigating a different region of Canada were King and Nadasdi (2003), who analyzed sociolinguistic interviews from Abram-Village and Saint-Louis in Prince Edward Island and from L'Anse-à-Canards in Newfoundland. The investigators found much higher percentages of the MF than have been reported for other regions of Canada (e.g., Poplack and Dion, 2009; and the 20% in Ottawa-Hull reported by Poplack and Turpin, 1999), with close to 60% use in Saint-Louis and Abram-Village and 40% use in L'Anse-à-Canards. The most important linguistic factor was temporal distance, as actions that were to take place in the near future strongly favored the PF. In a similar way, certainty was also a significant predictor, as actions that were certain to take place strongly favored the PF as well. The final significant predictor was the presence of subordinate clauses with *quand* ("when"), which strongly disfavored use of the PF in the main clause. The authors reasoned that the MF was more likely in such contexts due to the fact that when there is a sequence of two future events the event in the main clause is often contingent upon that of the subordinate clause, and thus it is somewhat more uncertain and will therefore be realized via the MF. Interestingly, unlike Poplack and Dion (2009), who found that negation nearly categorically co-occurred with the MF, polarity was not statistically significant here. However, King and Nadasdi do note that in some regard actions that are negated are therefore less certain, which would favor the MF and be in line with the 2009 study.

Poplack and Malvar (2007) considered five centuries of the historical development of future expression in the Portuguese of Brazil, where the MF is no longer used productively (Malvar, 2003). The data set included a corpus of grammars published between the 16th and 21st centuries, a corpus of popular theatre from the same time period, and a 20th Century spoken corpus. The investigators

considered the four most common variants: the MF, the PF, the PI, and periphrasis with the verb *haver*, and found that as new forms entered the grammar, they encroached upon specific contexts of the previously preferred variant before completely ousting them. Thus, forms may first appear in restricted contexts before spreading out profusely (such as the case of the PF, which is now the preferred variant of future expression, a title which the MF has lost over time) or they may remain limited in their original context of use (as indicated by the PI, which continues to have an isolated context for future expression, which it has held for over five centuries). As an example of the diminishing presence of the MF, the form has shown continual decrease of use from 66% in the 16th Century, to 53% in the 19th Century, to just 9% in 20th Century theatre and a mere 1% in the 20th Century oral data.

Thus, we have seen a glimpse of the decrease of the morphological future in both French and Portuguese, in addition to general reports that the MF is favored only at large temporal distances and in the presence of temporal adverbials. We turn our attention to Spanish, where findings of low use of this form have also been reported, in addition to reports of its occurrence in less frequently occurring linguistic contexts.

2.1.2. Future expression in adult Spanish

As we have noted variationist indications of the decrease of the MF in both French and Portuguese, we turn to similar trends in Spanish. Aaron (2006) analyzed the historical development of Spanish future expression and found that the relative frequency of the PF (in comparison with the MF) jumped from less than 1% in written Peninsular texts from the 13th-15th Centuries to nearly 20% in texts from the 19th-20th Centuries. The increase was even more notable when a 20th Century Peninsular spoken corpus was considered (*COREC: Corpus Oral Peninsular*, Marcos Marín, 1992), in which there was 66% PF, compared to just 34% MF use. Aaron (2006) also noted that historically the PF has spread from use with motion verbs (based on its original literal *going to* meaning) to different verb classes, as evidenced by a decrease in the range for the factor group verb class. She also noted that the PF is now favored in the absence of temporal adverbials and with interrogatives, largely related to the fact that the MF increasingly conveys an epistemic (i.e., probability) meaning that often requires the use of temporal adverbials in order to bolster its sense of temporality and that when co-occurring with interrogatives usually lacks temporal meaning (i.e., expresses epistemic meaning instead). In explaining related findings in a subsequent study, Aaron (2010) draws upon the notion of default status (Comrie, 1976; Dahl, 1985; Poplack & Malvar, 2007; Schwenter & Torres Cacoullos, 2008), in which default forms tend to be favored in the most frequent, general contexts, while other forms occur in less frequent, more specified linguistic contexts, such that the PF would be considered the default marker of futurity for Aaron's Peninsular data, similar to what Poplack and Malvar (2007) noted for Brazilian Portuguese.

Sedano (1994) investigated Venezuelan future expression in Caracas and Maracaibo and found that temporal distance and modal value were the most important linguistic factors. With respect to temporal distance, the PF was used categorically to refer to the immediate future and its use dropped gradually with reference to intermediate distance and the more distant future, although it was still used more commonly than the MF in both contexts. In the analysis of modal value, epistemic modality yielded an interesting distribution of form use, as verbs of certainty strongly favored the PF, verbs of uncertainty favored the MF, and interrogatives of uncertainty co-occurred commonly with both forms. The author concluded that the MF was associated with greater temporal distance and the epistemic modalities of doubt and conjecture; the PF was connected to closer temporal proximity and to speaker intention, in addition to the modality of certainty.

Sedano (2006) shifted her attention from oral data to the written data of articles published in *El Universal* of Caracas. Interestingly, while Sedano (1994) found just 12% overall use of MF in her spoken data, Sedano (2006) found 93% MF in these newspaper articles. Like the 1994 study, Sedano (2006) found that the PF was used to refer to immediate futurity, but unlike the former study, in intermediate contexts the MF was used more commonly (in 95% of cases), and the MF was used categorically for distant temporal reference. Sedano (2006) also found that first person subjects co-occurred with the PF more frequently (75% of cases), while third person subjects showed the opposite tendency, co-occurring with the MF 94% of the time. The author explained that the third person is used to report someone else's intention (or no intention at all), whereas the first person shows the

speaker's intention, and thus the use of the PF with the latter was expected. Lastly, with respect to epistemic modality, interrogative sentences that denoted uncertainty occurred categorically in the MF in the written data, whereas in the oral data of Sedano (1994) nearly half of such sentences occurred in the PF, although the pattern of more MF in utterances of less certainty continued. The author concluded that discursive modality (written or spoken) is the most important variable, but that temporal distance, verbal person, and epistemic modality are also conditioning factors for future expression.

The Northern Colombian Spanish of Barranquilla was the focus of Orozco (2005), who analyzed sociolinguistic interviews and found that the PF was used in about 46% of the future contexts, while the PI was used in 36% and the MF in roughly 18%. Like Sedano (1994, 2006), Orozco (2005) found that the MF was favored in distant future contexts (while the PF and PI were disfavored, and the opposite effect held for near future contexts), which was unlike Poplack and Turpin's (1999) finding for Canadian French, in which the near future favored the MF. Orozco (2005) also found that plural subjects favored the MF more than singular subjects and that non-human subjects favored the MF more than human subjects. Additionally, the presence of time markers favored the MF, while their absence favored the PF (similar to Aaron, 2006), which is consistent with the view that since the PF has become the most common marker of futurity it frequently does not occur with additional adverbial information, since it conveys future temporality without the need for temporal adverbial modification.

Gudmestad and Geeslin (2011) conducted semi-structured sociolinguistic interviews with highly advanced learners and native speakers (NSs) from a variety of nations of origin. Given the focus of the current section, the NS results will be reported here. The NSs used the PF for 59% of future reference, compared to 16.5% MF and 13% PI. For the NSs, the significant linguistic features included presence of temporal adverbials, temporal distance, clause type, certainty, and person/number. As in Orozco (2005) and Aaron (2006), more PF use occurred in the absence of temporal adverbials, in immediate future contexts, and with first person singular forms. Additionally, the PF was favored in contexts of certainty (as in Sedano, 1994) and in subordinate clauses.

While it is relatively agreed upon that the PF has become the dominant form of future expression in monolingual Spanish, there is some counter-evidence of the MF demonstrating more productive use in contact situations. Perhaps the most relevant example of such a situation is found in the methodologically-rigorous study of Blas Arroyo (2008), who analyzed speakers from Castellón, Spain, a region in contact with Catalan. The investigator found 54% PF and 46% MF use and the relatively high percentage of MF was expected, given the influence of Catalan (which uses an equivalent of the preterit with *anar* "to go" which closely resembles the Spanish PF, such that *va sortir* ("salió" "he left") is quite similar to the PF *va a sortir* ("va a salir" "he is going to leave"), which leads to greater use of the MF to avoid confusion). The study considered numerous linguistic variables and the following were significant: temporal proximity (more temporal distanced favored the MF), sentence modality (affirmative sentences favored the MF), speaker attitude (uncertainty favored the MF), adverbial specification (quantifying adverbials favored the MF), type of verb (modals favored the MF), semantic category of subject (non-human subjects favored the MF), clause type (main clauses favored the MF). Additionally, the following extra-linguistic factors were significant: place of origin (speakers from the province favored the MF, as opposed to speakers from the city), social status (the lower-middle class most favored the MF), and age (older speakers favored the MF). Thus, in this region higher use of the MF, which the author links to the contact situation, has slowed down PF progression.

We have seen that similar to French (the Newfoundland data of King & Nadasdi, 2003; Poplack & Dion, 2004; Poplack & Turpin, 1999) and Brazilian Portuguese (Malvar, 2003; Poplack & Malvar, 2007) most contemporary dialects of Spanish strongly favor the PF (e.g., Aaron, 2006; Gudmestad & Geeslin, 2011; Orozco, 2005; Sedano, 1994) but that in certain situations (e.g., contact with Catalan, Blas Arroyo, 2008; or in the written register, Sedano, 2006), highly frequent use of the MF occurs. We have also seen that the PF tends to be favored in the absence of temporal adverbials (Aaron, 2006; Blas Arroyo, 2008; Gudmestad & Geeslin, 2011; Orozco, 2005; Poplack & Dion, 2004), in immediate future contexts (Aaron, 2006; Blas Arroyo, 2008; Gudmestad & Geeslin, 2011; King & Nadasdi, 2003; Orozco, 2005), with human subjects (Blas Arroyo, 2008; Orozco, 2005), with first person singular forms (Aaron, 2006; Gudmestad & Geeslin, 2011; Orozco, 2005), in contexts of certainty (Blas Arroyo, 2008; Gudmestad & Geeslin, 2011; King & Nadasdi, 2003; Sedano, 1994), and in subordinate clauses (Blas Arroyo, 2008; Gudmestad & Geeslin, 2011).

2.2. *The acquisition of future expression*

In the current section, studies of the acquisition of future expression will be reviewed. First, a summary of studies that have focused on adult L2 acquisition of futurity in the Romance languages will be presented, which will be followed by a review of the Spanish L1 child acquisition of future expression, which has received far less attention in a handful of descriptivist studies.

2.2.1. *Adult L2 acquisition of future expression*

The adult L2 acquisition of future expression has yielded interesting findings with respect to the distribution of future forms used by learners. In his study of the acquisition of futurity in L2 French, Moses (2002) implemented an oral interview task based on story squares, which required learners to describe future situations, and found a clear sequence of emergence that started with uses of present for the future, followed by the emergence of the periphrastic future, which itself preceded the morphological future. The researcher's crucial finding that the PF emerged prior to the MF in the L2 acquisition of a Romance language might lead us to expect similar findings for Spanish. Additional support for this idea could also come from the fact that the PF is formed partly using the present tense (which is the first tense that learners use), is presented earlier in instruction than the MF (e.g., Lee, Young, Bransdorfer, & Wolf, 2005), and is highly more frequent than the MF in L1 Spanish (e.g., Silva-Corvalán & Terrell, 1989; Sedano, 1994).

Turning to the acquisition of future expression in L2 Spanish, Gudmestad and Geeslin (2011) conducted semi-structured sociolinguistic interviews with 16 highly advanced learners (graduate students) and 16 native speakers (NSs) and noted that the L2 acquisition of Spanish future expression involves reducing the amount of PF used (as the learners used 76% PF compared to the NSs' 59%), while increasing the amount of MF (since the less than 9% use by the learners of this form was only about half of NS use), both of which contributed to the two groups having significantly different distributions of verb forms. The study also confirmed previous reports of very high NS use of the PF and more limited use of the MF (e.g., Orozco, 2005; Blas Arroyo, 2008). With respect to linguistic factors, for the NNSs, the PF was favored in the absence of temporal adverbials, in immediate and same day contexts, and in subordinate clauses (Gudmestad & Geeslin, 2011).

In a recent cross-sectional study that included learners of Spanish who were less proficient than the graduate student learners of Gudmestad and Geeslin (2011), Solon and Kanwit (forthcoming) had 104 learners from the first five semesters of study complete an oral interview task that focused on future-time contexts. The study found that at the first three semester levels learners used the PF earlier and much more frequently than the MF, while fourth semester learners used significantly more MF than first, second, and third semester learners, which is consistent with Moses' (2002) findings for French. The authors also reported that many of their lower level participants were *specialists*, or users of only one form of future marking, while higher level participant production was more indicative of multifunctionality (Andersen, 1984, 1991), or the use of multiple forms to convey future meaning.

In sum, we have seen evidence for the emergence of the PF ahead of the MF in studies of L2 French (Moses, 2002) and L2 Spanish (Solon & Kanwit, forthcoming), which might lead us to hypothesize a similar order for L1 Spanish. Additionally, even at very high proficiency levels, we have seen that learners continue to produce even less MF than NSs (Gudmestad & Geeslin, 2011).

2.2.2. *Child L1 future expression in Spanish*

While the studies reviewed thus far have shed great light on adult expression of futurity, much less is known about child future expression. Kernan and Blount (1966) investigated the speech of children in Jalisco, Mexico. The children investigated were all from the lower socioeconomic level and ranged from five to twelve years of age. The researchers aimed to test for the presence of internalized rules in the children's grammars and presented them with pictures and a nonce word within a particular linguistic frame. The child would then be presented with a different linguistic frame and would have to modify the form of the nonce word in order to match that frame. One of the frames tested by the researchers was the morphological future. They found that children in the 5-7 age group only produced the target forms correctly in the MF about 30% of the time, while those in the 8-10 age group did so about 45% of the time, and the oldest children, in the 11-12 age range, did so approximately

80% of the time. In other words, older children were much more successful with future expression. This contrasted with other data in the study, such as the formation of plurality, for which even the youngest children demonstrated extremely high accuracy rates. Younger children also had much less difficulty with the formation of the present perfect and the imperfect than the MF. Thus, this study serves as an early indicator that young children might find the MF to be a difficult form to use.

Similarly, in his Puerto Rican data, Gili Gaya (1972) did not find use of the MF before age four, at which time only one token was produced, and González (1970), noted no MF use from the ages of two to four years and then only one token at age four years six months in the Mexican-American children whom he analyzed in Brownsville, Texas. Also reporting a lack of early MF use was Brisk (1972), who found zero uses before the age of five in the New Mexican pre-school children that she investigated via oral interviews. Moving up the age spectrum, Gili Gaya (1972) reported five tokens of MF for his first grade speakers and only a slight increase at the fourth grade level.

While the few studies of child future expression have noted that the morphological variant is far less common in children's speech than adult's (Brisk, 1972; Gili Gaya, 1972; González, 1970; Kernan & Blount, 1966), to the best of our knowledge little if any work has analyzed child L1 expression of futurity from a variationist perspective. Given this gap in the literature, the current study aims to apply variationist methods to the expression of futurity in the L1 child speech of Madrid in order to expound upon descriptive accounts of child expression of futurity, to expand what is known about L1 variation in future expression, and to potentially help inform adult L2 acquisition of future expression.

3. The current study

The goal of the current study is to explore the frequency of use and the linguistic and extra-linguistic factors conditioning this use of the morphological and periphrastic future forms in the expression of future time in conversational data by child speakers in Madrid. In order to accomplish this goal, the following research questions guided the present study:

1. What is the frequency of use of the periphrastic and morphological future forms in child conversational data in Madrid? Is the MF used less than the PF? Does it appear later (with respect to age) than the PF?
2. What linguistic and extra-linguistic factors predict the selection of the MF?
3. How do frequency of use and predictive factors for the child data compare to previous variationist findings for adult native speakers and adult L2 learners?

4. Method

The current study analyzes variation in future expression via an equally stratified subset of 40 speakers from the *Becacesno* corpus (Benedet et al., 2004) of the CHILDES database (Macwhinney, 2000), which includes one hour child-adult conversations. The children, who varied from 3 to 12 years of age, were divided evenly among gender (20 males, 20 females) and age (4 speakers of each age (2 males, 2 females) from ages 3-12 (with the exception that since there were no 12 year old males in the corpus, two additional eleven year old males were included in the analysis for the purpose of having an even number of males and females and due to their proximity in age to the 12 year old group). All were monolingual and lived in the Madrid area. Additionally, in order to include more controlled conversations and to avoid the repetition of one child's speech by another child speaker, only conversations that were between an adult and one child were included in the data (the corpus also contains conversations between an adult and multiple children.) This subset included 40 hours of speech and a total of 325,320 words.

In the current analysis, the dependent variable considered is the form of the conjugated verb used to convey future time reference. The linguistic factors included have been adapted from Blas Arroyo (2008), the most comprehensive variationist study of future temporality to date. The linguistic variables coded in the present data are temporal distance, sentential modality, adverbial specification, subject animacy, clause type, and the person and number of the subject¹. The variable temporal

¹ Originally, an additional linguistic variable, propositional certainty, was also coded and included contexts which are certain, uncertain, express intention, or express opinion. Although this variable was included in Blas Arroyo

distance includes proximal (occurring within the same day as speech time), intermediate (less than a year away), maximal (to occur at least one year after speech time), and indefinite distance (unspecified or hypothetical time frames). Sentential modality is comprised of affirmative, negative, and interrogative utterances. The factor group adverbial specification includes no adverbial specification, precise specification (e.g., *el jueves*), imprecise specification (that do not indicate an exact moment that can be pinpointed, as in *cuando pueda*), and quantified specification (that provides a totalizing view, as in *jamás, nunca, siempre, en la vida*). The factor group subject animacy includes human, as opposed to non-human subjects. The variable clause type includes main and subordinate clauses. The final linguistic factor group is person and number of the subject and includes *yo, tú, él/ella/usted, nosotros*, and *ellos/ellas/ustedes* (no tokens of *vosotros* were produced in the analyzed interview data). Extra-linguistic factors considered include the aforementioned age and sex of the child speaker.

In order to capture all potential contexts of periphrastic and morphological future forms, searches were performed for all forms of *ir* (and those that returned uses other than the PF were removed), in addition to searches for the MF endings (*-ré*, etc.). As in Blas Arroyo (2008), formulaic, discourse-related forms such as *ya verás* were removed from the data. While the present indicative is relevant to future expression, based on the emphasis of PF and MF forms in previous literature, the fact that PI is known to emerge as the earliest form in child language (e.g., Kernan & Blount, 1966), and the aim of the current study to investigate the emergence and ordering of PF and MF forms, the PI is not included in the analysis. Accordingly, the dependent variable therefore included the use of PF or MF, which also enabled binomial regressions to be run in Goldvarb X (Sankoff, Tagliamonte, & Smith, 2005). Overall, the researcher hypothesized a lower use of MF in child speech than adult speech, in addition to lower MF use among younger children than older children, based on the previous child literature.

Following token extraction, binomial regressions were run within Goldvarb X in order to determine which dependent variables in which order form the predictive model that best selects the occurrence of the morphological future. The regression measures the probabilistic weight of each independent variable in relation to the application value (i.e., the MF). A weight above .50 indicates that the factor in question favors the MF, while a weight below .50 indicates a disfavoring effect.

5. Results

The results of the current study will now be presented, beginning with the overall distribution of the use of the morphological future and periphrastic future forms. Next, results from the regression analyses run in Goldvarb X will be provided, beginning with the factors selected as significant.

With respect to the overall distribution of the two future forms (Table 1), in total the morphological future (MF) was used in 18.1% of the cases (76/419), while the periphrastic future (PF) was used in the other 81.9% of the cases (343/419), which indicates that for the 40 participants investigated the PF was the far more common variant, although there was variation according to the linguistic and sociolinguistic context, as will be seen throughout the results section. The strong preference for the PF serves as an initial confirmation of the prediction that child production of the MF would lag behind PF production.

Table 1. Distribution of periphrastic and morphological future forms

Madrileño Child Speech		
	#	%
Periphrastic Future	343	81.9
Morphological Future	76	18.1
Total	419	100

A general view of how the data were distributed can be seen in Table 2, in which the factor weights and percentages of use of the morphological future are presented for each factor group. The regression examines the degree to which the linguistic and extra-linguistic factors in the current study

(2008), as an anonymous reviewer noted, it is not completely independent from the variables subject animacy and subject person/number, since only animate subjects can have intentionality and intentionality is expressed via 1st person subjects. Accordingly, propositional certainty has been removed from the analysis and excluded from the regression. For the sake of comparison, the distribution within that variable can be found in the appendix.

predict the selection of the morphological future form. The number shown in the probability (i.e., factor weight) column is taken from either the best binomial stepping up and down regression (for factors from significant factor groups) or from the first stepping up run (for factors from groups that were not selected as significant).

Table 2. Linguistic and extra-linguistic factors selected as significant to the occurrence of the morphological future; factor groups not selected as significant in square brackets

Factor Group	Probability	% (N)
FG7: Sex		
Female	.65	27 (219)
Male	.34	9 (200)
Range	31	
FG8: Age		
6-8 years	.67	30 (150)
12 years	.46	20 (25)
9-11 years	.40	11 (86)
3-5 years	.39	11 (158)
Range	28	
FG4: Subject Animacy		
Non-human	.70	33 (52)
Human	.47	16 (367)
Range	23	
FG1: Temporal Distance		
Maximal	[.87]	58 (12)
Intermediate	[.55]	21 (82)
Indefinite	[.55]	21 (92)
Immediate	[.44]	14 (233)
FG2: Modality		
Exclamatory	[.66]	30 (10)
Negation	[.63]	27 (55)
Affirmative	[.48]	17 (329)
Interrogative	[.39]	12 (25)
FG3: Adverbial Specification		
Quantifier	[.88]	60 (10)
Imprecise specification	[.63]	27 (68)
Precise specification	[.57]	21 (42)
No specification	[.44]	14 (299)
FG5: Clause Type		
Subordinate	[.52]	19 (42)
Main	[.50]	18 (377)
FG6: Person and Number		
<i>Tú</i> (2 nd s.)	[.62]	27 (34)
<i>Uds./Ellos/-as</i> (3 rd pl.)	[.55]	21 (42)
<i>Nosotros</i> (1 st pl.)	[.52]	19 (79)
<i>Ud./Él/Ella</i> (3 rd s.)	[.49]	17 (93)
<i>Yo</i> (1 st s.)	[.46]	16 (171)
Log likelihood = -174.153		p = .009

Note: Total N (/variant) = 419 (76); Corrected mean = .15

One-level analysis: Total $\chi^2 = 255.54$; $\chi^2 / \text{cell} = 1.15$

5.1. Significant factor groups for future expression

According to the regression, there were three significant factor groups that were chosen for inclusion in the predictive model: speaker sex, speaker age, and subject animacy. The fact that the stepping-up and stepping-down regressions have the same log likelihood (-174.153) and choose the same groups with the same factor weights indicates that the regressions are quite trustworthy and are free of interactions in the data.

5.1.1. Speaker sex

According to the Goldvarb regression, speaker sex was the first factor group chosen as significant ($p < .001$). Females favored the use of MF (with a factor weight of .65), using it 27% of the time (58 of 219 cases). On the other hand, males disfavored the MF (factor weight .34), using it just 9% of the time (18 of 200 cases). This variable will be considered in conjunction with speaker age later in the results section (Section 5.1.3), but a preliminary explanation could be that, given our knowledge of earlier and more formally complex female linguistic development in comparison with that of male children (e.g., Huttenlocher et al., 1991; Hyde & Linn, 1988; Kimura, 1999; Maccoby, 1966; Özçalskan & Goldin-Meadow, 2010; Ramer, 1976), since the MF is used a very low percentage of the time in the youngest age groups (as will be seen in the next section), that the use of a corpus of (young) child language data provides future expression data that demonstrates higher sex differences than adult language, since sex was not significant in other studies (such as Blas Arroyo, 2008). Overall, the strong significance of this factor group is further confirmed by its large range of 31, the difference between the factor that most favors (i.e., female) and most disfavors (i.e., male) the MF.

5.1.2. Speaker age

Speaker age was the second factor group chosen by the regression as significant ($p < .001$). Within this variable, speakers of 3-5 years of age were combined into one group due to the similar patterning of their results, while speakers in the 6-8 year old range were also combined, and children in the 9-11 year old group were also collapsed into one group for the same reason. The speakers from the 12 year old age group were kept separate, due to somewhat different behavior from the 9-11 group, creating a total of four age groups. The data indicate, as predicted, that the youngest speaker group (3-5) was the least likely to produce the MF (factor weight .39), disfavoring this form and producing it just 11% of the time (17 out of 158 cases). This low production of the MF at the youngest age level supports previous reports (Brisk, 1972; Gili Gaya, 1972; González, 1970; Kernan & Blount, 1966).

A large increase in MF form production occurred at the next age group (6-8), as this group favored the form (factor weight .67), producing it in 30% of the cases (45 of 150). It is possible that since this form is likely being used robustly for the first time at this age group that there is especially frequent use, whereas use declines again at older age groups, who have been using the form productively for a longer period of time. Thus, the third age group (9-11) again disfavored the form, producing it 11% of the time (9 of 86 cases). Further, the frequent MF using second age group includes the age at which schooling begins, as will be seen in the discussion section.

There was a bit of an increase in the last age group, however, as the 12 year olds produced the MF 20% of the time, although it was still very slightly disfavored with a factor weight of .46 (5 of 25 cases). Since this was the oldest group interviewed in the corpus, it is not possible to tell from the data set whether the use would continue to increase or whether it levels out after age twelve. While the age distribution of future forms was not completely straightforward, the hypothesis that younger speakers would more strongly favor the PF than older speakers was borne out in the data, given that the youngest group had the lowest MF factor weight. The range for this factor group was 28, indicative of the gap between the youngest speakers and those that most productively used the MF.

5.1.3. Cross-tabulating age and gender

Given the significance of both of the extra-linguistic variables included (i.e., sex and age), a cross-tabulation of the two factor groups was run in order to see in further detail the effects of speaker

variables on future expression (Table 3). With respect to differences across age groups, we begin by comparing females to males and then make comparisons within each sex.

Table 3. Cross-tabulation of speaker age and sex

Age	Verb Form	Females % N	Males % N	Total % N
3-5	Morphological Future	21% (14)	3% (3)	11% (17)
	Periphrastic Future	79% (53)	97% (88)	89% (141)
	Total	100% (67)	100% (91)	100% (158)
6-8	Morphological Future	39% (34)	17% (11)	30% (45)
	Periphrastic Future	61% (53)	83% (52)	70% (105)
	Total	100% (87)	100% (63)	100% (149)
9-11	Morphological Future	12% (5)	9% (4)	10% (9)
	Periphrastic Future	88% (35)	91% (42)	90% (77)
	Total	100% (40)	100% (46)	100% (86)
12	Morphological Future	20% (5)	--	20% (5)
	Periphrastic Future	80% (20)	--	80% (20)
	Total	100% (25)	--	100% (25)
Total	Morphological Future	26% (58)	9% (18)	18% (76)
	Periphrastic Future	74% (161)	91% (182)	82% (343)
	Total	100% (219)	100% (200)	100% (419)

As hypothesized, the cross-tabulation indicates that young female children do indeed produce more morphological future than young male children, as evidenced by the 3-5 age group, in which the females' percentage (21%) was seven times higher than that of males (3%), which represented a statistically significant difference, $\chi^2(1, N = 158) = 12.4, p < .001$. Further, the 3-5 year old females were similar to the 6-8 year old males, who more closely approximated the former's rate of MF use, although they (17%) still did not quite reach the 21% MF use of the younger girls. Meanwhile, the female age counterparts in the 6-8 group raised their total to 39% MF use, which was significantly higher than the 6-8 year old males, $\chi^2(1, N = 149) = 8.13, p < .01$. At the next age group (9-11), percentages of MF use dropped back down, and the males finally demonstrated similar rates as the females (9% and 12%, respectively), as their use was no longer statistically significantly different, $\chi^2(1, N = 86) = .330, p > .05$, although the females still did produce a slightly higher percentage of MF.

Turning our attention to comparisons within each sex, girls in the 6-8 age group indeed produced significantly more morphological future than girls in the 3-5 group, $\chi^2(1, N = 154) = 5.83, p < .05$. A similar, albeit even more highly significant, increase occurred for males, as boys in the 6-8 group significantly exceeded those of the 3-5 group in MF production, $\chi^2(1, N = 143) = 9.04, p < .01$. Moving up the age spectrum, girls in the 9-11 age group used significantly less MF than those in the 6-8 group $\chi^2(1, N = 154) = 5.83, p < .05$. While boys in the 9-11 group also produced less MF than their 6-8 year old counterparts, this difference was not significant, $\chi^2(1, N = 109) = 1.72, p > .05$. Finally, in the oldest age group, although the 12 year old girls increased MF production as compared to the 9-11 females, this difference did not reach significance, $\chi^2(1, N = 65) = .665, p > .05$.

Given the distribution of the data, it appears then that somewhere in the age 9-11 range male child use of the MF finally approximates that of female children. Since the *Becacesno* corpus does not include 12 year old boys, one cannot say for certain whether in the last age range boys would continue to have similar rates as girls, whether they would surpass girls in MF use, or whether they would drop below female use. As previous studies of adult future expression have not found gender to be significant, a reasonable hypothesis might be that boys would continue to have similar rates as the girls in the 12 year old group. Further, within each sex, the fact that differences in MF use were significant in comparing the two younger groups to each other but then generally lost significance with age seems to indicate that future expression is in great flux during the earlier childhood years but largely stabilizes over time. Overall, as will be considered in the discussion section, significantly higher MF production by girls than boys at the 3-5 and 6-8 age groups supports previous research's documentation of earlier and more complex female linguistic development (e.g., Huttenlocher et al., 1991; Hyde & Linn, 1988; Kimura, 1999; Özçalskan & Goldin-Meadow, 2010; Ramer, 1976).

5.1.4. *Subject animacy*

Subject animacy was the third and final factor group selected as significant by the Goldvarb regression ($p < .01$). Within this group, non-human subjects strongly favored the MF (factor weight .70), co-occurring with it in 33% of the data (17 of 52 cases). That non-human subjects favored the MF is consistent with Blas Arroyo's (2008) similar finding, as well as Orozco's (2005). On the other hand, human subjects, which were much more frequent, slightly disfavored the MF (factor weight of .47), co-occurring with it in 16% of cases (59 of 367). Within this factor group, we see the general pattern of the MF being more highly favored in the less frequent context (non-human subjects) and more disfavored in the more frequent context (human subjects), which is consistent with previous research that points to the PF as having become the default indicator of futurity, which with it entails more frequent general use (once again 82% in the current data) and its being favored in more frequent contexts (for a discussion of default status with respect to other temporal forms see the following: Comrie, 1976; Dahl, 1985; Schwenter & Torres Cacoullous, 2008). The notion of default status will be further examined in the discussion section. The generally strong significance of this factor group is also evidenced in its range of 23. The fact that this linguistic variable is significant also serves as evidence that the child speakers have begun to be constrained by factors that also restrict the adult native speaker grammar, which will also be further considered in the discussion section.

5.2. *Non-significant factors*

In this section, the factor groups mentioned were not selected as significant by GoldVarb and thus will receive less emphasis, except for those found to be significant in numerous prior studies.

5.2.1. *Temporal distance*

While temporal distance was not selected as significant by the regression model, there are some interesting and expected results within this category. As predicted, maximal temporal distance (for events that were to occur at least a year in the future) strongly favored the use of the MF (factor weight .87), which was used in 58% of such contexts (7 of 12). This is consistent with the findings of Blas Arroyo (2008), Sedano (1994), Orozco (2005), and Gudmestad and Geeslin (2011), as well as Poplack and Turpin (1999) for Canadian French. The most likely reason that this factor group was not selected as significant was due to the small number of tokens of such maximal contexts. The other temporal distances were all close to the .50 borderline of neither favoring nor disfavoring the MF. Intermediate temporal contexts (following Blas Arroyo, 2008, occurring at least one day later than the moment of speech) slightly favored the MF (factor weight .55), occurring with it in 21% of the data (17 of 82 cases), while indefinite temporal contexts (those that were to occur at an undetermined time) demonstrated very similar conditioning (factor weight .55, also 21% of the data or 19/92 cases).

Lastly, as expected, immediate contexts (those that were to occur the same day as the utterance) were the contexts that most disfavored the MF (factor weight .44) (albeit slightly), co-occurring with it 14% of the time (33 of 233 cases), which was also the case for Blas Arroyo (2008), although this context more strongly disfavored the MF in his data. Once again, it is interesting to note that this was the most common context in the current data (233 cases) and was also that which most favored the PF, which is consistent with the PF's status as the default marker of futurity.

5.2.2. *Modality*

Although sentential modality was not selected as significant by the regression model, exclamatory sentences favored the MF (factor weight of .66), co-occurring with it in 30% of cases (3 of 10 tokens), but the scarcity of such tokens is likely what kept this factor group from reaching significance. Exclamatory sentences actually disfavored the MF in Blas Arroyo's (2008) data, but this difference could again be due to the infrequency of such utterances. Sentences that contained negation also had a favoring effect (.63), using the MF 27% of the time (15 of 55 cases). This differs from the disfavoring effect of negation noted by Blas Arroyo (2008), but is consistent with Poplack and Turpin's (1999) finding that negation favors the MF in Canadian French. Affirmative sentences (factor weight of .48) and interrogative sentences (.47) neither favored nor disfavored the MF.

5.2.3. Adverbial specification

Although adverbial specification was not selected as significant, the current findings are quite similar to the expected pattern, as demonstrated in Blas Arroyo (2008). In the current data, quantified specification (such as *nunca* and *siempre*) very strongly favored the MF (factor weight .88), co-occurring with it 60% of the time (6 of 10 cases), but once again significance for this factor group was not reached, likely due to the small token count of such cases based on the infrequency of quantification. Blas Arroyo (2008) found a similar effect for quantifiers in his data, and they were infrequent there, as well. Imprecise specification (such as *cuando pueda*) also favored the MF in the current data (factor weight .63), which was congruent with Blas Arroyo's (2008) findings. In the current data, precise specification (such as *el viernes*) slightly favored the MF (.57), whereas it neither favored nor disfavored the MF in Blas Arroyo's (2008) data. Lastly, a lack of adverbial specification slightly disfavored the MF (factor weight .44) which was the same effect and nearly the identical factor weight in Blas Arroyo's (2008) data, and which also confirms Orozco's (2005) and Gudmestad and Geeslin's (2011) findings that the absence of adverbials disfavored the MF.

5.2.4. Clause type

In the current data, whether the future verb occurred in a main (factor weight of .50) or subordinate clause (.52) had essentially no effect on the verbal form used, as the former co-occurred with the MF in 18% of cases and the latter did so 19% of the time. This was slightly different from Blas Arroyo's (2008) finding that main clauses moderately favored (.57) the MF.

5.2.5. Person and number

As was the case with Blas Arroyo (2008), the category person and number of the subject was not chosen as significant. In the current data, *tú* favored the MF (.62), and this was yet another case of the least frequent member of a factor group (used with the MF in 9 of 34 cases) most favoring the MF, while the most frequent member *yo* (27 of 171 cases) once again was the one that most disfavored the MF, which supports Sedano's (2006) and Gudmestad and Geeslin's (2011) findings of high use of the PF with *yo*. Given the nature of conversational data, it was not surprising that *yo* was the most frequent subject pronoun and the fact that the PF was most used in that context reaffirms its status as the default marker of futurity. Use of *Uds./ellos/ellas* (factor weight of .55), *nosotros* (.52) and *Ud./él/ella* (.49) did not greatly affect the verbal form used.

A further interesting note about the correspondence between verbal form used and the person and number of the subject is that the order of frequency of the subject forms was the direct inverse of their likelihood to favor the MF (i.e., ranking each of the five forms from least frequent to most frequent is equivalent to ranking them from most favoring to most disfavoring MF), as evidenced by *tú* (34 cases, factor weight .62), *Uds./ellos/ellas* (42 cases, factor weight .55), *nosotros* (79 cases, factor weight .52), *Ud./él/ella* (93 cases, factor weight .49), and *yo* (171 cases, factor weight .46). The fact that plural subjects tended to slightly favor the MF is in line with Orozco's (2005) data. That singular subjects (other than *tú*) tended to slightly disfavor the MF also confirms Orozco's (2005) findings, although once again this factor group was not selected as significant in the current regression.

6. Discussion

Firstly, in terms of pure frequencies, the periphrastic future (81.9%) was shown to be much more prevalent than the MF (18.1%), indicating a general preference for the PF in the child speech of Madrid that is consistent not only with reports of adult future expression (e.g., Aaron, 2006; Gudmestad & Geeslin, 2011; Orozco, 2005; Sedano, 1994), but also of low use of morphological future by children (Brisk, 1972; Gili Gaya, 1972; González, 1970; Kernan & Blount, 1966). This also is consistent with patterns found in adult Canadian French (the Newfoundland data of King & Nadasdi, 2003; Poplack & Dion, 2004; Poplack & Turpin, 1999) and Brazilian Portuguese (Malvar, 2003; Poplack & Malvar, 2007). Development and robust use of the MF subsequent to the PF also parallels L2 acquisition findings for French (Moses, 2002) and Spanish (Solon & Kanwit, forthcoming).

The binomial regression analysis demonstrated that speaker sex, speaker age, and subject animacy were all selected as statistically significant. Among the conclusions that should be gleaned from the current study is that child age is an important factor in the expression of futurity, such that great care should be taken when investigating child speech, as the speakers below the age of six differed greatly from those above that age, which in many ways confirms previous reports that four and five year olds produced very few forms of the MF (Brisk, 1972; Gili Gaya, 1972; González, 1970; Kernan & Blount, 1966). Speaker age, however, was not a completely straightforward variable. Although the youngest speakers (ages 3-5) were the ones who most disfavored the MF, the 6-8 year olds were actually the only age group in the current data set that favored the MF. Given the large increase in MF use at that age, the 6-8 group especially merits further investigation in future studies. This variable was also shown to demonstrate a complex relationship with the other sociolinguistic variable, speaker sex.

Indeed, speaker sex was statistically significant in the current analysis, although it has not received emphasis in previous L1 child studies of future expression. Similarly, it has received little attention in the adult literature, although Blas Arroyo (2008) does mention that it was not selected as a significant factor group in his model, although he does not report values. None of the other studies included mention speaker sex in their analyses. Additional analysis via the cross-tabulation of speaker age and sex revealed that females produced the MF earlier than males and produced a significantly higher percentage than their male counterparts (in both the 3-5 and 6-8 year old groups) until later in childhood, in addition to the general finding that female speakers strongly favored the MF (.65), while male children rather strongly disfavored it (.34). This finding adds to previous reports of earlier female linguistic development with respect to more developed verbal performance (e.g., Hyde & Linn, 1988; Kimura, 1999), earlier production of first words (e.g., Maccoby, 1966), earlier production of first sentences (e.g., Ramer, 1976), larger vocabulary inventories (e.g., Huttenlocher, Haight, Bryk, Seltzer, & Lyons, 1991), greater variety of sentence types (e.g., Ramer, 1976), and earlier production of gestures (e.g., Özçalskan and Goldin-Meadow, 2010). Earlier and more robust female child production of a morpho-syntactic form (i.e., the morphological future) is thus highly congruent with previous work on other aspects of child L1 linguistic development.

In fact, the cross-tabulation of age and sex also revealed that within each sex 6-8 year olds produced significantly more MF than 3-5 year olds (at the $p < .01$ level for boys and $p < .05$ level for girls). At the next age group, MF use then decreased for both sexes, although the difference was only significant for females ($p < .01$). Since most children begin formal schooling around the age of six, perhaps it is not surprising that the 6-8 year old group is that which experiences the spike in MF use, and it may explain why this group is significantly different from both the younger 3-5 group (for both males and females) and the older 9-11 group (for females). In fact, in the L1 sociolinguistic literature other linguistic differences have been attested to manifest themselves with the onset of formal education. For example, in their analysis of sociolinguistic interviews of children in Caracas, Díaz-Campos and Colina (2006) noted an increase in intervocalic /d/ retention that corresponded with enrollment in elementary school. While sociolinguistic differences conveyed by the retention or deletion of intervocalic /d/ in Díaz-Campos and Colina (2006) likely differentiate that study from the current one, we might hypothesize that regardless of whether there is substantial sociolinguistic meaning associated with one variant or another, the beginning of schooling makes for a time of great potential linguistic change for children, which would certainly be supported by the current data.

The significant linguistic factor subject animacy showed consistency with findings from variationist studies of adult native speaker production. The fact that non-human subjects favored the MF is consistent with both Blas Arroyo (2008) and Orozco (2005). This linguistic factor serves as a preliminary general indicator that the child speakers in the current study are acquiring certain restrictions of the adult grammar and are demonstrating sensitivity to similar constraints. Thus, the present study reveals that, even at an early age, the system of future expression in child language already shows evidence of being conditioned by one of the same linguistic variables known to meaningfully affect the adult system.

Why the MF seems to emerge after the PF is a question that will warrant continued investigation in subsequent research. The fact that the MF is far less frequent in adult L1 Spanish use (e.g., Aaron, 2006; Orozco, 2005) indicates that children likely receive much less input in the MF than the PF. Further, since the MF is formed by contributing additional morphology to the entire infinitival form, MF forms typically are at least three syllables long, which may pose a challenge for very young

speakers, as demonstrated by the difficulty of producing MF forms with nonce verbs in Kernan and Blount (1966). Additionally, since even the youngest learners in the current data set used the PF quite robustly, there may not have been a great need to also be able to express futurity via the MF in the earliest years since other means already were in place. As has been demonstrated for L2 acquisition, Andersen's (1984) one-to-one principle of meaning-to-form mappings indicates that in earlier stages language learners demonstrate a straightforward use of one surface form (in this case the PF) to express one underlying meaning (i.e., futurity). Thus, the need to express futurity was fulfilled by the PF and some time passed before speakers demonstrated multifunctionality (Andersen, 1991), or the use of multiple forms (i.e., the PF and the MF) to convey futurity. An early reliance on the one-to-one principle is perhaps best illustrated by the 3-5 year old boys in the current study, who produced 97% PF in future contexts. This could be contrasted, for example, with the 6-8 year old girls, who used the PF 61% of the time, demonstrating a comparatively much more balanced system of multifunctionality.

Furthermore, the few times when the morphological future was favored tended to be the least frequent factor within a factor group (e.g., with non-human subjects, when *tú* was the subject, in maximal temporal distances, in exclamations, and with quantified adverbials²). In light of the notion of default status (Comrie, 1976; Dahl, 1985; Poplack & Malvar, 2007; Schwenter & Torres Cacoulios, 2008), this indicates that the PF is indeed the default form for child speech in Spanish, as well as its previous documentation in adult speech (e.g., Aaron, 2006, 2007, 2010; Moreno de Alba, 1977; Palmer, 2001), since default forms tend to be favored in the most frequent (and most general) contexts, with other forms being relegated to less common (and more specified) linguistic contexts. Thus, the current study provides compelling evidence that the periphrastic future is indeed the default form of future expression for child speech in Madrid, based both on overall rates of use and the frequency of the individual factors that favor such use.

7. Limitations and future directions

While the current study was designed to analyze the emergence of the periphrastic and morphological future forms, when the former begins to yield some terrain to the latter, and the roles of sex and age, it is important for subsequent studies to also consider the present indicative. While the PI is certainly prevalent in the speech of young children (e.g., Kernan & Blount, 1966), including the form in future studies can provide additional information about the factors that constrain future expression in child speech and how these factors might compare with what is known about how they condition adult speech. This would also raise the token count for contexts of future expression, which can otherwise be relatively infrequent, especially in child speech, as we have seen.

Additionally, it was shown that the MF was favored for the factors which were least frequent within their factor groups. With this in mind, future studies that aim to elicit higher percentages of the MF could target these specific linguistic environments via questions in sociolinguistic interviews or in elicitation tasks. More generally, two recent studies have implemented preference tasks that isolate the linguistic factors known to significantly affect future expression and have yielded interesting, readily comparable findings (e.g., Gudmestad & Geeslin, forthcoming; Kanwit & Solon, 2013). Future work will certainly build on these findings.

Speaker sex was significant in the current study, but has generally been ignored in the literature on child future expression in Spanish and has often been omitted from adult L1 studies on the topic. Thus, while it may not be a predictive variable in adult future expression, subsequent studies of child future expression will benefit from further investigation of differences according to sex.

While changes in the distribution of future expression among children of different ages from the same speech community provide compelling evidence for the role of age, the current study has used cross-sectional data to stand in for longitudinal data. Ideally, subsequent research could uncover more about how future expression changes with age by monitoring the same child speakers over time. This would also shed further light on changes that might occur once children are enrolled in formal education, given the behavior of the current study's 6-8 year olds.

² Interestingly, this also was the case with statements of opinion, which were the least frequent factor within the variable "propositional certainty," which was removed from the final analysis, but can be found in the appendix.

Lastly, considerations of epistemic uses (i.e., the expression of probability) of the MF would supplement this data well (e.g., Aaron, 2010). While such uses do not represent a variable context, subsequent projects could analyze epistemic MF use in child speech in order to see when such use enters child grammars and how the use might differ from the temporal MF with respect to the age at which it is produced and the frequency with which it is used.

Appendix

Table 4. Future expression according to the variable propositional certainty

Factor	Percentage of MF Use	Number of Tokens (MF / Total)
Opinion	37.0%	17/46
Uncertain	22.6%	14/62
Intention	18.4%	30/163
Certain	10.1%	15/148

Note: Speaker certainty was adapted from Blas Arroyo (2008) and includes contexts which are certain (for actions that are sure to happen, as in *van a llegar las vacaciones*), uncertain (where some doubt exists, as with *si* clauses such as *si hay tiempo, iremos*), express intention (for plans the speaker will carry out, as in *Nos vamos a quedar aquí después de la fiesta*), and express opinion (in which the speaker indicates personal views, as in *Según mi punto de vista, Carla no va a estar muy contenta allí*).

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