

# Optional Infinitives in Child Spanish

Amy Pratt and John Grinstead

The Ohio State University

## 1. Introduction

The influential work of Wexler (1990, 1994, 1998, 2000) on the crosslinguistic use by children of nonfinite verb forms known as the "Optional Infinitive Stage" has pointed out a number of properties of this stage, with the most fundamental being the simultaneous option to produce both finite and nonfinite verbs in root clauses. For example, young child English-speakers produce both "He walk." and "He walks." in the same recording session. Shortly after Wexler's project began, a number of child language researchers working on Southern Romance languages examined spontaneous language transcripts of child speakers of Italian (Guasti 1994), Catalan (Torrens 1992, Grinstead 1994) and Spanish (Grinstead 1994) to determine to what degree this phenomenon could be detected in these languages. The conclusion of these researchers was that there did not appear to be substantial numbers of nonfinite verbs in these child languages, and specifically that morphological infinitives did not seem to occur often or at all in root contexts and that in general child speakers of Southern Romance gave the impression of producing quite adult-like tense and agreement marking on verbs.

A problem inherent in this work, in these null subject languages, however, was always that as adults reading child language transcripts full of verbs that did not occur with overt subjects (at levels close to 80% for Catalan and Spanish, according to Bel 2003), it was never totally clear whether a verb agreed with its intended (null) subject or not. In the case of morphological infinitives, it was clear enough because any morphological infinitive, with or without an overt subject, that was not either subordinate to an auxiliary or discourse licensed, in the sense of Lasser (1997), would constitute a root infinitive. Other forms that have since been argued to constitute root nonfinite forms in Southern Romance, however, such as third person, singular present (or bare stem) forms, were harder to distinguish as finite or nonfinite. That is, it is possible to see a child-produced verb form like "Corre." or "Run." in a transcript and conclude that it is a well-formed third person singular present indicative verb. However it is also possible that this form is a kind of default, bare stem form which is nonfinite in child Southern Romance grammars. This is a problem similar to the one faced by phonologists and phoneticians with the categorical perception of sounds. We hear phonemes, even when they are not produced for reasons having to do with context. Similarly, we may perceive child verbs as finite, because of our adult interpretation of context, even when they are in fact nonfinite.

In this paper, we will review the existing evidence from spontaneous and elicited production (with both real and invented words) to the effect that Spanish-speaking children do in fact use these forms and others as nonfinite or "optional infinitive" verb forms. We will then present the results of a new grammaticality judgment task in which monolingual child Spanish-speakers accept as grammatical the 3 verb forms we hypothesize to be optional infinitives in child Spanish. Finally, we will show how such facts can be accommodated in theories of nonfinite verbs in child Spanish syntax.

## 2. Bare Stems

Briefly, the primary reason for believing that the third person singular form can be nonfinite in child Spanish, Italian and Catalan is that verbs of this phonological form can be nonfinite in the adult language. As pointed out in Grinstead (1994, 1998, 2004), 2<sup>nd</sup> person singular imperatives, which are inherently nonfinite, occur in the exact same form as third person, singular present indicative verbs.

(1) Corre.  
Run-2<sup>nd</sup>, sg., imperative  
"Run."

(2) Corre.  
Run-3<sup>rd</sup>, sg., indicative  
"(He, she, it) is running./(He/she/it) runs."

Additionally, Spanish, Catalan and Italian have yet another form which is homophonous with the third, singular present indicative which may fail to agree in number with its argument, namely the impersonal passive.

(3) Se cortan árboles.  
Imp. Cl. cut trees  
"Trees cut."

(3) Se corta árboles.  
Imp. Cl. cut trees  
"Trees cut."

Impersonal forms obviously differ from imperatives and third person, singular indicative forms in that they co-occur with a "se" clitic, but the verb morphology is unaffected by the singular or plural number of the argument they occur with and they only occur in the third person. There are no first or second person impersonals, suggesting that these forms lack both person and number specifications.

Finally, note that the verb root plus a theme vowel is the least specified that a verb may be in Spanish, while still respecting Spanish phonotactics and being pronounceable (Harris 1991).

(4) \*Habl-  
speak  
"Speak"

(5) Habl-a.  
speak  
"Speak."

If the adult version of Spanish tends to use bare stem forms to represent verbs which are semantically unspecified for tense, as in imperatives, or are impervious to agreement marking, as in impersonals, then it is plausible, *prima facie*, that bare stems are a good candidate for being nonfinite forms in child language. Now we turn to evidence showing that they are in fact the most prominent nonfinite verb form in early child Spanish.

### 3. Spontaneous Production

As suggested above, a problem with spontaneous production data in null subject languages is that, by virtue of lacking overt subjects, roughly 80% of all child verbs do not allow for the possibility of judging directly whether or not there is a mismatch in agreement between a 3<sup>rd</sup> person or bare stem verb and its subject, which we take to be an example of a nonfinite verb in Spanish. In child Spanish spontaneous production data, we find examples of these bare stem forms occurring with overt subjects which are not 3<sup>rd</sup> person, confirming that this is a possibility for child Spanish grammars (data from Grinstead 1998). Note for examples (6) and (7) that nominative case 1<sup>st</sup> person singular pronouns in adult Spanish occur with the 1<sup>st</sup> person, singular form of the copula and not with 3<sup>rd</sup> singular agreement, as in English (e.g. "It is I." translates for adults as "Soy yo." and not as "Es yo.").

(6) Eduardo - 2;0.14  
Es yo.  
Copula 3<sup>rd</sup> sg I-nom  
"Is I."

(9) Carlos - 2;1.08  
Va yo.  
go 3<sup>rd</sup> sg I-nom  
"I goes."

(7) Eduardo - 2;2.0  
Es tú.  
Copula 3<sup>rd</sup> sg you-nom  
"Is you."

(10) Carlos - 2;4.23  
Tú sí voy.  
You-nom emph. Go 1<sup>st</sup> sg  
"You do too go."

(8) Eduardo - 3;0.28  
Yo quiere hacerlo.  
I want 3<sup>rd</sup> sg do inf cl acc sg masc  
"I wants to do it."

(11) Carlos - 3;3.28  
Yo pone.  
I-nom put 3<sup>rd</sup> sg  
"I puts."

- |  |   |
|--|---|
| <p>(12) Carlos - 3;3.28<br/>Yo va a buscar.<br/>I-nom go 3<sup>rd</sup> sg to look for inf<br/>"I goes to look for."</p> <p>(13) Graciela - 2;2.23<br/>Yo se cayó.<br/>I-nom cl. 3<sup>rd</sup> sg fall 3<sup>rd</sup> sg past<br/>"I fell."</p> <p>(14) Graciela - 2;6.5<br/>Hace esto yo.<br/>do 3<sup>rd</sup> sg this I-nom<br/>"I does this."</p> | <p>(15) Graciela - 2;7.6<br/>Yo lo rompó.<br/>I-nom cl acc sg masc break past overreg<br/>"I breaked (vis. rompí) it."</p> <p>(16) Graciela - 3;3.26<br/>Este, yo quiere.<br/>this, I-nom want 3<sup>rd</sup> sg<br/>"This, I wants."</p> |
|--|---|

These utterances are examples of bare stems which have been noted in many other studies of child Spanish, including Hernández-Pina (1984), Radford & Ploennig-Pacheco (1995), Davidiak & Grinstead (2004), Clahsen, Avelado & Roca (2002), Liceras, Bel & Perales (2006) and Buesa (2006). Given the existence in child Spanish spontaneous production of bare stem forms which appear to be third person singular present indicative forms, but in fact are non-agreeing forms of undetermined temporal-aspectual interpretation, we now turn to examples, from Grinstead (1998) where context suggests that even without an overt subject, bare stems are being used to refer to a non-third person subject.

- (17) Eduardo - 2;5.29  
No puede.  
not can 3<sup>rd</sup> sg  
“(S/he) cannot.”  
[responds to the investigators question of whether he can put two pieces of a puzzle together.]
- (18) Graciela - 2;3.4  
No quiere.  
not want 3<sup>rd</sup> sg  
“(S/he) does not want.”  
[responds to mother asking her if she wants a band-aid.]
- (19) Carlos - 2;9.15  
Sí puede nadar.  
Emph. can 3<sup>rd</sup> sg swim inf  
“(S/he) can too swim.”  
[responds to investigator asking if he can swim “¿Puedes nadar?”]

These examples show that the children are willing to allow the co-occurrence of an inferred-from-context non-third person subject (in cases 17-19, a 1<sup>st</sup> person singular subject) with an apparently third person singular present indicative verb. This observation casts even further doubt on the interpretations in the literature that the apparently third person singular present verbs which occurred with null subjects were adult-like.

More evidence from spontaneous production to the effect that child Southern Romance includes optional infinitive verbs, is presented in Davidson and Goldrick (2003) who show for child Catalan that bare stem forms disappear from child Catalan grammar at the same rate that non-third person singular agreement (2nd person singular, 3rd person plural, etc.) begins to be used. This finding lends further support to our hypothesis that there are significant numbers of root nonfinite forms in early child Southern Romance languages, but they are mistaken by adults for adult-like verb forms.

Finally, other studies which have argued that bare stems are nonfinite forms in child Spanish include Hernández-Pina (1984), Radford & Ploennig-Pacheco (1995), Davidiak & Grinstead (2004), Clahsen, Avelo & Roca (2002), Licerias, Bel & Perales (2006) and Buesa (2006). These studies also find some number of morphological infinitives being used by children, as in the following from Davidiak & Grinstead (2004).

(20) Carlos – 2;2.7  
Payaso venir.  
clown come inf  
"Clown come."

(22) Eduardo - 2;8.26  
Pintar.  
paint inf  
"Paint."

(21) Graciela - 2;3.11  
Bañar.  
bathe inf  
"Bathe."

In summary, morphological infinitives and most especially bare stems are commonly produced by child speakers of Southern Romance languages in studies of spontaneous production and they appear to be gradually replaced by forms inflected for person and number.<sup>1</sup>

#### 4. Elicited Production

Beyond the fact that studies of spontaneous production in null subject languages present a greatly reduced number of opportunities to observe unambiguous cases of root nonfinites, they also suffer from the defect that children may use constructional idioms or "frozen forms" to express many of their ideas. In these cases, we assume that children are drawing fully inflected, morphologically unitary elements from the lexicon, which tell us little about productive morphosyntax. For this reason, elicited production studies which present children with both the subject they must use and the verb which they must pair with the subject provided to form an agreement relationship may serve as a clearer reflection of the grammatical competence of children. Fortunately, a number of studies have been carried out in child Spanish and all suggest that bare stems, morphological infinitives and an overregularized third person singular past form may serve as nonfinite forms in child Spanish. We return to the status of these overregularized forms below.

There are two studies carried out with monolingual child Spanish speakers in Spanish-speaking countries which followed the design of Berko-Gleason's (1958) "Wug Test" for verbs by providing children with invented verbs to conjugate. Pérez-Pereira (1989) presented children with the opportunity to change verbs into 3<sup>rd</sup> person past (preterite) and found that children made large numbers of errors, as illustrated in Table 1.

	3 Year-olds	4 Year-olds	5 Year-olds	6 Year-olds
Past-preterite	32%	64%	71%	78%

Table 1 - Percentage Correct with Invented Verbs in Pérez-Pereira (1989)

Pérez-Pereira (1989) found slightly improved percentages with real verbs in a similar elicited production experiment, as illustrated in Table 2.

	3 Year-olds	4 Year-olds	5 Year-olds	6 Year-olds
Past-preterite	48%	74%	73%	76%

Table 2 - Percentage Correct with Real Verbs in Pérez-Pereira (1989)

<sup>1</sup> Though some studies, such as Radford & Ploennig-Pacheco (1995) provide estimates as high as 20% for the percentage of all verbs which are nonfinite, the same inherent limitations on working with spontaneous production data in null subject languages caution against relying too heavily on such numbers. Consequently, we limit ourselves to establishing that this is a real phenomenon in spontaneous production.

Kernan & Blount (1966) found similar results. Unfortunately, neither of these studies say much about what kinds of errors children produced and they only tested 3<sup>rd</sup> person singular past tense.

However, Bedore & Leonard (2001) carried out a similar elicited production study with 3 and 5 year-old Spanish-speaking children in the US, however they elicited 1<sup>st</sup> and 3<sup>rd</sup> person, singular and plural, present and past tense verbs. Furthermore, they included details regarding the types of errors children made, which turned out to be the same set found in spontaneous production, as well as a form which had not been previously documented: third person singular past preterite. The total percentages of errors produced by the typically-developing children in the study, compiled from Bedore & Leonard (2001 – prepublication copy), are given in Table 3.

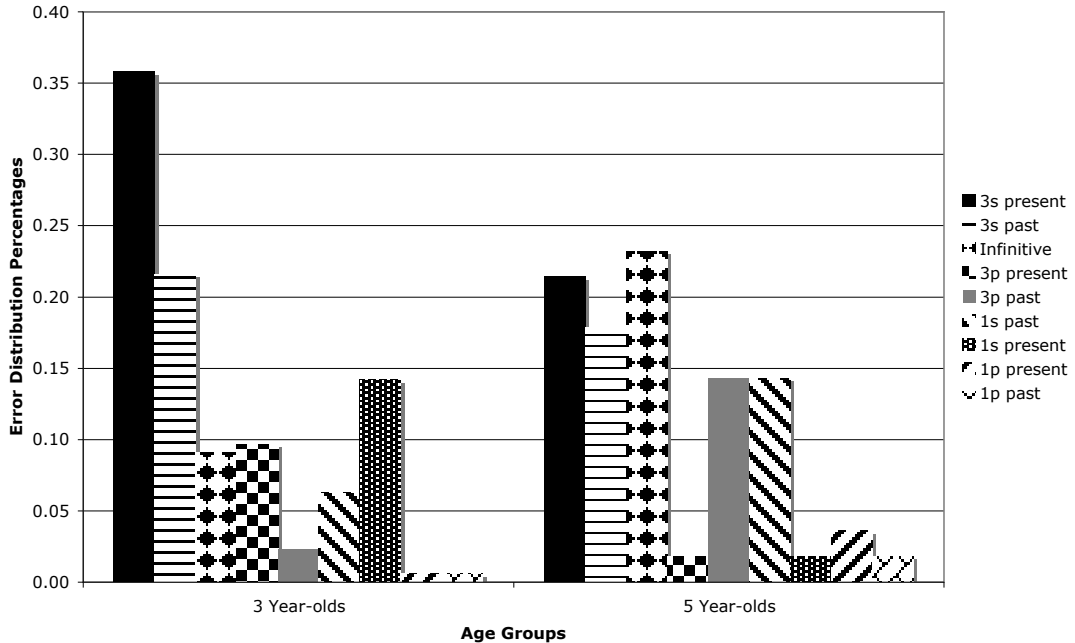
	3 Year-olds	5 Year-olds
Total Errors	176	56
Total Possible	1186	1511
Percent Errors	15%	4%

Table 3 – Elicited Production Errors from Bedore & Leonard (2001, Table 5)

As one might expect, if optional infinitives are a significant phenomenon in Spanish as they are in English, the elicited production error percentages for 3 year-olds (range = 2;10 – 3;6) of Bedore & Leonard (2001) are similar to the percentages given in Rice, Wexler & Hershberger (1998) for 3 year-old (36 months old) typically-developing child English speakers. As shown in Table 3, 3 year-old child Spanish-speakers produced 15% errors, while the 3 year-old child English speakers in Rice et al (1998) produced errors between 20% and 40%. For the 5 year-old groups in both elicited production studies, the percentage of errors was near 5%.

Returning to Bedore & Leonard's study of Spanish, it is interesting to note that the distribution of errors made by 5 year-olds and 3 year-olds is quite different, when analyzed closely. While 35% of the errors produced by 3 year-olds are bare stems, this percentage drops to 20% in 5 year-olds, who distribute their errors much more evenly across a range of non-target forms, as illustrated in Figure 1. The fact that bare stems are the most prevalent error made by the younger children in Bedore & Leonard (2001) and the fact that it is the most common error noted in spontaneous production is consistent with its status as a nonfinite form in child Spanish.

Figure 1 - Error Distribution By Group



Notice in Figure 1 that over 60% of all errors made by each group consist of bare stems (3s present), the infinitive and the overregularized 3<sup>rd</sup> person singular past tense. We suggest that the third person singular past tense is an overregularized form because it only occurred when the target form was 1<sup>st</sup> person singular present (25 errors in 152 attempts – 20%).<sup>2</sup> Note the segmental similarity and prosodic difference between the following two forms of the verb *hablar* "to speak".

(23) 1<sup>st</sup> Person Singular Present Indicative

Hablo.  
[a.βlo]

(24) 3<sup>rd</sup> Person Singular Past Preterit

Habló.  
[a.βlo]

We can see from these examples that a child attempting to produce the form in (23) could easily change the stress to the word-final syllable and instead produce (24) as an overgeneralization that fails to respect the phonemic nature of stress in Spanish, but which nonetheless is segmentally correct.<sup>3</sup>

Summarizing, there are 3 major nonfinite forms produced by child Spanish speakers in elicited production experiments, which account for over 60% of their errors. The errors of younger child Spanish speakers include more bare stems and infinitives and fewer overgeneralized 3<sup>rd</sup> person, singular past forms. The overall percentages of errors committed by child Spanish-speakers is somewhat lower than those of their child English counterparts, but not radically so.

<sup>2</sup> It is interesting to note that the children with specific language impairment studied in Bedore & Leonard (2001) only made this kind of overgeneralization error on 2 of 134 attempts (1.5%), suggesting that their morphosyntax was not adding bound morphemes to stems in the same way that the typically developing children were, consistent with a representational view of SLI as a language deficit, as in Rice & Wexler (1996).

<sup>3</sup> Other kinds of overgeneralization – between regular and suppletive forms – have been argued to be the signal that the optional infinitive stage has begun and it has been observed that nonfinite forms decrease in frequency after the first production of overgeneralized inflectional morphemes on verbs in Spanish (Clahsen, Avelledo & Roca 2002) and in English (Grinstead & Bahnsen 2006).

A possible explanation for higher proficiency in Spanish than in English with finiteness marking is the fact that it is simply impossible to pronounce a verbal root, e.g. *camin-* ‘walk’, in Spanish without adding at least the word-final “word marker” morpheme *-a* to form *camina* (Harris 1991). In English, on the other hand, a morphological root *walk* is the same as the morphological stem *walk*. Though Spanish-speaking children seem willing to simply produce a stem, even when it does not agree with the subject, they would seem likely to be more keenly aware of word-final morphological processes than are child English speakers, simply as a function of input.

## 5. Grammaticality Judgment

We have seen that error percentages for typically developing children in elicited production experiments are roughly similar in child English and child Spanish. Are they similar for the receptive grammar measures provided by grammaticality judgment tasks? Table 4 compares the percentage correct of finite verbs in the elicited production and spontaneous production studies in Rice, Wexler & Hershburger (1998) with the percentage correct from the grammaticality judgment study of 4 year-old (the youngest age tested) child English speakers in Rice, Wexler & Redmond (1999).

	Percentage Correct for 4 Year-olds
Spontaneous Production – Rice et al (1998)	85% ±
Elicited Production – Rice et al (1998)	75% ±
Grammaticality Judgment – Rice et al (1999)	65% ±

Table 4 – A Comparison of Methods Used for Measuring Finiteness Marking in Child English

We see that in Table 5, a similar relationship for Spanish-speaking 3 year-olds in the US obtains between the spontaneous production results of Bedore & Leonard (2005) and the elicited production results of Bedore & Leonard (2001). Until now, however, we have had no information regarding the performance of child Spanish speakers on a grammaticality judgment task to measure finiteness.

	Percentage Correct for 3 Year-olds
Spontaneous Production – Bedore & Leonard (2005)	95% ±
Elicited Production – Bedore & Leonard (2001)	85% ±
Grammaticality Judgment	??

Table 5 – A Comparison of Methods Used for Measuring Finiteness Marking in Child Spanish

It is important to point out that Rice, Wexler and colleagues have long used a "composite" of morphological tense markers to measure child English proficiency with verbal finiteness. This composite includes 3<sup>rd</sup> singular *-s*, regular past tense *-ed*, copular and auxiliary *be* & *have* as well as *do*. Following Rice & Wexler, we take the 3 most common errors produced in spontaneous and elicited production studies (the bare stem, the infinitive and the 3<sup>rd</sup> singular past) to form a composite of child Spanish nonfinite forms. The motivation in much of Rice & Wexler's work for this composite is the observation that the composite is capable of distinguishing child English speaking children with specific language impairment from both age- and language-matched control groups, under the hypothesis that it is tense that is selectively impaired in children with this language disorder. Elsewhere (Pratt and Grinstead 2007b), we present preliminary evidence that the same is likely to be true for our composite in child Spanish speakers with SLI.

Consequently, our current question is whether typically developing child Spanish speakers will be able to distinguish, using their receptive grammatical abilities in a grammaticality judgment task, finite and nonfinite verbs, where the nonfinite forms are the main three forms of our composite.

## 6. Methods

### 6.1 Participants

The participants in this study were 15 monolingual, typically-developing child Spanish speakers from a daycare center in Mexico City. Their ages ranged between 4;1 and 5;10. The mean age was 5;1.

### 6.2 Procedures

Our grammaticality judgment task was an adaptation of McDaniel & Cairns (1990), McDaniel, Chiu & Maxfield (1995) and Rice, Wexler & Redmond (1999). In the task, it was explained to the children that we were going to play a game in which the characters (a dog, a cat and a turtle) were still learning to talk and did not always say things well. As a result of this problem, the experimenters needed to ask the children to help the animals learn, “Can you help them learn to talk by telling them when they don’t say things right?” The children were then shown Flash animated scenarios on a 15 inch laptop computer screen depicting actions taking place in the present or the past. When the actions took place in the past, they were depicted in a thought bubble above the heads of the characters and it was emphasized to the children that these actions were completed and had taken place the day before.

After each action was shown to the child, he or she would be asked if the character in the animation had said it correctly or said it incorrectly (“¿Lo dijo bien o lo dijo mal?”). To insure that children did not confuse truth with grammaticality, they were given a warm-up explaining the difference. All children passed the warm-up. 15 items were presented in the present and 17 in the past. 3 of the utterances in the present were grammatical and 3 of the utterances in the past were grammatical. The rest, 12 in the present and 14 in the past, were ungrammatical. 6 fillers were included. Only children who passed at least 4 of 6 fillers were included. 4 of 19 children were excluded, leaving 15.

Characters in the animation would speak to each other, allowing for the use of 1st, 2nd and 3rd person singular and plural. Native speakers of Spanish were recorded producing the utterances that the children judged, using an standard Apple external microphone using SoundStudio software on a Macintosh computer. The characters spoke to one another using either a grammatical utterance or an utterance containing a nonfinite form. The nonfinite forms were taken from the forms produced by children in spontaneous and elicited production studies in the literature. For example, children heard ungrammatical sentences, such as:

- Ustedes pintar.
- Yo quiere una galleta.
- Tú pintó.
- Nosotros brincar.

They also heard grammatical sentences, such as:

- La tortuga brincó.
- El perro y la tortuga corren.
- Ustedes abrieron la boca.

Verbs were taken from the Spanish version of the MacArthur Communicative Development Inventory (Jackson-Maldonado, Bates & Thal 1992) to increase the odds that the words would be in the children’s vocabulary. Verbs varied by transitivity, verb conjugation (-ar, -er, -ir) and items were presented in different orders.

## 7. Results

The children's results fell very much in the range one might have expected, if one believes that root infinitives are a phenomenon in Spanish, much as in English, as we argue. In Table 6, we see that, overall, children gave correct judgments 72.5% (348/480) of the time.

	Present	%	Past	%	Overall	%
Grammatical	40/60	66.67	46/60	76.67	86/120	71.67
Ungrammatical	120/165	72.72	142/195	72.82	262/360	72.77
<i>Total</i>	160/225	69.70	188/255	74.74	348/480	72.50

Table 6 – Grammaticality Judgments of Grammatical (Finite) and Ungrammatical (Nonfinite) Verbs in Past and Present Tense Spanish.

In general, we see that our 5 year-old participants accepted nonfinite forms as grammatical or judged finite forms as ungrammatical 27% of the time, which suggests that even at 5 years of age, they still possess grammars that still allow nonfinite verbs. Notice that 5 year-old English speakers in Rice, Wexler and Redmond (1999) only accepted nonfinite verbs as grammatical 10% of the time.

## 8. Summary

In summary, we have seen that nonfinite verbs occur as bare stems and as morphological infinitives in child Spanish spontaneous production, attested in a large number of studies. We have also seen that these two forms, as well as an overgeneralized 3<sup>rd</sup> singular past form occurs in studies of elicited production. Finally, we have seen that in a grammaticality judgment task, children's receptive knowledge of Spanish grammar allows these nonfinite forms, even in children as old as 5;1.

## 9. Discussion

Our goal in exploring the phenomenon of optional infinitives in child Spanish has been to argue that child Spanish grammars belong to the set of child grammars which optionally allow root nonfinite forms and that any crosslinguistic analysis of root infinitives must explain child Spanish grammar in their proposal somehow. Wexler (1998), for example, argues that root infinitives in child language result from a constraint particular to child grammars known as the Unique Checking Constraint (UCC). The thrust of the proposal is that verbs in the adult grammar have a D feature that must be checked, or eliminated from the derivation, by coming into a structural relationship which allows checking other D features on both the tense and agreement functional heads. While in the adult language, the D feature of both tense and agreement must be deleted, the UCC, which only operates in child language, allows only 1 of these 2 features to be checked. Consequently, in cases where verbs are nonfinite, it is said that only the D feature of tense or only the D feature of agreement has been checked by the verb. This is characterized as a "minimal violation", in the sense of Optimality Theory, of the "interpretative/conceptual properties" which require that either agreement or tense be checked. When verbs are finite, Wexler argues, both features have been checked, which constitutes a "minimal violation" of the UCC. In order to explain the previously predominant, and empirically incorrect, position that null subject languages like Spanish do not display the optional infinitive phenomenon, Wexler argues that in such languages agreement is D, and consequently has no D feature independent of it, associated with it. In order for Wexler's system to accommodate the observed fact that child Spanish is an optional infinitive grammar, the only change necessary would be to assume that in fact agreement is D and that this fact does not mean that it does not need a D feature, but rather that it includes a D feature. To the degree that our syntax is going to have any correspondence to our semantics, it would only seem natural to assume that a pronominal feature in agreement has just as much of a chance as having the "D" property as would any other nominal. Given that this is a cumbersome and unnatural component of Wexler's hypothetical construct anyway, such a modification not only brings his theory greater empirical coverage, but makes it much simpler and more appealing.

An alternative explanation proposed in Grinstead (1998) is that in Spanish, following Ordóñez (1997) who in turn follows proposal for Arabic by Jelinek (1984) and Fassi-Fehri (1993) and American Indian languages by Baker (1996), agreement is an incorporated pronominal. The idea is that agreement may either be non-nominal, as in English, or nominal, as in Arabic and Spanish. It is an actual pronoun which incorporates into the verb. In this framework, the incorporated pronominal gets Case by having its D feature checked by the verb through incorporation and is also the subject

argument that gets a theta role, as do impersonals in Raposo & Uriagereka's (1996) analysis. Syntactic tense, meanwhile, following the spirit of Hoekstra & Hyams (1995) is established anaphorically by a tense chain from the left edge of the clause in Finiteness Phrase, as in Rizzi (1997), which binds the agreement morpheme in the clause, which incorporates the verb which in turn carries the event argument, in the sense of Higginbotham (1987). In utterances which lack this agreement morpheme, such as infinitives, imperatives and impersonals, there is no tense chain established, in which case tense may be fixed deictically, following Guéron & Hoekstra (1988).

In such a framework the failure of children to mark tense, a fundamentally discourse-semantic notion, in morphosyntax can be seen as a subcase of a larger discourse-syntax interface delay, specifically rooted in the left periphery of the clause. In this way, we subsume the optional infinitive phenomenon to the larger and empirically more well-established phenomenon of syntax-pragmatics delay, which includes early child difficulties with Principle B, object clitics, scrambling, definiteness marking on DPs as well as other cases. In most of these cases, the deficit appears where syntactic mechanisms can be viewed as depending on a discourse presupposition of some kind. Such an account for has been put forth by Roberts (2003), for example, which argues that a presupposition of familiarity in the common ground is necessary to account for definite descriptions. There is an analogous sense in which tense marking presupposes a representation of an event taking place at a time relative to speech time which could just as easily be disrupted in an immature interface between syntax and discourse-pragmatics. Children may simply assume, as in cases of nominal anaphora, that their interlocutors share their presuppositions. In the nominal domain, this has a wide array of non-adult-like syntactic consequences in child language, including overusing definite articles, overusing pronouns and overusing null subjects in null subject languages. The idea in the case of tense is that children assume that their listeners are aware of their temporal presuppositions and consequently use morphosyntactic verb forms which do not mark tense morphologically. In the same way that overuse in child language of, for example, definite articles with nouns that adults would mark as indefinite is not an "all or nothing" phenomenon, but rather decreases with time and co-exists with occasional use of indefinites in appropriate circumstances, nonfinite verbs also gradually decrease as children become aware, perhaps through the development of Theory of Mind, that their interlocutors do not share their discourse presuppositions. Notice that children could have completely adult-like morphosyntactic knowledge under these circumstances, but simply be unable to take advantage of it, as a function of the Temporal Interface Delay (TID) Hypothesis.

(25) The Temporal Interface Delay Hypothesis – children have adult-like morphosyntactic competence, but lack adult-like access to discourse-pragmatic information regarding tense and consequently allow verb forms which may either mark tense through a T-chain in the adult way, or deictically when they assume that their interlocutors share their access to discourse-pragmatic tense information.

If the TID is correct, we have an explanation of, among other things, the difficulty that a subgroup of children who have Autism Spectrum Disorders have with marking finiteness, as documented in Roberts, Rice & Tager-Flusberg (2004). The TID would constitute a simpler account of problems with finiteness marking in children with ASD, as a result of the fact that the great majority of the language difficulties ascribed to this population are attributed to a failure to access discourse pragmatic information resulting from deficits in ASD children's Theory of Mind (Baron-Cohen 1995, Tager-Flusberg 1997). Following the TID, the problems with finiteness marking that some children with ASD face would not appear as an unrelated, independent language deficit, but rather as a difficulty that relates directly to the pragmatic deficit that is taken by many to be at the core of ASD.

This Temporal Interface Delay Hypothesis, can be subsumed to Left-Peripheral Delay for nominal anaphoric elements inasmuch as both depend on the discourse-sensitive domain of the clause to find morphosyntactic expression. In turn, Left-Peripheral Delay can be viewed as a particular type of Interface Delay, which is attested in other cases in which aspects of cognition which seem developed in their own domains are nonetheless slow to integrate with other domains of cognition. Language and spatial cognition is one such example, illustrated in the work of Landau & Jackendoff (1993), while language and number is another example, illustrated in Grinstead, MacSwan, Curtiss & Gelman (1998)

as well as language and memory, as in Gibson (1998). We hope that further work revealing the nature of the interpretations children have of these nonfinite utterances is not too far off in the future

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