

Modality, Non-finite Forms, and the Manifestation of the RI Stage in Null and Non-Null Subject Languages

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1. Introduction

One of the aspects of child language that has attracted the attention of numerous researchers concerns the production of non-finite forms in contexts where a finite form would be required, i.e., what have come to be known as root infinitives (RIs). Depending on the language, these non-finite forms may be actual infinitives (as in French, German or Dutch) or bare forms with no tense or agreement morphology (as in English).

Also, evidence for the existence of a RI stage has not been found in all languages. In fact, there seems to be a notable difference among languages depending on whether they allow null subjects or not. Thus, non-null subject languages are languages where a robust RI stage has been attested, whereas null subject languages do not appear to exhibit such a noticeable RI period (Guasti 1994; Rizzi 1993/1994).

In this paper, we analyze the presence and interpretation of RIs in null subject languages and propose an explanation of this phenomenon based on the combination of two features: person [+/-P] and infinitive [+/-R]. We will further argue that the way these two features are implemented in the grammar of a given language can be used to predict the duration of the RI across languages.

2. The RI phenomenon across languages: Cross-linguistic differences

It is well known that there are differences in the amount of RIs found in child language data depending on whether a language allows null subjects or not. Thus, children acquiring null subject languages like Spanish, Italian or Catalan are said not to go through an RI stage (Guasti 1994; Rizzi 1993/1994), whereas children acquiring non-null subject languages like Dutch, German or French usually exhibit a robust RI stage.

One of the first attempts to deal with the appearance of RIs in child language is Radford's (1990) maturation hypothesis, which states that children do not have access to functional categories at the beginning of the acquisition process and so they start out with simply a verbal phrase (VP), as in (1). The remaining functional categories are supposed to become available in the course of maturation. The problem with this proposal lies in that evidence of absence of functional categories is very difficult to find in languages with rich verbal morphology, which raises the question of why functional categories are available earlier in some languages than in others.

(1) [VP ...V...]]]]]

A different account is found in Rizzi (1993/1994), who proposes that there is a principle of Universal Grammar (UG) that is responsible for the fact that all sentences include a complementizer phrase (CP), even if in some sentences this CP is phonetically empty. Nonetheless, this principle is subject to maturation in the case of the child. Thus, children can truncate the structure of the clause at any node below the CP. When the child truncates the structure of the clause below the TP node, a non-finite form appears (see (2)), whereas if the structure is truncated above the TP level, a finite tensed form comes in. In the case of the infinitives of null subject languages, truncation below TP is not possible because infinitives need to rise to AgrP to check agreement features, which explains the absence of these forms in the data.

(2) [CP [AgrP [NegP [TP  [VP ...V...]]]]]]

Wexler (1994) advances an alternative explanation. For this author, both Agr(eement) and T(ense) have an uninterpretable D feature that needs to be checked via DP subject rising to the specifier of TP. However, Wexler proposes that children abide by the *Unique Checking Constraint*, which says that only T's or Agr's feature can be checked. This being so, children occasionally omit T from the representation in order to comply with the UCC. When this happens, a RI comes along. The reason why children learning null subject languages are not constrained by the UCC is that in these languages Agr licenses null subjects and therefore it does not have an uninterpretable D feature that requires checking, as in (3).

(3) [CP [AgrP [NegP [TP [VP ...V...]]]]]]

Despite differences in the technical details, Rizzi's and Wexler's proposals share some basic underlying assumptions. Firstly, both claim that crosslinguistic differences in the number of RIs produced by children are motivated by the different parametric properties of infinitives in the respective languages. Secondly, they also share the premise that children are sensitive to these parametric properties from very early on. Finally, Rizzi's and Wexler's proposals share the belief that all functional categories are accessible to the child from the beginning, contra Radford (1990).

Although numerous authors have adhered to the claim that the existence or not of a RI stage is contingent on the (un)availability of null subjects in a given language, there have also been authors who have advocated for the existence of a RI stage in null subject languages. The proposals in this direction can be separated into two groups. On the one hand we have those who claim that there is a true RI stage similar to that of non-null subject languages, but that children learning null subject languages recover faster (Bel 1998, 2001; Liceras, Bel and Perales 2006) and, on the other hand, those who claim that there are analogous RIs forms in null subject languages: bare forms (Hernández-Pina 1984; Tsimpli 1992; Radford and Ploennig-

Pacheco 1995; Davidson and Goldrick 2003; Clahsen, Aveledo and Roca 2003; Buesa 2007; Pratt and Grinstead 2007) or imperatives (Salustri and Hyams 2003).

2.1 RIs in null subject languages

If we look at the production rates of RI forms in the data files from children learning languages like Spanish and Italian and compare the raw numbers with the total obtained in the data from children learning other languages like German or French, we will see that the totals are radically different, with the latter children obtaining far higher scores than the former. However, there are authors who show that if we count RIs file by file, we will find that at some points the number of RIs is also high in children who are learning null subject languages. For instance, Bel (1998, 2001) counted the number of RIs in the production data of Jùlia, a Catalan-speaking child, from the age of 1;10 to 2;5. She found that at 1;10 the percentage of RIs amounted to 21%, whereas at 2;0 there was a significant drop to 3.2%.

Age	% RIs
1;10	21
2;0	3.2
2;1	3.9
2;2	9.8
2;5	5.6

Table 1: RIs in child Catalan (Bel 1998, 2001)

A similar result was found by Licerias, Valenzuela and Díaz (1999), who classified the data from María (a Spanish-speaking child) into two stages: one from the age of 1;0 to 1;9, in which a score of 32.2% was obtained, and another stage from 2;5 to 2;7 in which a low percentage of 2.6% was recorded.

Magín		María	
Age	% RIs	Age	% RIs
1;0 – 1;9	9.8	1;0 – 1;9	32.2
2;5 – 2;7	0.3	2;5 – 2;7	2.6

Table 2: RIs in child Spanish (Licerias, Valenzuela and Díaz 1999)

Bel (2001) also counted the number of RIs for María in a file by file fashion. She found that, up to the age of 1;10, the percentage of RIs was robust enough to be taken into consideration, as shown in the following table:

Age	% RIs
1;7	20.2
1;8	11.4
1;9	8.6
1;10	8.3
1;11	2
2;0	5.4
2;1	2.2

Table 3: RIs in child Spanish (Bel 2001)

These results suggest that looking at the total percentage of RIs produced by a single child may be misleading, because we may be missing stages in which the production of RIs in null subject languages is worth noting. It must be borne in mind that the RI stage in non-null subject languages is taken to last till 2;7 or even 3;0 years old.

A similar result is obtained in Basque, another null subject language. Ezeizabarrena (2002) provided the distribution of RIs in four different stages. Looking at her data, it becomes clear that these children continue to produce RIs after the age of two, but no further than the age of three.

Mikel		Jurgi		Oitz	
Age	% RIs	Age	% RIs	Age	% RIs
1;7 – 1;11	31.6	1;11 – 2;7	20.5	1;6 – 2;2	38.6
2;0 – 2;3	15.2	2;8 – 3	10	2;3	22.5
2;4 – 2;9	2.6	3;1 – 3;3	3.1	2;4 – 2;6	13.1
2;10 – 4	3.2	3;4 – 4;1	1.9	2;7 – 3	0.5

Table 4: RIs in child Basque (Ezeizabarrena 2002, 2003)

The data from Mikel and Oitz (first and second rows of data) show that RIs reach their maximum percentages around the second year of age. From then on, the percentages decrease, as shown in table 4 (see third row of data for Mikel and Oitz, and second row for Jurgi).

Schaeffer and Ben Shalom (2004) report similar results for Hebrew. They challenge Rhee and Wexler's (1995) study and reanalyze the data to show that Hebrew-speaking children also go through a RI stage, albeit shorter than that of children learning other non-null subject languages.

Age	% RIs
1;0 – 1;11 (12 children)	27
2;0 – 3;3 (24 children)	5

Table 5: RIs in child Hebrew (Schaeffer and Ben Shalom 2004)

As can be observed, these authors divide the children’s production data into two stages: one before age two, in which the percentage of RIs is rather high, and another one from age two onwards, in which the percentage of RIs is very low. These authors conclude that Hebrew-speaking children do go through a RI stage, but they recover faster than children learning non-null subject languages.

For Russian, we have looked at the data gathered by Bar-Shalom and Snyder (1997), represented in table 6, and Gagarina (2002), displayed in tables 7 and 8 (adapted from Bar-Shalom and Snyder 1997)¹.

Varya		Tanya	
Age	% RIs	Age	% RIs
1;6	17.2	2;5.11	28
1;7	24.3	2;5.24	10
1;9	18.4	2;6.1	10.7
1;10	5.3	2;6.8	8
2;0	3.7	2;7.6	2.6
2;4	2.1	2;8.26	4

Table 6: RIs in child Russian (adapted from Bar-Shalom and Snyder 1997)

The data from Varya show that RIs are quite common up to the age of 1;10, when a significant decrease is observed. In Tanya’s data, RIs are found even at age 2;6, which suggests a longer RI period than that found in Spanish, but similar to the one found in Basque. Interestingly, Basque and Russian verbs share the fact that they do not have a distinct infinitival marker, and that their infinitives encode aspect. We will come back to this later. In the data from Gagarina (2002) a similar trend can be observed; the production of RIs is high, and in some cases it lasts beyond the second year of age, as shown in tables 7 and 8 (adapted from Gagarina 2002).

Liza			
Age	% RIs	Age	% RIs
1;7	0	2;1	9.8
1;8	30.8	2;2	9.2
1;9	27.9	2;3	6.9
1;10	16.3	2;4	6.3
1;11	17.4	2;5	2.6
2;0	9.4		

Table 7: RIs in child Russian

¹ There has been some debate about whether Russian should be considered a null or a non-null subject language. Bar-Shalom and Snyder (1997) claim that since children produce a fair amount of RIs in this language, it should be included among the non-null subject languages. Nonetheless, we argue that null subject languages also exhibit RI effects, and therefore we oppose the direct relation established by these authors between availability of null subjects and production of RIs.

Vanja			
Age	% RIs	Age	% RIs
2;1	26.4	2;4	9.9
2;2	16.3	2;5	3.7
2;3	14.3		

Table 8: RIs in child Russian

The data presented above challenge the generalization that null subject languages do not exhibit RI effects. In fact, the languages reviewed in this section also obtain high percentages of RIs during a certain period, a fact that is obscured if we collapse the data into one single percentage.

2.2 RI analogues in null subject languages

Apart from the authors who claim for the existence of a RI period in which the production of RIs is similar to that of children learning non-null subject languages, there are authors who have proposed that a similar phenomenon is manifested in null subject languages. Hoekstra and Hyams (1998), after analyzing acquisition data from different languages, proposed that the relation between tense and discourse is encoded by different elements across languages: Number morphology in Dutch and English, Person morphology in Spanish and Italian, and Tense morphology in languages like Japanese. In the case of null subject languages, the underspecification of the feature Person brings about the *Avoid Plural Phenomenon*, which alludes to the inexistence of plural verbal forms during this stage of development.

Other authors (Hernández-Pina 1984; Tsimpli 1992; Radford and Ploennig-Pacheco 1995; Davidson and Goldrick 2003; Clahsen, Avelledo and Roca 2003; Buesa 2007; Pratt and Grinstead 2007) have adhered to the proposal that a bare form (the third person singular in the present tense) is the analogous RI form in null subject languages. They claim this is so because these forms are frequent in child language data, and because there is a high number of agreement errors involving this form. They also argue that this is a basic morphological form, with no suffixes, just the stem of the verb followed by the thematic vowel or ‘word marker’ (Harris 1991). Pratt and Grinstead cite examples like the ones in (4), which are considered as agreement errors because the child is using a third person verbal form to refer to herself.

- (4) a. No puede (Eduardo 2;5.29)
not can-3rd sg
‘He can’t’
[responds to the investigator’s question of whether he can put two pieces of a puzzle together]
- b. No quiere (Graciela 2;3.4)
not wants-3rd sg
‘He doesn’t want’ [responds to mother asking her if she wants a band-aid]

- c. Sí puede nadar (Carlos 2;9.15)
 yes can-3rd sg swim
 “Yes, he can swim”
 [responds to investigator asking if he can swim]

More recently, Salustri and Hyams (2003, 2006) have claimed that the imperative should be taken as the RI analogue for null subject languages because (i) they share with RIs “the mapping of *irrealis* mood onto a tenseless clausal structure” (Salustri and Hyams 2003: 693); (ii) they occur more often in child data than in adult data; (iii) they occur more often in null subject languages than in non-null subject languages, and (iv) they are restricted to eventive predicates. Crucially, the imperative form in these languages is homophonous with the third person singular form advocated for by Tsimpli (1992), Pratt and Grinstead (2007) and Buesa (2007), among others.

Bel (1998, 2001) and Bel, Liceras and Perales (2006) argue against considering that the third person singular is an RI analogue. They claim that for that to be the case, we should find that the third person singular form has different tense values. In the data, third person singular forms always have a temporal present value, whereas true RIs have both present and non-present value. Moreover, if the third person singular is used as a default form, we should find that it is used in contexts that do not refer to a third person subject, which is contrary to fact. In fact, utterances like the ones in (4) may be considered as ‘reference errors’ and not ‘agreement errors’ because the child is using a third person to refer to herself, but agreement is right. This is shown by the tendency of the child to refer to herself in the third person singular, as the following examples from Catalan show (Bel and Rosado 2006):

- (5) a. la Júlia vol la nina (Júlia 2;1)
 the Júlia wants the doll
 “Júlia wants the doll”
 b. a Júlia baixa a pantaló (Júlia 2;2)
 the Júlia puts down the trousers
 “Júlia puts down the trousers”

As these examples show, the child (Júlia) uses a third person singular form to refer to herself instead of using a first person but, strictly speaking, subject-verb agreement is essentially correct.

Bel (2001) and Bel, Liceras and Perales (2006) also argue against adopting the imperative as a RI analogue first, because RIs and imperatives do not share the same interpretive properties (RIs may refer to first and third person singular, whereas imperatives always refer to the second person). Secondly, RIs and imperatives do not have the same temporal reference, namely, RIs may refer to various tenses (past, present, future) whereas imperatives always refer to speech time. Furthermore, the fact that imperatives are restricted to eventives is expected since stative imperatives are not available (*know the lesson!). Finally, as Bel notes, arguing that imperatives are RI analogues based on a single percentage of appearance is misleading because

the data show that children continue to produce imperatives well beyond the RI stage.

3. On the semantic interpretation of RIs

It is well known that RIs and inflected forms do not share the same semantic or interpretive properties. In fact, numerous studies have concluded that as far as semantics is concerned, finite and non-finite forms do not alternate freely (Hoekstra and Hyams 1998; Hyams 2001). Specifically, it is the case that finite forms always have a temporal or *realis* interpretation (past or ongoing), whereas non-finite forms (or RIs) have a modal or *irrealis* value (deontic, volitional or future interpretation). Moreover, there are differences in the aspectual value of verbs in that finite forms can be either eventive or stative predicates, whereas RIs are restricted to eventives. These temporal and aspectual observations led Hoekstra and Hyams to propose the following generalizations:

(6) *Modal Reference Effect (MRE)*: with overwhelming frequency RIs have modal interpretations

(7) *Eventivity Constraint (EC)*: RIs are restricted to eventive verbs

Hyams (2001) goes one step further and claims that these two generalizations are determined by the child's attempt to establish a more primitive opposition: *realis* mood (actual occurrence, whether past or ongoing of an event) versus *irrealis* mood (desire, necessity of futurity of some event). Thus, according to this author, "the alternation between finite and non-finite forms falls out of the child's attempt to set up a system of semantic oppositions and map them onto morphological forms" (Hyams 2001: 47). According to this hypothesis, the RI stage is universal across languages, what differs is the specific forms children choose to mark the *realis* versus *irrealis* opposition. Table 9 summarizes the forms used by children learning different languages, as proposed by this author and colleagues.

	[+/-NS]	[+/-R]	<i>Realis</i>	<i>Irrealis</i>
Dutch, German	-	+	Inflected	Infinitives
English	-	-	Bare and Inflected	Semi-auxiliaries
Italian, Spanish	+	+	Inflected	Imperatives
Greek	+	-	Inflected	Bare subjunctive/perfective

Table 9: Crosslinguistic expression of the *realis/irrealis* opposition

In languages like Dutch and German, which do not allow null subjects[+/-NS] and have an infinitival form, the latter would be chosen by the child to convey an *irrealis* interpretation. According to Hyams (2001), the choice of the infinitive to express *irrealis* mood is motivated by the intrinsic modal value of infinitival markers. In English, a language without null subjects and without a distinct infinitival marker, both bare and inflected forms would be carriers of *realis* interpretation and semi-auxiliaries (*hafta, wanna, gonna*) would be used by the child to express the *irrealis* (Ud Deen 1997; Hyams 2001). In Italian and Spanish, null subject languages with distinct infinitival forms, inflected forms would express *realis* meaning and imperatives (bare verbal forms) would express *irrealis* meaning (Salustri and Hyams 2006). Finally, in Greek, a language without infinitives that allows null subjects, a bare form (subjunctive or perfective) would be in charge of the expression of *irrealis* interpretations (Hyams 2001, 2005).

Irrespective of the actual forms that are used in each language, this proposal paves the way to consider that the RI stage is indeed a universal stage of development across children and across languages, and therefore children will vary as to what forms they use to establish that primitive semantic opposition. In the next sub-section we will be looking at the semantic properties of RIs in null subject languages.

3.1 Interpretive properties of RIs in null subject languages

According to the studies that have isolated true RIs in children learning null subject languages, those non-finite forms are used to convey both *realis* and *irrealis* meanings. The following are examples from the languages discussed in 2.1:

- (8) *Catalan*
- | | | | | |
|----|------------------|-------|-----------------------|--------------|
| a. | Sortir | | <i>Irrealis</i> value | (Júlia 1;10) |
| | Come out-INF | | | |
| b. | Aixó recollir, | mama | <i>Realis</i> value | (Júlia 2;1) |
| | This pick up-INF | mummy | | |
- (9) *Spanish*
- | | | | | |
|----|------------------------|--|-----------------------|-------------|
| a. | Sentar | | <i>Irrealis</i> value | (María 1;8) |
| | Sit down-INF | | | |
| b. | El otro buscar | | <i>Realis</i> value | (María 1;8) |
| | The other look for-INF | | | |
- (10) *Basque*
- | | | | | |
|----|-------------------|--|-----------------------|-------------|
| a. | Hori amatau | | <i>Irrealis</i> value | (Mikel 2;1) |
| | That turn off-INF | | | |
| b. | Hemendik pasa | | <i>Realis</i> value | (Jurgi 2;7) |
| | Here pass-INF | | | |

(11) *Hebrew*

- | | | | | | |
|----|----------|---------|------------|-----------------------|-----------|
| a. | Lashevet | al | ha-shulxan | <i>Irrealis</i> value | (AD 2;1) |
| | Sit-INF | on | the table | | |
| b. | Malon | Lauf | | <i>Realis</i> value | (AM1 2;1) |
| | Balloon | fly-INF | | | |

(12) *Russian*

- | | | | | | |
|----|---------|--------------|--|-----------------------|---------------|
| a. | Rubasku | snimat | | <i>Irrealis</i> value | (Sasha J 2;4) |
| | Shirt | take off-INF | | | |
| b. | Tetya | pet | | <i>Realis</i> value | (Sasha P 1;9) |
| | Woman | sing-INF | | | |

These examples show that RIs in null subject languages do not conform to the *realis/irrealis* opposition predicted by Hyams, since they allow both interpretations. A possible explanation for this lies in the fact that *irrealis* forms in Romance languages are also morphologically salient (subjunctive) and therefore we expect that they are incorporated soon into the child's grammar. On the contrary, for languages that do not have a specific morphology for *irrealis* mood, the child needs to resort to the use of infinitives until modal verbs are integrated. This would suggest that this semantic opposition, rather than a primitive, would be the reflex of how children attempt to sort out the morphological intricacies of their language.

4. The role of the features Person [P] and Infinitive [R]

4.1 The [P] feature and the duration of the RI stage

Hoekstra and Hyams (1998) proposed that it was the underspecification of the Number feature that was responsible for the appearance of RIs in non-null subject languages. They also proposed that the underspecification of Person (the corresponding feature in null subject languages) was responsible for the *Avoid Plural Phenomenon*. After analyzing data from null subject languages, we claim that the Person feature is not underspecified in these languages and that the presence of this feature does not trigger the appearance of RIs in the child production data, but explains that in some languages the production of RIs is restricted to a shorter period of time. Schaeffer and Ben-Shalom (2004) also advocate that it is the Person feature that is responsible for the quick abandonment of the RI stage in null subject languages. They claim that Person (and also Tense) are “the most transparent bridges between syntax and pragmatics, which facilitates the acquisition of obligatory finiteness” (Schaeffer and Ben-Shalom 2004: 93). Nonetheless, and although we agree with these authors that the Person feature plays a crucial role in the abandonment of the RI stage, we propose a more syntactic explanation in that it is due to the fact that (i) its morphological realization is both salient and pervasive (a different ending for each person) and (ii) its pronominal (interpretable) nature makes children analyze it as one of the vocabulary entries in the numeration. In other words, the input provides a strong morphological trigger that is phonologically

salient and pervasive and the fact that it has referential (pronominal) properties also contributes to its triggering power. Furthermore, as we will argue below, this triggering power of the Person feature is further strengthened by the infinitival feature [R].

4.2 The [R] feature and the *realis/irrealis* opposition

Hoekstra and Hyams (1998) claimed that the infinitival morpheme was responsible for the modal interpretation of RIs in child language. However, later on Hyams (2005: 12) acknowledged, “the relation between infinitival morphology and modality hypothesized by Hoekstra and Hyams (1998) cannot be maintained”. In our proposal, however, the infinitival morphology is not what determines the semantic interpretation of RIs, but it is a facilitator for the abandonment of the RI stage. Thus, children learning languages that have a distinct infinitival morpheme will acquire the distinction finite/non-finite faster than children learning languages in which either the infinitival morpheme is phonologically identical to other verbal forms (e.g. Dutch, French), or it is simply non-existent (e.g. English). This is due to the fact that a distinct, unambiguous and consistent infinitival marker that realizes the [R] feature will constitute a clear trigger for the abandonment of the RI period (Liceras, Bel and Perales 2006)².

4.3 A typological distribution of [P] and [R]

Building on the above considerations about the role of the features Person and Infinitive, we have proposed a typological distribution of how the RI stage will manifest in a given language based on the combination of these two features (see also Bel, Liceras and Perales 2006; Liceras, Bel and Perales 2006; Perales, Liceras and Bel 2005). The idea is that depending on how these two features are morpho-phonologically realized in a given language, the duration of the RI stage will vary accordingly. The factors that must be taken into account are: (i) whether the person feature is realized either on both lexical and auxiliary verbs [ALV] or only on auxiliaries [AV]; and (ii) if the infinitival form in a given language has a specific morphological realization or if it is non-distinct (n.d.) from other forms of the verb. A classification of languages according to these features is shown in table 10:

² One reviewer points out that even though the Dutch infinitive is identical to the (finite) plural form, they behave differently in the syntax (infinitives always in final position) and that this should help Dutch-speaking children to abandon the RI stage earlier. Our proposal places the emphasis on a specific morphological feature (Person), which applies within the word domain. In the absence of such morphological trigger (e.g. Dutch) the child needs to resort to word order to acquire the finite/non-finite distinction. This implies that the child needs to be able to parse longer strings (sentences) in order to figure out how such distinction is implemented, which would explain why it takes longer for Dutch children to abandon the RI stage.

[P]	[R]	RI stage	Languages
+	+	°	Catalan, Italian, Spanish
[ALV]		Short	RIs with <i>realis</i> and <i>irrealis</i> value
+	+	°	Hebrew
		Short	RIs with <i>realis</i> and <i>irrealis</i> value
+	-	°	Greek
[ALV]		Short	<i>Irrealis</i> (bare subjunctive) / <i>Realis</i> (finite forms)
+	+	°°	Basque
[AV]	n.d.	Longer	RIs with <i>realis</i> and <i>irrealis</i> values
+	+	°°	Russian
[ALV]	n.d.	Longer	RIs with <i>realis</i> and <i>irrealis</i> value
-	+	°°°	Dutch, German, French
	n.d.	Very long	High percentage of <i>irrealis</i> RIs
-	-	°°°°	English
		Longest	RIs with <i>realis</i> and <i>irrealis</i> value

Table 10: A typological distribution of the features [P(erson)] and [R(infinitive)]

As can be seen, the combination of these two features permits us to classify languages according to the duration of the RI stage. In the first place, we find a group of languages for which a short RI stage has been documented (Catalan, Italian, Spanish, Hebrew and Greek). It is common to these languages that the feature Person is implemented in their verbal morphology and, with the exception of Greek, these languages also have a distinct infinitival marker. Thus, we argue that both the morpho-phonological saliency and the semantic (pronominal) value of the feature Person are responsible for the rapid acquisition of finiteness in these languages. This rapidness is also increased by the presence of a unique infinitival morpheme that makes the opposition finite/non-finite even more visible.

Secondly, Basque and Russian have a Person feature but, in the case of Basque, it is only morpho-phonologically perceptible in auxiliary verbs. Also, these two languages do not have an infinitival marker, which obscures somehow the distinction finite/non-finite, thus making it a bit more difficult to acquire such distinction, which results in a longer RI stage.

Finally, we have the languages for which the longest RI stages have been documented (Dutch, German, French and English). In these languages, verbal forms are not marked for Person, and moreover, the infinitive marker is shared with other verbal forms (Dutch, German and French) or lack an infinitive marker altogether (English).

In the following table we have represented the ages of children learning different languages in which the percentage of RIs falls under 15%. As can be observed, the production of RIs in Spanish, Catalan and Hebrew starts to decline earlier than in Basque and Russian.

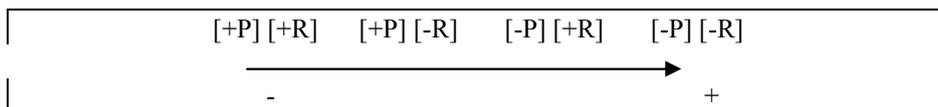
	+ 15%	- 15%
Spanish	1;7	1;8
Catalan	1;10	2;0
Hebrew	1;0 – 1;11	2;0
Basque	1;7 – 2;3	2;4
	1;11 – 2;7	2;8
	1;6 – 2;3	2;4
Russian	1;6 – 1;9	1;10
	2;5	2;6
	1;8 – 1;11	2;0
	2;1 – 2;2	2;3

Table 11: RIs by age

We have taken a percentage of +/- 15% as a tentative landmark for the existence of a RI stage or not. We can see in this table that for children learning Spanish, Catalan and Hebrew the production of RIs decreases around the age of two, whereas for Basque and Russian learners this period extends a bit beyond this age. We have explained this subtle difference by resorting to the morpho-phonological transparency of two features: [P] and [R], which would be responsible for the shorter or longer duration of the RI stage. Further research of languages with the same and other feature combinations should be carried out in order to define more precisely the percentage around which it can be considered that the RI period is over. Also, more languages need to be incorporated to the picture in order to get a clearer understanding of the contribution of each one of the features in the duration and manifestation of the RI stage.

5. The RI stage length continuum

To recap, after analyzing acquisition data from children learning null subject languages, we have confirmed that these children do go through a RI stage, albeit shorter than that of children learning non-null subject languages. Also, RIs in null subject languages do not respect the modal reference effect, as they are also used to convey temporal meanings. Thus, we have proposed that the RI stage is manifested differently across languages depending on two features: [P] and [R]. The way in which these two features are manifested morpho-phonologically in a given language will give rise to a longer/shorter RI stage.



This amounts to saying that the RI stage characterizes a universal stage of development across children and across languages. This stage is no more than the

reflex of the child's attempt to sort out how finiteness is encoded in his/her language. In languages where morphology makes the finite/non-finite distinction transparent (languages with a person feature and with a distinct infinitival marker), the child is able to abandon the RI stage earlier than in languages in which there is no such transparent distinction. As for the specific semantic properties of non-finite forms, we have shown that RIs have *irrealis* as well as *realis* value although some languages (Dutch, German ...) display a different distribution, at least in spontaneous production data. Nonetheless, in order to gain insight into this issue, more experimental evidence would be needed to understand how children convey and comprehend *irrealis* mood during the RI stage.

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