

Does Morphology Drive Syntax? Evidence from L1 acquisition*

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1 Introduction

The relation of syntax to morphology has been a central debate in the L2 acquisition literature (Haznedar and Schwartz 1997; Haznedar 2001; Ionin and Wexler 2002; Lardiere 1998; Prévost and White 2000a; Schwartz 2003, White 2003, 2004 among others). Specifically, there is a question of whether L2 learners acquire target syntax without the concomitant acquisition of the L2 morphology or are the two developments linked in some way. There has also been a related debate in synchronic and diachronic syntax, namely, can certain syntactic differences between languages (and language change) be explained as effects of differences in the morphology? The answer to this question has obvious implications for first language acquisition: If overt morphology is a reliable cue to abstract syntactic structure then this would provide an obvious bootstrapping mechanism for the L1 learner. In this essay I focus on first language acquisition.

Two areas of adult grammar in which the syntax–morphology connection has been investigated in some detail are (i) the relation of agreement morphology to the null subject (NS) phenomenon, illustrated in (1a), and (ii) the relation of agreement to verb raising, illustrated in (1b). (In (1b) the base position of the verb is indicated by the underscore.) (Examples are Italian.)

- (1) a. *Mangi* molto. (cf. Eng. *eat a lot)
eat.2nd per.sing. a lot
'(You) eat a lot.'
- b. *Gianni non fuma* più ____.
John not smoke-3rd per.sing. anymore
'John doesn't smoke anymore.'

In both these cases it has been proposed that 'rich' agreement causes or makes possible the specific syntax, subject omission in the first case and verb raising in the second. With respect to the NS phenomenon, it has not been easy to precisely define what kind or degree of morphological richness is necessary (and sufficient) to license or identify null subjects. Nevertheless, there is a kind of consensus that some differentiation in the overt marking of Person features is necessary (e.g. Jaeggli and Hyams 1988, and papers in Jaeggli and Safir 1989, Yang 2002, among others). Rizzi (2005a) addresses the acquisi-

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tion issue head on and suggests that the child sets the NS parameter on the basis of “rich” agreement in the input, and he defines rich agreement as in (2).

- (2) Agreement is rich when there is at most one syncretism in the Person paradigm.

He offers as example the difference between the present and past subjunctive paradigms in Italian, given in Table 1. In Italian a NS is possible with all persons in the past subjunctive but not in the present subjunctive where a 2nd person subject must be overt, as illustrated in (3).

Table 1: Italian subjunctive paradigm
(sing. forms of the verb *leggere* ‘to study’)

Person	Present	Past
1 st	<i>legga</i>	<i>leggessi</i>
2 nd	<i>legga</i>	<i>leggessi</i>
3 rd	<i>legga</i>	<i>leggesse</i>

- (3) a. Credevano che *pro* leggessi molto.
‘(They) believed that I/you would read a lot.’
- b. Credono che *pro* legga molto.
‘(They) believe that I/he/*you read(s) a lot.’
- c. Credono che tu legga molto.
‘(They) believe that you read a lot.’

The relation between rich agreement and verb raising (V to I) has also been subject to much debate (e.g. Rohrbacher 1999; Vikner 1996; Bobaljik 2002). In this case as well it has not been easy to precisely define a notion of rich agreement that correlates perfectly with V to I. For example, Rohrbacher (1999) proposes that verb raising is tied to specific paradigmatic contrasts, as in (4) (adapted from Rohrbacher 1999):

- (4) Agreement triggers overt verb movement in languages that minimally distinctively marks 1st and 2nd person in either the singular or plural.

But Rohrbacher’s and other hypotheses based on paradigmatic rich agreement have run into serious empirical challenges. For example, there are a number of cases in the literature of languages with equivalent morphological paradigms, but which differ in their verb raising syntax. One standardly cited case is the Kronoby dialect of Swedish spoken in Finland. This dialect of Swedish resembles standard Swedish in not having any subject verb agreement (Vikner 1997:135). Yet, it has V to I movement while standard Swedish does not (Platzack and Holmberg 1989).

There are similar examples from Faroese (reported in Lockwood 1964 and discussed in Bobaljik 2002 and elsewhere) and other languages, and there is also diachronic evidence from languages such as English that verb movement persisted for hundreds of years after morphology became impoverished (Lightfoot 1993; Vikner 1997). Not to belabor the point, but if verb raising occurs in languages without rich morphology, then the morphology cannot be what is driving the syntax.

While the implication from verb raising to rich agreement, as in (5a), seems to be wrong on its face, there does appear to be an implication in the other direction. Bobaljik (2002) observes that if a language has rich agreement, then it has verb raising, as in (5b).

- (5) a. Verb movement to I → rich inflection No
 b. Rich inflection → verb movement to I Yes

However, on Bobaljik's analysis "rich" inflection does not refer to a paradigmatic property such as number of distinct person markings. Rather, it is structurally defined as in (6):

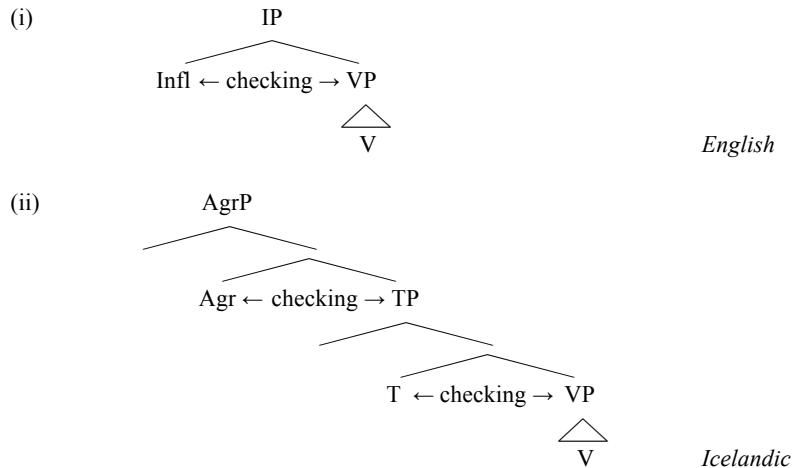
- (6) Verbal inflection is rich iff finite verbs may bear multiple distinct inflectional heads.

So, for example, Icelandic counts as having structurally rich inflection since in the past tense the verb is marked for both tense and person, as illustrated in (7a), while in a morphologically impoverished language such as English tense and agreement are in complementary distribution, as illustrated in (7b).

- (7) a. heyr-ðu-m
 hear-past-1pl.
 b. calls/called/*calleds/*callsed

Bobaljik, following an earlier suggestion in Johnson (1990), proposes that it is the inflectional structure of a language that determines whether there is verb movement or not and that "rich" agreement is a reflection, rather than a cause, of differences in syntactic structure.¹ However, he leaves open the possibility that rich inflection could serve as a trigger or cue to verb movement in language development.

¹ More specifically, Bobaljik (2002) proposes a Split Infl parameter according to which languages either have a Pollockian (1989) split Infl as in (i) or a single projection as in (ii). English is an example of the latter and Icelandic the former.



In this system features can be checked under a head-complement relation so in a split Infl language the verb checks Tense from inside the VP and must raise to T in order to check Agr. In a language like English the verb checks Infl (tense or agreement) from the VP and verb raising is not required (hence blocked by economy). This approach also answers the question of why there are no rich agreement languages (rich in Bobaljik's sense) that lack verb raising (the implication in (5b)); without movement the verb would never be in the checking domain of the higher head.

On that note, let me turn to first language development and the role of morphology in syntactic development. Specifically, I will attempt to evaluate the Rizzi's (2005a) hypothesis, in (2), with respect to the role of agreement in the child's acquisition of a NS grammar, and also proposals concerning the "triggering" relation between rich agreement and verb raising in language development, both of the paradigmatic kind proposed by Rohrbacher, in (4), and Bobaljik's structural hypothesis, in (6).

2 Language acquisition: Do children rely on morphology to learn syntax?

It is clear that hypotheses concerning the relation of morphology to syntax in adult grammar have rather direct consequences for language acquisition. If null subjects are subject to an identification or licensing condition such as Rizzi's proposal in (2), then there should be a contingency between the real-time acquisition of the agreement paradigm and the setting of the NS parameter. I will refer to this as the 'paradigmatic agreement hypothesis'.

(8) *Paradigmatic agreement hypothesis*

The acquisition of the verbal paradigm triggers a NS grammar.

Similarly, if the number of inflectional heads represented on the verb is an indicator of verb movement (the implication in (5b)), then acquisition of the morphologically complex form might act as a trigger for verb movement. According to this view we expect a contingency between the acquisition of a verb raising grammar and the learning of the relevant morphological forms in those languages in which both Tense and Agreement are realized on the verb (cf. Bobaljik 2002). I will call this the 'structural agreement hypothesis'.

(9) *Structural agreement hypothesis*

The acquisition of morphologically complex forms (Agr and T on the verb) triggers a V to I grammar.

In the following sections I will review some results from various studies of first language acquisition that bear on the paradigmatic and structural agreement hypotheses in (8) and (9), and more generally, on the question of whether children do plausibly rely on morphology to learn syntax. I will begin with a discussion of null subjects and then move on to verb raising.

3 Null subjects and paradigmatic agreement

As is well known, young children omit subjects in their spontaneous speech whether or not they are acquiring a NS grammar (Hyams 1986, among others). Some English examples are given in (10). The examples in (10), in which the child first uses a null subject and then repeats the sentence with an overt subject, illustrate two general properties of early NS sentences; first, that the child is capable of producing the longer sentence, and second, that the subject of the NS sentences need not be 1st person.

(10) Go nursery....Lucy go nursery

Crawl downstairs ...Tommy crawl downstairs
Stand up... Cat stand up.

Despite the prevalence of sentences such as (10) in child English (and other non-null subject languages, e.g. French, Dutch, and German), significant empirical evidence shows that NSs in early English (French, German, etc.) differ in frequency and distribution from NSs in early Italian or Portuguese (Roeper and Weissenborn 1990; Sano and Hyams 1994; Valian 1991; Valian and Eisenberg 1996). And it seems clear that children acquiring these languages do not entertain a NS grammar of the Italian sort. Rather, all children fix the NS parameter correctly (positively or negatively) at a strikingly early age. Based on a comparative study of null and pronoun subjects in English and Italian-speaking children, Valian (1991) claims that American children understand that English is not a NS language sometime between 1;10 and 2;0 (MLU 1.5–2;0) and Italian children of roughly the same age already have a NS grammar.² Our question is: how do children acquiring “true” NS languages do this, and does morphology play a crucial role?

Various studies have shown that children acquiring “rich” agreement languages acquire this morphology at a very early age and they do not typically make agreement errors (see Hoekstra and Hyams 1998 for review of these studies). However, they do not acquire the paradigm in one fell swoop. Some children begin with a single (usually 3rd person) form and then introduce contrasting (e.g. 1st / 2nd person) forms. Importantly, these are typically restricted to singular forms, with the plural morphology coming in much later (Pizzuto and Caselli 1992; Hyams 1992). Guasti’s 1993/4 study of three Italian-speaking children is a case in point.

As a point of reference, the Italian present tense verb paradigm for the verb *parlare* (‘speak’) is provided in Table 2.

Table 2. Present tense of *parlare* (‘to speak’)

Person	Singular	Plural
1 st	<i>parl-o</i>	<i>parl-iamo</i>
2 nd	<i>parl-i</i>	<i>parl-ate</i>
3 rd	<i>parl-a</i>	<i>parl-ono</i>

In two of the children in Guasti’s study, Martina and Diana, the 1st, 2nd, 3rd person singular all appeared at ages 1;8 and 1;10, respectively. Guglielmo began with the 3rd singular at 2;3 and then one month later the 2nd and 1st person forms emerged. If these children assume that null subjects are licensed when ‘there is at most one syncretism in the Person paradigm’ (as in (2)), at this point they are still not in a position to determine whether their grammar is a NS grammar or not. For this they need the plural forms, for it is possible a priori that there will be a three-way syncretism there (as in the present subjunctive illustrated in Table 1). To discount this possibility they need to acquire at least two plural forms. Typically, children learn the 1st and 3rd plural significantly earlier than the 2nd plural and these children are no exception. Martina had both the 1st and 3rd plural forms at 2;4, Diana at 2;1 and Guglielmo at 2;3. (The 2nd person plural still had not appeared at 2;7 for any of these children.)

Guasti does not discuss these children’s use of null subjects (in terms of frequency or distribution) so it is not possible to do a direct comparison of their acquisition of morphology relative to their NS use. But if we extrapolate from Valian’s study (5 Italian-speaking children) we would have to assume that Martina, Diana and Guglielmo determined their language to be a NS language by age 2;0 at the latest and probably somewhat

² There are various explanations for null subject phenomenon in non-NS languages like English, including proposals that children drop subjects due to performance limitations (e.g. Bloom 1990; Valian 1991), for phonological reasons (Gerken 1991), or for grammatical reasons unrelated to the NS parameter per se (e.g. Rizzi 2005b; Hyams and Wexler 1993; Orfitelli and Hyams 2008, 2012).

earlier.³ If this is the case, then they did not converge on a NS grammar based on paradigmatic agreement.

Similarly, the NS properties of a language like Brazilian Portuguese (BP), which has one syncretism in the singular and one in the plural, could not be acquired until the child has learned the entire paradigm. But in fact, according to Gonçalves (2002), the BP-speaking children she studied had the same percentage and type of null subjects as adult BP speakers prior to the point at which they acquired any of the plural forms.

Another bit of evidence, from a single bilingual child—the perfect controlled experiment—supports this general conclusion. Serratrice (2002) reports that from age 1;10, the earliest data point in her study, her bilingual English-Italian child clearly distinguished the two languages in terms of the NS option: the child produced overt subjects in English about 80% of the time and only 5–10% of the time in Italian. At this same age he was using only the 3rd person singular form of the verb in Italian. The 1st person form emerged shortly thereafter, and the 2nd person form did not emerge for another 3 months.

These results are unexpected under the paradigmatic agreement hypothesis in (5) in which the richness of agreement in terms of the degree of suppletion determines the NS properties of the developing grammar. It seems more likely that Italian children are led to a NS grammar based on obvious syntactic properties in the input such as sentences with null referential subjects.⁴

4 Verb raising and paradigmatic agreement

Let me now turn to verb raising and its relation to morphological development. As White (2003) points out, adult L2ers use non-finite verbs in contexts where finite verbs would be required. Some French examples from Prévost (2003) are given in (11). The sentences in (11a,b) have subject clitics which require a raised finite verb.

- (11) a. Il laver les serviettes.
 he wash-inf. the towels
- b. Elle retourner à la salon.
 she return-inf. to the living room
- c. J'entrer pas ici à Toulon.
 I enter-inf. not here in Toulon

Prévost and White (2000), following Haznedar and Schwartz (1997), argue that sentences such as (11) are structurally finite, hence involve verb raising to I, and that L2ers dissociate verb movement from finite morphology. The question for us is whether this dissociation is also a property of L1 development, as was illustrated for null subjects. First, I will discuss 'rich' agreement in terms of contrasting features and its role in the

³ The five Italian children in Valian's study were followed longitudinally (monthly recordings for one year). At Time 1 they ranged in age from 1;6 to 1;10 and at Time 2 from 2;0 to 2;5. There was no difference in NS or pronoun use between Time 1 and Time 2 use, suggesting that they had fixed the NS value for their language by 1;10.

⁴ This begs a number of important questions such as exactly what aspect of the syntactic structure do the children attend to in the input to determine whether they are in a null subject language or not. In other words, why don't cases of 'diary drop', e.g. *Wanna eat now?* (Haegemann 2000) lead English-speaking children to assume they are in a NS language? One possibility is that children acquiring Italian-type languages attend to embedded null subjects, which are not possible in non-null subject languages, as suggested by Roeper and Weissenborn 1990.

development of V to I raising. Then I'll turn to structural agreement in Bobaljik's sense and evaluate its contribution to syntactic development.

French is a V to I language. French morphology is not as rich as in the Romance NS languages, nevertheless French does distinguish (1st), 2nd and 3rd persons in the plural.⁵ So it meets Rohrbacher's criterion for a rich agreement language (see (4)). In addition, French has distinct subject clitics (*je* 'I', *tu* 'you', *il/elle/on* 'he/she/one', *nous* 'we', *vous* 'you-pl.', *ils/elles* 'they'), which some have argued constitute the agreement system. Ferdinand (1996) investigated the acquisition of verb morphology and verb placement in four French-speaking children. (The names and ages of the children are given in Table 3 below.) She notes that during the entire period of observation these children used only the singular form of the verb (e.g. *adore* 'love' *tourne* 'turn' *bois* 'drink'), which is not marked for person; they did not use the 2nd or 3rd person plural, the only distinctive verb endings in French. Moreover, two of the children (Natalie and Gregoire) initially had only the 3rd person subject clitic. Nevertheless, all of these children showed the form-position contingency first observed by Weissenborn (1988) and Pierce (1992), illustrated in (12), according to which finite verbs (12a,b) occur above negation (*pas*) and non-finite verbs (e.g. root infinitives—more below) (12c,d) occur below negation. (See also Ferdinand 1996 and Verrips and Weissenborn 1992.)

- (12) a. Est **pas** gros.
is not fat
- b. Veux **pas** lolo.
want not water
- c. **Pas** manger la poupée.
not eat-inf. the doll
- d. **Pas** tomber bébé.
not fall-inf. baby

Some quantitative results are provided in Table 3.

Table 3: French children
Dissociation of verb morphology and verb raising
(based on Ferdinand 1996)

	Age	2 nd / 3 rd pl. verbs	Errors in finite verb position
Nathalie	1;9;3–2;3;2	No	4/66
Grégoire	1;9;14–2;3;0	No	0/18
Daniel	1;8;1–1;11;1	No	2/45
Philippe	2;1;19–2;6;27	No	0/189

Table 3 shows a clear dissociation between the development of the agreement paradigm (according to Rohrbacher's criterion, or in fact any criterion based on paradigmatic contrasts) and verb raising. Similar results have been reported for children acquiring Brazilian and European Portuguese (Gonçalves 2002). These children appear to have set the

⁵ There is some question as to whether the 1st person plural form (e.g. *nous parlons* 'we speak') is used in colloquial French. Ferdinand (1986) claims that the children (and adults) in her study used only the more colloquial 3rd person impersonal *on* 'one'.

V to I parameter (and the null subject parameter—see previous section) prior to the acquisition of contrasting morphological forms.

There is, moreover, at least one kind of verb raising for which there is no overt morphological cue to the syntax. If agreement is an important bootstrap into syntax in L1 acquisition, then an aspect of syntax that has a particularly opaque morphology should be difficult to acquire. Belletti (1990) has argued that in Italian verb raising is a generalized movement that also affects infinitives, as illustrated by the example in (13), where the infinitival verb is above the negative adverb. (As before the base position of the verb is indicated by an underscore.)

- (13) Gianni ha deciso di non fumare **più/mai** ____.
 John has decided to not smoke-inf. more/never
 ‘John has decided not to smoke anymore/ever.’

In French, on the other hand, infinitives do not raise to Agr, as illustrated in (14).

- (14) a. Pierre dit ne **pas/plus** manger.
 Pierre says ne not/anymore to eat-inf.
 ‘Pierre says not to eat (anymore).’
 b. *Pierre dit ne manger **pas/plus** ____.

Belletti argues that the Italian infinitive has abstract Agr features that force raising to I. If overt morphology is crucial then the raising of infinitives in Italian should be hard—a late acquisition, and Italian children should treat infinitives just as French-speaking children do. But in fact there is reason to believe that the syntax of infinitives (in both languages) is an extremely early development.

As illustrated above (see (12)) French-speaking children distinguish finite and non-finite verbs, raising the former to I, but not the latter. The Italian facts are somewhat more indirect. As is well known, early in development (around age 2–3 years) children exhibit a root infinitive (RI) stage, that is, a stage in which infinitives appear in root contexts (Wexler 1994; Rizzi 1994; Sano and Hyams 1994 among many others). This is illustrated in the French examples in (12c,d), and is also true for Dutch, German, Swedish, Icelandic, English-speaking children among others. (See Hoekstra and Hyams 1998 for overview.) The RI stage, though very robust in the languages in which it occurs is not universal. Children acquiring Italian and other southern Romance languages do not show an RI stage. (To the extent that they do produce RIs they are far less frequent and occur at an earlier age.) There are various suggestions in the literature as to why there should be this particular difference. Rizzi (1994) explains the absence of RIs in Italian (and related languages) as an effect of the infinitive raising to Agr. Given a hierarchical organization in which Agr is above Tense, if Agr is merged then T must also merge and thus RIs are excluded.⁶ If something along these lines is correct, it means Italian-speaking children have acquired the raising properties of infinitives at around the time that other (e.g. French-speaking) children hit the RI stage (2–3 years) and do so in the absence of any morphological cues whatsoever.

As in the null subject case, children do not need to rely on morphology to set the V to I parameter. There is ample syntactic evidence for verb raising, in particular the position

⁶ Rizzi’s proposal is embedded within a theory in which RIs are truncated VPs (Rizzi 1994). The raising of the infinitive to Agr blocks truncation because the (entailed) projection of T requires that the tense variable be fixed, either by a higher verb or T in the case of embedded infinitives, or by finite morphology in the case of root Tense.

of the verb with respect to other constituents such as negation or adverbs (but see section 1.3). There is therefore no necessity for children to use morphology to deduce verb raising and indeed no evidence that rich morphology of a paradigmatic kind drives syntactic development in this domain.

5 Verb raising and structural agreement

What about the structural agreement hypothesis in (9)? To examine this we need to look at the development of languages in which the verb is marked for both tense and agreement. As noted earlier (cf. example 7a), Icelandic is such a language. While there has been no systematic study of the relation between the acquisition of tense and agreement morphology and verb raising in Icelandic, there is some anecdotal evidence from a very earlier talker—Eva—that the first clear cases of verb raising (where the verb raises above negation) occurs at age 1;6. The example in (15a) shows the raised finite verb (*come*) and (15b), occurring one month later, shows the same verb in non-finite form below negation (from Sigurjónsdóttir, p.c.).

- (15) a. Skotta kemur ekki. (Eva, 1;6)
 Skotta comes-3rd.per.sg. not
 ‘Skotta (dog’s name) is not coming.’
- b. Þau ekki koma. (Eva, 1;7)
 they not come-inf.

Importantly, Sigurjónsdóttir also reports that the Eva’s first use of the past tense morpheme is at age 1;4—two months prior to the verb raising example in (15a).

More extensive data come from Italian child language. In Italian (and the other Romance languages) there is no tense marking in the present tense. However, both tense and agreement are marked in the imperfect, as illustrated in the Italian example in (16).⁷

- (16) a. mangia-v-a
 eat-pst-3p.sing.
- b. dormi-v-o
 sleep-pst-1p.sing.

To show verb raising in Italian you need examples such as in (17) ((17a) = (1b)) in which the verb precedes a negative such as *più* (‘anymore’) or *mai* (‘never’) or an adverb such as *sempre* (‘always’) or *ancora* (‘again’).

- (17) a. Gianni non fuma più/mai.
 John not smokes more/never
 ‘John doesn’t smoke anymore/ever.’
- b. Maria studia sempre.
 Mary studies always
 ‘Mary is always studying.’

⁷ Following Girogi and Pianesi (1997) I assume that the imperfect in Italian (and other Romance languages) is a past tense marked by the morpheme -v, to be distinguished from the (*im*)perfective, which are aspectual categories.

If the double marking found on the imperfect triggers the development of verb raising then we expect that there will be no verb raising prior to the acquisition of the imperfect. Indeed, this prediction finds some support in the acquisition data. A search of the Childe files of five Italian-speaking children (ages 2 to 3 roughly) shows that the first clear cases of verb raising, i.e., verbs above negation or other adverbs (e.g. *Non me lo ricordo più* ‘(I) don’t remember it anymore’: Guglielmo 2;7) occur at the same time or after the first use of the imperfect (e.g. *e lu’ cadeva* ‘and (he) was falling’: Guglielmo 2;4).⁸ This is laid out in Table 4 (CHILDES: MacWhinney and Snow 1985; Calambrone and Antelmi corpora).⁹

Table 4: First use of the imperfect and of verb[^]adverb

	Imperfect	Verb [^] adv
Diana	2;5 (file 08)	2;5 (file 08)
Guglielmo	2;4 (file 3)	2;7 (file 5)
Raffaello	2;0 (file 06)	2;11 (file 16)
Camilla	2;6 (file 206)	2;9 (file 209)
Rosa	3;0 (file 19)	3;3 (file 21)

For each child the first use of the imperfect either occurs at the same time (Diana) or precedes the first clear case of raising by 3 months (Guglielmo, Rosa, Camilla), despite the individual differences between these children.¹⁰ The data in Table 4 are consistent with the hypothesis that the imperfect acts as a trigger for the acquisition of verb raising, and hence with the structural agreement hypothesis.¹¹

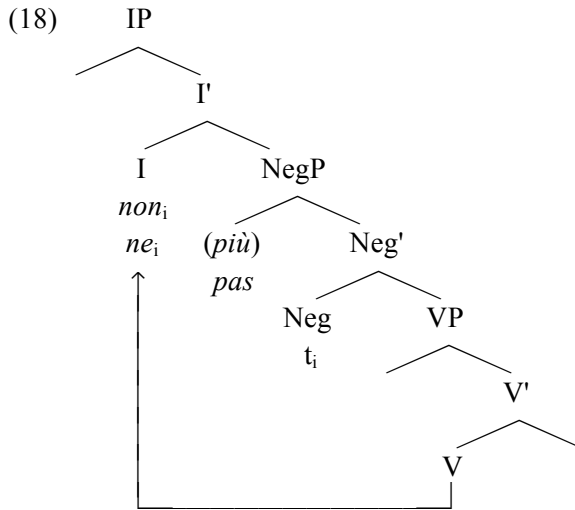
This proposal brings to the fore an interesting difference between French and Italian-speaking children with respect to verb raising. The data in Table 3 suggest that French children raise finite verbs before the age of 2;0. Italian children, on the other hand, give clear evidence of verb raising only after the age of 2;5, as shown in Table 4. This is a substantial gap by early acquisition standards. It is possible that the age difference is an effect of the evidence needed to trigger verb raising in the two languages. Following Guasti (1993/4), I assume that the Italian negative *non* heads a maximal projection NegP, located between IP and VP, and that negative adverbs *più*, *mai*, etc. are optionally generated in the Spec of NegP, as in (18). A similar structure is proposed for French *ne ... pas* (Pollock 1989).

⁸ In the same file Guglielmo also produced the following imperfect sentence: *perchè pulisceva* ‘because (he) was cleaning’ (referring to a cat). This example is of particular interest because it is an overgeneralized form based on the irregular present tense stem *pulisc-* while the correct adult imperfect is *puliva*, based on the stem of the infinitive *pulire*. Overgeneralization is diagnostic of a productive rule.

⁹ We searched the children’s corpora for *più* (‘more’), *gia* (‘already’), *mica* (‘at all’), *mai* (‘never’), *ancora* (‘again’), *sempre* (‘always’).

¹⁰ Raffaello does not fit the generalization as there is an 11-month gap between the two developments.

¹¹ This would support a parameter-resetting model in which Italian children (in fact all children) begin with a non-split Infl, and switch to a split Infl when they have clear morphological evidence of multiple heads and hence movement. See note 1.



In both languages, the neg head Italian *non*/ French *ne* is a clitic that moves and cliticizes to I, the position that the raised verb also moves to. The crucial difference between French and Italian is that in French the negative specifier *pas* is obligatory (*ne* alone is insufficient to negate a sentence); hence raising in French is made visible in every negative sentence by the position of *pas* relative to the raised verb—*pas* follows the verb, as in (19a). In Italian the movement of the verb is only visible if one of the optional specifiers is realized, as in (19c), but not in the simple negative case illustrated in (19b).

- (19) a. Jean ne chante **pas**.
 b. Gianni **non** canta.
 ‘John doesn’t sing.’
 c. Gianni non canta **più/mai/mica**.
 ‘John doesn’t dance anymore/ever/at all.’

The simple negation (*pas/non*) is (presumably) more frequent in the input to the child and semantically simpler than constructions with negative adverbs. The more limited availability/accessibility of negative adverbs (19c) relative to simple negation (19a,b), as well as the fact that in Italian both finite and non-finite verbs raise (cf. 13), while in French the raising occurs only with finite verbs (cf. 14), makes raising much less transparent in Italian than in French. This might lead the Italian child to rely on the imperfect (structural agreement) rather than negation as a cue to verb raising. Because the imperfect is a relatively late tense to develop, raising is thus also delayed in Italian.

6 Conclusion

In these brief remarks I have tried to evaluate the hypothesis that ‘rich’ agreement drives or serves as a bootstrap for particular aspects of syntactic development, in particular, the NS and V to I parameters. Two versions of the ‘rich’ agreement idea were considered, one defined in terms of contrasting forms in the verb agreement paradigm (the paradigmatic agreement hypothesis), the other defined in terms of the number of inflectional heads that are spelled out on the verb (the structural agreement hypothesis). We have seen that the paradigmatic agreement hypothesis does not fit the empirical facts, that

children acquiring a NS grammar or a verb raising grammar (e.g. Italian-speaking children) acquire those properties of their language before they have fleshed out the agreement paradigm in sufficient detail for licensing purposes. The structural agreement hypothesis fared better. Preliminary evidence from five Italian-speaking children (and one Icelandic child) provides clear evidence of verb raising appears only after the children have acquired morphologically complex verb forms. I also entertained the possibility that the triggers setting particular parameters may vary across (even related) languages, resulting in differences in the ages and rate of acquisition of core syntactic properties.

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