

Early Negation in Catalan and Spanish*

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Abstract

This article deals with the acquisition of the position of the negative marker *no* with respect to the verb in Catalan and Spanish. The alternation in the early data between preverbal and postverbal negation suggests that what children initially do is to explore all the options allowed by the parameters of UG. Once children acquire the feature or features relevant for the parameter setting, the parameter becomes steadily set, and the chosen value coincides with that of the adult language. Following Zanuttini (1991), it is shown that the acquisition of the notion of tense and its corresponding functional category (TP) is responsible for the setting of the parameter associated to Neg. As for the presence of functional categories in the early stages of development, we suggest that the data presented in this paper cannot be explained without appeal to the presence of IP. We can therefore assume that they are somehow present from the earliest syntactic manifestations.

Key words: L1 acquisition, negation, parameter setting.

Resum. *Les primeres manifestacions de la negació en català i castellà*

En aquest article s'aborda l'adquisició de la posició del marcador negatiu *no* en català i en castellà en relació amb el verb. L'alternança inicial en les dades de la negació preverbal i postverbal suggereix que allò que fan els nens és explorar inicialment totes les opcions permeses pels paràmetres de la GU. Un cop els infants adquireixen el tret o trets rellevants per a la fixació del paràmetre, aquest queda definitivament fixat i el valor escollit coincideix amb el de la llengua adulta. D'acord amb Zanuttini (1991), es mostra com és l'adquisició de la noció de temps i la categoria funcional corresponent (STemps) la responsable de la fixació del paràmetre de Neg. Quant a la presència de categories funcionals en els primers estadis del desenvolupament, se suggereix que les dades aportades en aquest article no es poden explicar sense apel·lar a la presència de SI i, per tant, cal suposar que, d'alguna manera, ja són presents des de les primeres manifestacions sintàctiques.

Paraules clau: adquisició de L1, negació, fixació paramètrica.

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Table of Contents

1. Introduction	4. An analysis of the development of negation in child language
2. The development of negation in Catalan and Spanish	5. Conclusions
3. Some recent analyses on negation	References

1. Introduction

As is well-known, language learning takes place in a natural way, with no need for explicit instruction. The predisposition we humans share to learn the language in the context where we live makes it possible that, in a relatively short period of time, we come to «get» the linguistic system of this language. But before reaching the stage where this system corresponds to what we would call the adult system, the child tries, and shows, a succession of systems which do not completely match the language in the environment. The first question raised by this observation in the field of linguistics is the following: are these systems possible grammars? in other words, do they abide by the principles of Universal Grammar? In order to answer these questions, we must first ask whether these systems show some uniformity, and whether phenomena observed in one child are shared by other children learning the same language, or even other languages. To provide a satisfactory answer to these questions within (or with the help of) a particular theory of grammar certainly becomes a challenge for the general theory of universal grammar and, at the same time, a good means of testing and validating the theory itself.

This paper addresses one aspect in the development of child language: that of negation. In a good deal of the literature on child language, it is claimed that the relative position of the negative marker with respect to the verb is the correct one from the earliest linguistic productions, even if it is not with respect to the subject (*No Mummy doing*). Some data collected from Catalan show that this is not always the case: at an early stage expressions can be found of the kind *Menja no* 'Eat(s) not', which obviously do not belong to the adult language (where the order is the opposite). Beside expressions of this kind, one also finds expressions where the negative marker precedes the verb: *No menja* 'Not eat(s)', or *No mengis* 'Not eat-SUBJ-2s'.

Closer inspection of the data, however, shows that the positioning of the negative marker in these early stages is not arbitrary, but rather depends on internal phenomena that can be justified on the basis of grammar itself. The aim of this paper is to provide arguments to demonstrate that there is a relation between the position of the negative particle and the morphology of the verb or, more technically, the functional category Inflection.

Parallel comparative work on various languages has provided evidence for the relation between tense and negation (Zanuttini (1991) for Romance languages, and Laka (1990), for Basque, English and Spanish). What the child would be doing, then, is to set different options allowed by Universal Grammar (UG) at different stages. These options are independently attested in other languages, and the child would set one or the other in accordance with the degree of development of the functional system at a given stage.

Following Zanuttini's (1991) proposal, in Romance languages there are two possible positions for the Neg (Negation) category, which define two parametric options, and which surface in two different word orders: Neg V, which is chosen when Tense Phrase has 'evident' morphology, and V Neg, when Tense Phrase has 'reduced' morphology. Correspondingly, Catalan and Spanish children indistinctly place Neg before or after the verb in stages and contexts where there is little verbal morphology, while they place it before the verb when more morphology shows up, until they come to a steady stage for the setting of the parameter, and then NegP always appears before the verb.

From the perspective of the theory of language acquisition, this corroborates the view that parametric variation is to be explained on the basis of the inherent properties of functional elements, and, furthermore, that functional categories are present (and play an important role) from the beginning of language acquisition, even if the whole of the functional structure may be built progressively, until the adult system is reached. This supports the hypothesis on language acquisition according to which at least some functional categories are somehow present (even if in a different way from the steady system to be acquired) from the earliest syntactic manifestations (Pierce (1992), Meisel (1992), Déprez (1994)), and contradicts the hypothesis that early stages of acquisition are crucially characterized by the absence of functional categories (Guilfoyle and Noonan (1988), Radford (1990)).

Finally, this paper aims at shedding some light on the following question: what induces change? what is its triggering factor or factors? It is obvious that, as the child keeps acquiring morphology, the whole of the Inflection (IP) functional system is built and the position of negation becomes steady. Pollock (1989) proposes splitting IP into two projections: Tense Phrase and Agreement Phrase. From the perspective of acquisition, do these categories both appear at the same time? are they both crucial in determining a steady setting for the parameter responsible for negative marker placement? The data presented in this paper suggest that it is Tense which is responsible for the setting of this parameter.

2. The development of negation in Catalan and Spanish

2.1. Catalan data

The Catalan data correspond to video recordings of a Catalan little girl, Júlia, carried out through a period of twenty months, between the ages of one and a half year and three years. The recordings vary in length between twenty and forty minutes, with a periodicity of two weeks. The samples belong to spontaneous speech in various situations of play with her parents.

The present paper only deals with the period in which the little girl produced expressions where the negative marker appeared both before and after the verb. During this period, from 23.5 months to 25.5 months, in addition to the recordings, transcriptions were increased by means of a diary of direct observations and notes on the phenomenon under study. The examples adduced here, then, come from both recordings and notes.

Let's introduce the relevant data. During the period of study, the girl's productions involving negation evolved in the direction shown by the following examples:

- (1) a. No menja.
not eat(s)
- b. Menja no.
eat(s) not
- c. No camina.
not walk(s)
- d. Camina no.
walk(s) not
- (2) a. No vagis.
not go-SUBJ-2s
- b. No cantis.
not sing-SUBJ-2s
- (3) a. No caio. [No caic]¹
not fall-1s
- b. no surt.
not goes-out
- c. No ha tancat.
not has closed
- d. no.n vull.
not-of-it want-1s
- e. No mengis.
not eat-SUBJ-2s

From a developmental perspective, the period these productions belong to has been characterized in the literature as the first stage in the development of syntax: indeed, most productions consist of few units (between one and three words). We could then say that we are dealing with the first syntactic manifestations, the two-word stage. Sentences in (1) to (3) only show cooccurrence of negation and verb. In descriptive terms, and concerning the position of negation, we can divide the period of study into two phases:

- (4) a. *Phase I*: [Neg V] and [V Neg] (from 23,5 to 25,5 months)
- b. *Phase II*: [Neg V] (from 25,5 months on)

In (1) the free appearance of the negative marker both before and after the verb is illustrated. In this first phase (which, as specified in (4a), extends from 23,5 to 25,5 months), both the [Neg V] and the [V Neg] patterns coexist, the former

1. In some cases the child's morphology differs from the adult one, the latter is provided in square brackets.

corresponding to the adult language. If we pay attention to the verbal forms in this set of examples, which are representative of the period, we see that they are 'bare' verbal forms, i.e., they show minimal or null verbal inflection (they look like 3rd person singular, which is the barest verbal form in the Catalan conjugation).

Instead, the sentences in (2), which are from the same period as those in (1), show forms of the negative imperative (which in Catalan takes the form of present subjunctive), in which verbal inflection is more evident. Several authors coincide in claiming that in the early stages of linguistic development verbal morphology is absent or, at least, very poor. In descriptive work on the development of verbal forms in Catalan and Spanish, however, it is noticed that there is an early appearance of imperatives, non-finite forms (infinitives, gerunds and past participles) and present tense forms (cf. Cortés & Vila (1991), and López Ornat (1994)).² In any event, and this will be the main topic of discussion here, whenever the little girl uses imperative forms, the position of the negative marker is always the correct one with respect to the adult language, namely before the verb. In sum, whenever there is evident verbal morphology, the position of negation is steady.

Finally, the verbal forms in (3) show overt morphology in all cases: they bear not only Tense markings, but also person markings. As for negation, it always appears in preverbal position. These productions belong to the second phase in the linguistic development of the little girl, from 25,5 months on.

The fact that our subject was completely available made it easy to closely follow the phenomena concerning negation. The problem with the other data, taken from the literature, is that they are often partial and reflect moments at which, for various reasons, the facts cannot be so clearly detected. In some of the transcriptions, the phenomenon of postverbal negation may even be entirely missed.³

In order to more clearly illustrate the evolution sketched above—which is in fact very quick: only two months—I reproduce below some of the examples taken from the diary, based on direct observation, with an exact indication of the moment they were produced:⁴

(5) Expressions with postverbal no

- a. Punxa no. (23;15)
prick(s) not
- b. Memra no. [Crema no] (24;0)
burn(s) not

2. For the moment, I will not address the question whether these forms convey features of Tense, Aspect, or something else. In this section, I am only interested in establishing their occurrence.
3. Meisel (1992) emphasizes this point. Even conceding the importance of periodically collecting spontaneous data, he considers it advisable "to collect data on a daily basis, whether in recordings or in diary studies, in order to capture facts on what might otherwise appear to be 'silent' developments" (Meisel (1992: 18-19).
4. In these examples the standard spelling is used to reproduce the pronunciation. Square brackets are used, as before, to give the target (adult) form of the words. Whenever the interpretation is not clear, the glosses are provided with contextual information in parentheses. The notation for age is: (months; days).

- (5) c. La Júlia canta no. (24;11)
the Júlia sing(s) not
- d. La Neus estima no. (25;9)
the Neus love(s) not
- e. La Neus no trenca no. [no es trenca] (25;9)
the Neus not break(s) not
'Neus (a doll) does not break.'
- (6) *Expressions with negative imperatives*
- a. Vagis papa. (24;0)
go-SUBJ-2s daddy
- b. No n vagis. (24;8)
not go-SUBJ-2s
- c. Papa vagis no. (24;13)
daddy go-SUBJ-2s not
- d. No cantis. (24;19)
not sing-SUBJ-2s
- e. No ploris. (24;21)
not cry-SUBJ-2s
- f. No t mengis la txitxa, gos. (25;15)
not-REFL eat-SUBJ the meat dog
'Don't eat up the meat, dog!'
- g. No cantis nero, papa. (25;23)
not sing-SUBJ-2s nero daddy
- (7) *Expressions with preverbal no*
- a. La mama no pobava. [la mama no trobava] (25;10)
the mama not found (the pacifier)
- b. La Júlia no pot. (25;13)
the Júlia not can (open the box)
- c. La Júlia no vol la pastanaga. (25;15)
the Júlia not wants the carrot
- d. La mama no podia. (25;15)
the mama not could (do this)
- e. La Júlia no volia. (25;23)
the Júlia not wanted (to touch the shrimp's moustache)

From what the data above show, there seems to be an inflection point, which sets the borderline between the two phases, at around 25,5 months: the last postverbal

no recorded in the diary was produced at (25;11) (*No, posa no* 'No, put not');⁵ during the same recording, a past imperfective form appeared, like the one in (7a), which is from the day before (25;10). This form has obvious tense morphology, and the negative marker correspondingly appears in the correct preverbal position. From that moment on, more and more forms of the verbal paradigm appear and, simultaneously, sentences become progressively longer and contain more elements, as can be seen in (7).

Let us focus now on the first phase, represented by (5) and (6). The sentences in (5), with verbal forms in the present tense, coexist with the corresponding ones with preverbal negation. For instance, during one session, and within only a few moments, the correlate to (5d) was: *No estima a Neus* 'Not loves Neus'; or there was clear hesitation giving rise to (5e), with the negative marker repeated in both positions.

The data that become crucial in this first phase, though, are those in (6). Beside the data in (5), negative imperative forms (which are borrowed from the present subjunctive) appear in this phase —and, obviously, they remain in the following phase. In these cases, negation is *systematically* preverbal —except for (6a), in which the negative marker is missing: but both the verb form and the contextual information tells us it is an imperative; and (6c), which is the only example in all the recordings —diary and films— with postverbal negation occurring with an imperative.

Considering these facts, a question immediately arises: what explains the fact that during this first phase verbs in the present⁶ *systematically* show alternation concerning the position of the negative marker, while verbs in the imperative *systematically* show a steady preverbal position for this marker? I will suggest an answer to this question in section 4.⁷

2.2. Spanish data

The Spanish data for my analysis have been taken from López Ornat (1994). Research by this author and her collaborators presents speech recordings of a little girl, María, from nineteen months to four years. This book provides all the transcriptions of the recordings. These recordings collect the child's spontaneous speech in everyday situations with her parents. The sessions are 30 minutes long and took place every fifteen days.

5. There is only one more example after this date: *Treu no* 'Take-out not' (25;23) and it crucially involves a verb in the present tense, in accordance with the hypothesis defended here.
6. Here I use the term *present* in the sense that it coincides with the present form of adult Catalan. I am putting the issue aside whether this form is really *present tense*.
7. I want to point out that the Catalan data above have been contrasted with data from other two subjects. Consider the data from one of them, Roger, a Catalan child:
 - (i) a. Surt no. (20;25)
goes-out not
 - b. Passa no. p[ə]r[ta], no passa. (21;1)
goes-through not door not goes-through

Concerning negation, the appearance of the negative marker *no* can be attested from early on. The first usages of this particle are anaphoric, but we soon find it cooccurring with other lexical elements and, what is relevant for the present paper, beside the verb.

Below I reproduce some examples with an indication of the developmental moment:⁸

(8) 19 months

- a. Notá nenes. [No están los nenes.]
not-is kids
'The kids are not there.'
- b. No'stá a bota. [No están las botas.]
not-is the boot
'The boots are not there.'
- c. Bota no'stá.
boot not-is
'The boot is not there.'

(9) 21 months

- a. Quita no, quita no.
take-away not take-away not
- b. Cota no, pincha. [Corta no, pincha.]
cuts not pricks
'It doesn't cut, it pricks.'

(10) 22 months

- a. Nene sito no, e sienta no. [Nene sienta no, se sienta no.]
kid sits not REFL sits not
'The kid is not sitting down.'
- b. Aquí no pintas.
here not paint-2s
'Here you're not painting.'
- c. No quema.
not burns
'It doesn't burn.'
- d. No supa guaguau. [No chupa/chupes perro.]
not lick wow-wow
'The dog is not licking'/'Don't lick, dog!'

8. I transcribe the examples as in the source they are taken from. Some of them include an approximate rendering into adult speech between square brackets.

(11) 23 months

- a. El oto no se quita.
the bear not REFL takes-away
'The bear can't be taken away.'
- b. No cabe papá e sapatito.
not fits papa the little-shoe
'The little shoe doesn't fit, papa.'
- c. ¡No quite sapatito!
not take-off-SUBJ little-shoe
'Don't take my little shoe(s) off!'
- d. ¡No! No se caen. [No se cae/n.]
no not REFL fall(s)
No, it/they do(es) not drop!
- e. Nooo, no teno casé. [No tengo casete.]
no not have-1s tape
No, I don't have a/the tape!

In these data, we can see that at 19 months María only uses, in the recorded corpus, the marker *no* with the verb *estar* 'to be (stage level)', in the order [Neg V]. The examples corresponding to 21 months all show the order [V Neg], and it is at 22 months when most of the examples show the order [Neg V], as in adult Spanish, the only exception being (10a), with negation after the verb. By 23 months, word order is steady, and the examples also show a wider variety of verbs and more verbal production generally.

I have reproduced all these examples in order, first of all, to clearly show their evolution and, secondly, to clarify the scarcity of examples showing the order I want to discuss in this paper. Let me explain: the total amount of [V Neg] examples is, in absolute terms, pretty low. This could easily suggest that we are dealing with production errors, waverings, etc. In order to dismiss such a view, I decided to reproduce all the variety of negative sentences produced by the child recorded by López-Ornat (1994) between 19 and 23 months, which is the period where the relevant phenomenon appears in this subject's sample. As can be seen, the variety of sentences produced is rather meager. Furthermore, I have counted the negative sentences —as I said, I take as negative sentences the ones where a VP is negated; at this developmental stage, VP generally reduces to V—, and the result is the following:

(12) *Number of negative sentences by María*

Age (in months)	Neg + V	V + Neg
19	5	0
21	0	3
22	5	2
23	15	0

This table shows that, at this early stage, negated sentences are scarce and, consequently, the five sentences produced between 19 and 22 months with the order [V Neg] are one third of the negative sentences in this period. Even more: we should bear in mind that it is at 22 months that María seems to 'become aware' of the requirement to put negation before the verb, and that the 2 sentences with postverbal negation belong to the first recordings in this month. If we only count the negative sentences up to the moment the change takes place, the ratio of sentences with final negation is even higher. Notice, in addition, that it is from this moment on, when the word order for negation is mastered, that there is an increase in the production of negative sentences (and obviously, not only of negative sentences).

3. Some recent analyses on negation

3.1. *The relevance of tense for negation (Laka (1990); Zanuttini (1991))*

Pollock (1989) proposes that the negative marker (Neg) must head its own functional projection (NegP, Negative Phrase), against the view that it is a mere adverbial projection.⁹ From his perspective, NegP is one of the components of IP (Inflection Phrase), which appears above AgrP (Agreement Phrase) and below TP (Tense Phrase):

- (13) *Structure of IP: Pollock (1989)*
 [TP [NegP [AgrP]]]

This structure allows him to account for the distribution of negation in French and English, and for the phenomenon known as *do-support* in the latter language.

Laka (1990), following Pollock (1989) and Chomsky (1989), shows that, while in languages such as English it is plausible that negation is generated below TP, there are other languages, such as Basque and Spanish, where negation must be generated above TP. This gives rise to parametric variation depending on the D-structure position of negation. The parametric choice seems to depend on the tense variable, which is realized as the TP functional projection.

This proposal ties in with Chomsky's (1989) idea that linguistic variation is linked to the inherent properties of functional elements, which can differ in their selectional properties.

Unlike in French and English, where T selects NegP as its complement, in Basque Neg selects TP as its complement. In Laka's words (1990: 27), «French and English have IP internal negation, whereas Basque negation is external to IP». Spanish, in her analysis, is like Basque: Neg selects TP too.

9. For the view that NegP is a functional projection, see Zanuttini (1991: section 2.3.1.), where arguments for this view are summarized. In short, she gives four main arguments: (1) the distribution of preverbal negative markers in Romance languages is quite different from that of other adverbial classes in these languages; (2) the interaction of preverbal negative markers with pronominal clitics: the former block long distance movement of the latter; (3) the interaction of negative markers with imperatives (see below); and (4) the behavior of negative quantifiers.

Following Laka (1990), then, the two values of the order parameter for negation are the one in (13) (repeated below as (14b)), for English and French, and the one in (14a), for Basque and Spanish:¹⁰

- (14) a. [NegP [TP [AgrP]]]: *Basque, Spanish*
 b. [TP [NegP [AgrP]]]: *English, French*

Zanuttini (1991) studies the syntactic strategies resorted to in various Romance languages to express negation. She observes that the different strategies that can be detected through synchronic comparison of various languages can also be detected through the diachronic study of a single language. This is of interest for the present paper because this idea can be extrapolated to the various evolutive stages in the acquisition of a single language.

By observing the behavior of sentence negative markers in various Romance languages (Standard Italian, various Italian dialects, French, Occitan, Romanian, Catalan, Spanish), Zanuttini (1991) establishes that the basic difference in the distribution of these elements has to do with their position with respect to the verb. She takes two cases as representative for her argumentation: Italian *non* and Piedmontese *nen*. The Italian negative marker always precedes the verb, in both its finite and non-finite forms; in Piedmontese, instead, the negative marker appears postposed to the verb in its finite form, while it can optionally precede or follow the non-finite verb:

- (15) a. Maria *non* ha telefonato a sua madre. (*Italian*)
 Maria not has phoned to her mother
 b. Maria a mangia *nen*. (*Piedmontese*)
 Maria cl_{subj} eats not

This author addresses the question whether these two S-structure positions correspond to two different D-structure positions or, instead, they share a common D-structure and it is movement that is responsible for the contrast. After analyzing several facts, which we will see in more detail in the next section, Zanuttini concludes that there are two types of sentence negative marker, and that this is related to phenomena of an exclusively morphosyntactic nature: the presence or absence of tense morphology and its corresponding functional projection. The relevant distinction is not merely finite versus non-finite, but, even more simply, between presence or absence of the TP category itself. Specifically, whenever we have a 'bare' verbal form (little or null morphology), a negative marker of the Italian (*non*) type

10. The aim of Laka's (1990) dissertation, however, goes beyond what has been presented here. She argues for the existence of a universal condition, the 'Tense c-command condition', which, in short, requires that, by the level of S-structure, the head of the NegP functional category must be c-commanded by the head of Tense. This condition allows her to explain, in a unified way, the behavior of both negation in English (the *do-support* phenomenon) and in Basque (movement of the inflected auxiliary), and leads to the proposal presented in the text.

cannot appear because it is sensitive to tense morphology. The Piedmontese (*nen*) type of marker, instead, is insensitive to the morphological structure of the verb.

To summarize the main idea in this section, we see that both Laka's (1990) and Zanuttini's (1991) dissertations, which are two recent important contributions in the field of negation, coincide in emphasizing that tense is relevant in determining the kind of sentence negation displayed by a language. In other words, the functional projections corresponding to tense and negation, despite their apparent unrelatedness, interact in a way that allows us to explain phenomena with no apparent direct link.

3.2. Two types of negative markers (Zanuttini (1991))

In this section I will summarize the central ideas in Zanuttini (1991). As we saw in the preceding section, this author postulates two different negative markers for Romance languages. Each projects its own functional category, NegP, with its own properties, and occupies a different position in the sentence. She calls markers in preverbal position NegP-1, and markers in postverbal position NegP-2.

NegP-1, which is characteristic of languages such as Italian, Spanish or Catalan, only occurs in clauses containing TP, and appears structurally above TP since, according to the author, it selects TP as its complement. The examples in (16) are from Zanuttini (1991:14):

- (16) a. Gianni *non* ha telefonato a sua madre. (Italian)
Gianni not has phoned to her mother
- b. Juan *no* ha llamado a su madre. (Spanish)
Juan not has called to his mother
- c. El Joan *no* ha trucat a sa mare. (Catalan)
the Joan not has called to his mother
- d. Joao *nao* ligou para sua mae. (Portuguese)
Joao not called for his mother
- e. Jon *nu-i* telefona mamei lui. (Romanian)
Jon not-has phoned mother-DAT his

These preverbal negative markers are characterized by the fact that they always precede the verb, whether finite or non-finite, simple or compound. They are only separated from the verb by pronominal clitics; and in interrogative sentences, they move, together with V, to CP. In addition, they block clitic movement: in a sequence of clitic complements, the negative element usually appears in a leftmost position. This blocking effect is also manifested in clitic climbing contexts (examples from Catalan):

- (17) a. Voldria perjudicar-te.
would-like-1s to-damage-you
- b. Et voldria perjudicar.
you would-like-1s to-damage

- (18) a. Voldria no perjudicar-te.
would-like-1s not to-damage-you
- b. *Et voldria no perjudicar.
you would-like-1s not to-damage

As for the syntactic representation of this type of negative marker, the author argues they are heads, i.e., X^0 elements. The main argument for this claim is their blocking effects for head movement, which we illustrated with pronominal clitics.¹¹

NegP-2, which occurs in languages like Piedmontese or colloquial French (*pas*),¹² is insensitive to the presence or absence of TP, and it appears structurally below this functional projection. The following examples from Piedmontese (from Zanuttini (1991)) give an approximate idea of the syntactic behavior of this element:

- (19) a. Maria a mangia nen.
Maria cl_{subj} eats not
- b. Maria a l'ha nen parlà tant.
Maria cl_{subj} has not talked much
- c. Cerkuma d nen spurkese.
Try of not get-dirty
'Let's try not to get dirty.'
- d. Maria a parla sempre / anco / già / pi.
Maria cl_{subj} talks always still already no more
- e. A-m lo da nen.
cl_{subj}-cl_{dat} cl_{obj} gives not
'S/he won't give it to me.'

These postverbal markers follow the main verb when it is finite and simple (19a). With compound tenses, there is more variation between languages than in the case of preverbal negative markers: in some languages they follow the auxiliary (19b), while in others they follow the past participle. With the infinitive, some of these elements follow it, some precede it (19c), and some have an optional position before or after the verb. The distribution of postverbal negative markers is often similar to that of some sentential adverbs (19d). In sum, preverbal markers are homogeneous in their position with respect to the verb, while postverbal markers are not.

Finally, from the position occupied by *nen* in (19e) we can conclude that it does not block or interfere with movement of either the verb or clitics. This is a powerful argument for postulating that postverbal negative markers are not heads themselves, i.e., unlike preverbal markers they are not X^0 elements. Now, if they are not X^0 , what are they? Zanuttini proposes that they are X^{\max} , in particular

11. According to the usual analyses, cliticization can be interpreted as a case of head-to-head movement, which results in the clitic's adjoining to V to form a complex word.

12. In other cases, the postverbal negative marker appears together with a preverbal one: this is the case with Standard French or Occitan (*no...pas*).

they occupy the Specifier of Neg projection. In this way, she recaptures Pollock's (1989:414-418) hypothesis that *ne* in standard French is the head of NegP, i.e., it occupies the Neg^o position, while *pas* appears under [Spec, NegP].

Zanuttini's (1991) proposal, then, involves two different structural positions for negative markers, as represented in (20):

- (20) a. NegP-1: [NegP [... [TP [...]]]]: *Italian, Catalan, Spanish*
 b. NegP-2: [TP [... [NegP [...]]]]: *Piedmontese, French*

These structures coincide with the ones proposed by Laka (1990) (see above (14a) and (14b), respectively); (20b) is also the structure proposed by Pollock (13).¹³

To summarize, the parameter associated to Neg can be informally expressed in the following terms:

- (21) *Neg Parameter Generalization: Zanuttini (1991)*

Languages express sentence negation through preverbal (NegP-1) or postverbal (NegP-2) negative markers. NegP-1 depends on the presence in its domain of the TP functional projection. NegP-2 is independent from the presence or absence of TP. In addition, markers of the NegP-1 type are heads, while those of the NegP-2 type are specifiers.

What this parameter predicts, then, is the following: *if TP is absent, NegP-1 cannot appear, since its properties would not be satisfied; on the contrary, NegP-2 is not affected by the presence or absence of TP.* I want to emphasize this theoretical point, since my account of the facts concerning sentence negation acquisition will crucially hinge on it.

13. The representations in (20) abstract away from the AgrP projection, unlike those in (14). If we take the distribution of AgrP into account, in addition to the structures in (14) there are two other possible options of combining these three projections:

- (i) a. [AgrP [NegP [TP]]] (Belletti (1990), Solà (1989))
 b. [NegP [AgrP [TP]]] (Espinal (1991))

Espinal (1991:46-52) gives several arguments which lead her to conclude that the right structure for Catalan must be (ib). First, the idea that the highest element in the structure must be NegP is supported by the non-clitic status of *no* in Catalan (it can be emphasized and receive contrastive stress) and by the fact that it always precedes the verb, whether finite or not, and all pronominal clitics. Secondly, the idea that AgrP is above TP, and not conversely, gets support, according to Belletti's (1990) proposal, from the morphological structure of the verb, which in Catalan is the following: V + T + Agr. I think that the stand taken by Espinal (1991) is the most adequate one for Catalan. For the purposes of the present paper, though, what is crucial is that TP occurs in the domain of Neg, and this is common to all proposals, except for Pollock's (1989).

Ouhalla (1990) proposes parameterization for the position of Neg too: Neg is associated to a parameter which allows it to be subcategorized for TP in certain languages (French, Berber) and for VP in others (English, Turkish). It is to be remarked that, unlike Pollock, he proposes different structures for French and English, the reason being that, in his hypothesis, Neg is an absolute barrier for verb movement.

3.3. Imperatives and negation in Romance languages

An important set of data concerning sentence negation comes from imperatives. In many languages, negative imperatives use different forms from affirmative imperatives. Zanuttini (1991) observes that this is connected to the type of negative marker in the language. If a language has *non*, as Italian, a form of the imperative cannot be negated, since this mood is characterized by its defective conjugation (usually it only expresses one person, the second) (see examples in (22)). Conversely, if a language has *nen*, as Piedmontese, the imperative forms can be negated (see (23)):

(22) Italian

- a. Parla!
speak-IMP-2s
- b. *Non parla!
not speak-IMP-2s
- c. Non parlategli!
Not speak-IND-2p

(23) Piedmontese

- a. Parla!
speak-IMP-2s
- b. Parla nen!
speak-IMP-2s not

Zanuttini's account is the following: 'true' imperatives do not involve the TP functional projection, as suggested by their reduced morphology (notice that the verbal forms in (22a) and (22b) do not bear tense markings, but only person markings); as a consequence, the negative marker of type *non*, NegP-1, cannot be used to negate them, since it cannot appear in constructions without a TP—in other words, it cannot satisfy its selection requirements. Hence, the language has to resort to other mechanisms to express a negative order (nothing prevents this possibility from a semantic point of view), such as borrowing the verbal forms of another tense in the paradigm (in this case, present indicative, see (22c)). By contrast, since *nen*, NegP-2, does not have these requirements—it is insensitive to the presence or absence of TP—it can cooccur with 'true' imperatives, independently from their morphological structure, and it becomes unnecessary to borrow forms from other tenses (see (23b)).

In the case of Catalan, it can be shown that the imperative morphology is very poor: its second person singular is curiously identical to the 3rd person form of the present indicative, its weak forms (whose stress falls on the affix: 1st and 2nd plural) are identical to the corresponding ones in the present indicative (which in turn are identical to the ones in the present subjunctive).¹⁴ Spanish shows a similar

14. According to Mascaró (1986:110-111), the conjugation morpheme (or thematic vowel) is \emptyset (except for E/In conjugation IIIa), the tense morpheme is also \emptyset and the person morpheme is \emptyset for 2s and [w] for 2pl. We can conclude, then, that the imperative morphological structure reduces to its 'pure' (or 'bare') stem.

situation (this language, though, has a differentiated form for imperative 2nd plural: *Caminad* 'walk-IMP-2pl).

In accordance with the predictions made by Zanuttini's proposal, in Catalan and Spanish it should not be possible to negate the imperative forms. And this is indeed the case: skipping some details, the negative construction for the imperative is obtained in these languages by borrowing the corresponding forms in the subjunctive:

(24) *Catalan*:

- | | |
|---------------|--------------------|
| a. Beu! | c. No beguis! |
| drink-IMP-2s | not drink-SUBJ-2s |
| b. Beveu! | d. No begueu! |
| drink-IMP-2pl | not drink-SUBJ-2pl |

(25) *Spanish*:

- | | |
|------------|-----------------|
| a. ¡Come! | c. ¡No comas! |
| eat-IMP-2s | not eat-SUBJ-2s |
| b. ¡Comed! | d. ¡No comáis! |
| eat-IMP-2p | not eat-SUBJ-2p |

To be precise, Zanuttini's hypothesis goes further to claim the 'true' imperatives do not involve a TP functional projection, not only in the sense that they do not bear any morphology corresponding to this category, but also in the sense that they lack this abstract projection in their structure. In other words, TP is neither lexically realized nor abstractly projected. One further argument for this view is that, unlike indicative and subjunctive, which have several tenses, the imperative has only one, the present, which cannot be properly considered a tense, since a tense is defined by opposition to other tenses in the paradigm. From this perspective, both subjunctives and infinitives, unlike imperatives, would bear abstract tense.¹⁵ This is why negative imperatives in NegP-1 languages like Catalan or Spanish can only be formed by borrowing forms which involve TP.

4. An analysis of the development of negation in child language

4.1. *Contrasting different analyses*

In this section I will try to link the data presented in section 2 to the various proposals introduced in section 3. In the discussion of the data on early child Catalan, we saw that two surface orders appeared: [Neg V] and [V Neg]. How can we account for this alternation?

15. This claim is important in view of the fact that in Spanish, and also in Italian, infinitives can be used as imperatives, both affirmative and negative (examples from Spanish):

- (i) a. ¡Votar!
 vote-INF
 b. ¡No votar!
 not vote-INF

Following Radford (1990), we could analyze this word-order alternation for negation by claiming that in this early stage the negative marker is analyzed by children as an adjunct. Roughly speaking, adjuncts are optional constituents and, by definition, are not subject to any restriction on their position. They can, therefore, freely (and randomly?) appear in one position or another. As an adjunct, the negative marker can occupy a preverbal or postverbal position, or it can be a sentence adjunct, as in the by now classic English child sentences of the kind *No I see truck*.

Arguments against this view are of two types: theoretical and empirical. As for the former, one is forced to stipulate that in an early stage, children analyze the negative marker as an adjunct and, later on, as a head (or a specifier, depending on the language) of its own (functional) category. On which evidence is this change triggered? Obviously, Radford's answer is based on the contention that in the earliest stages of child language there are no functional categories although they mature later on. This is known as the maturation of functional categories hypothesis. Then the question shifts to why there is a change from absence to presence of functional categories. The answer to this second question is obviously linked to our previous question; in other words, the answer to the latter question contains the answer to the former. In any event, whatever the answer may be—certainly not an easy one—, what is clear is that the change, in the case of negation, must involve recategorization. One should wonder whether this is a desirable result, and whether it could be avoided.

As for empirical arguments, I think that the data presented in section 2.2—specifically the sentences in (1) to (7)—are, if not conclusive (this is always hard to establish if we are dealing with more or less partial data based on observation), rather revealing, in showing that the position of negation with respect to the verb—or rather the position of the verb with respect to negation—is not random in this first stage of child language. In addition, we would expect postverbal negation to occur in early English too. Radford does not provide any example of this sort.

An alternative view would be to try to account for the data in (1)-(7) using the theory and grammatical description in their narrowest sense: I mean on the basis of analyses proposed for the steady systems of adult language. If, within this view, it can be shown that the explanation for steady systems can cover the explanation for (apparently) non-steady systems, I think that grammatical theory and acquisition theory will be favoring each other.

Let us go back to the data and their interpretation. Two issues should be developed and clarified. The first is whether there is verb movement to some functional projection in the early stages of Catalan and Spanish. The second concerns the IP structure we need in order to account for the two possible orders in these stages.

The consistency shown by the data in (2) and (6), in the sense that negative imperatives *always* show preverbal negation, in contrast to (1) and (5), where verbs in the present tense allow both preverbal and postverbal negation, suggests that at this early stage there is already verb movement to some IP functional head (probably TP), where it attaches to (or checks) its morphology (recall that these imperative verbal forms are characterized by showing more evident morphology).

For adult Catalan, two analyses have been proposed (to my knowledge) to account for the structure of IP (see footnote 13):

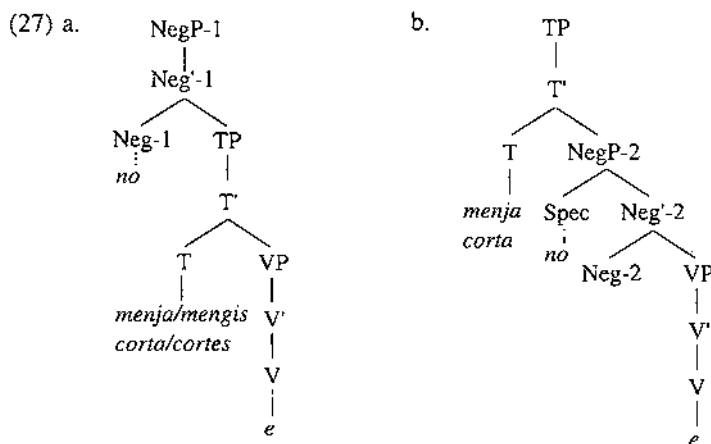
- (26) a. [NegP [AgrP [TP]]] (Espinal (1991))
 b. [AgrP [NegP [TP]]] (Solà (1989))

On the basis of (26a), and assuming there is verb movement, we can account for the child (as well as adult) surface word-order [Neg V] (sentences (1a) and (2a): *No menja, No vagis*): we would have to assume that the verb raises to TP and possibly to AgrP. (26a), however, does not allow for the order [V Neg] (sentence (1b): *Menja no*), since there is no appropriate landing site for the verb.

Structure (26b) would allow for an account of both orders, by stipulating that the verb raises to TP when we have [Neg V], while it raises to AgrP when the order is [V Neg]. The question is, however: what empirical motivation do we have to decide when there is raising to Agr and when there is not? For it is precisely when we should assume that there is movement to Agr that the verb shows least morphological markings, not only for tense but also for agreement (sentences of the kind *Menja no*). Besides, we have sentences of the kind *No menja*, whose verb has the same morphological shape as the former, and also *No mengis*, where agreement morphology is more evident but, nonetheless, should not involve movement to Agr.¹⁶

We seem to be in a cul-de-sac if we try to account for the two word orders by starting from one single representation, the one corresponding to the adult language, whichever it may be.

If, however, the hypotheses introduced in the preceding section are correct, we can resort to a parameter associated to the Neg category. This parameter, which was informally stated in (21), has two values, which account for two possible positions of the negative marker:



16. These are not arguments to show that these structures are not valid for Catalan (see footnote 13), but rather to show that they cannot account for the two word orders on the basis of one single structure.

These representations account for the data in (1)-(7). The representation in (27a) would correspond to sentences with preverbal negation, which would involve verb movement to TP to pick up (or check) tense morphology (which would be more or less abstract but, we could assume, would involve strong features). This tense morphology is evident in the case of negative imperatives, as opposed to 'true' imperatives (remember the discussion in section 3.3). In addition, this would, roughly, be the representation for the adult language.¹⁷ With the representation in (27b) we would account for postverbal negation: here too, we must stipulate verb movement to TP, but this is not problematic since this kind of movement is uniformly proposed in all cases.¹⁸ As we have seen in section 3.2, languages choosing this representation are languages where the negative marker is insensitive to the presence/absence of TP, and, correspondingly, appears below TP. What children do is precisely to resort to this representation when they use verbal forms with little evidence for tense morphology; when, instead, morphology is evident, the value they choose for the parameter is the one where Neg has TP in its domain.

We cannot, however, be content with the account presented thus far. We must go further to address the following question: why do children keep the two parametric values simultaneously activated? My answer will be perhaps speculative, but I think it is not implausible. When the child starts, so to speak, 'doing syntax', s/he can choose between two negative markers. One of them, NegP-1, is directly linked to the tense morphology of the verb. Even if I take the view that functional categories are present from the earliest moments, it seems obvious to me that the notion of tense, and the corresponding tense morphology, is built step by step and becomes more and more complex. The data on the position of the negative marker in early stages would provide, in my view, clear evidence that the child is 'hesitating' between the two options of the parameter until s/he knows which value to choose definitively. And s/he proceeds all the time in consistency with the data s/he has available at each moment in the development. In other words, the child keeps trying all the parameter values afforded by UG while s/he has not fully developed the projection corresponding to tense. As s/he progressively discovers and uses the abstract notion of tense and the morphology linked to this notion, s/he will be definitively biased to choose the NegP-1 value, which is the option in adult Catalan.¹⁹ Notice that in such

17. Notice that, if we abstract away from AgrP, this representation matches the ones proposed in (26) for adult Catalan.
18. Remember that the specifier status of Neg-2 allows verb movement across it. On the obligatory character of verb movement to T (or some IP head) from the earliest stages of linguistic development, see the argumentation in Déprez (1994). This author attributes this movement to the strong status of the verb features. From an Economy point of view, Chomsky (1989) points out that we may expect optionality of structures when there are derivations equivalent in cost. This might be the case under discussion: in both cases V raising involves one-step derivation.
19. It is relevant here to cite Déprez (1994) and Valian (1994). From different viewpoints, they make a partly similar proposal to the one advocated here. Déprez's proposal is based on the hypothesis that there is underspecification of morphological features for parameters with two values which require specification of some relevant features for the setting of the right value. In this sense, it is to be expected that, while the relevant features remain underspecified, child grammars can realize all the options available before steadily setting the right one. As for Valian, even if she attributes the differences between child and adult grammars to performance factors (processing), she also contemplates the possibility that all the values of a parameter are manifested at a given moment.

a proposal, the notion of parameter re-setting disappears, since, after the first stage of trial, the setting would already correspond to the adult one.

It is at this point that the data in (3) and (7) become crucial. In these examples there is more variety of verbal forms than in the first stage. The little girl keeps adding new verbal forms to her productive repertoire, and from this moment on *no* case of postverbal negation is attested. It seems implausible that such a change should be accidental. I will further develop the hypothesis defended here in the next section.

4.2. *The triggering data: TP*

Without going into the details of what has been called the *triggering problem* in the literature on acquisition in the Principles and Parameters model—the so-called *parameter setting* model—we can define the triggering data as the element—or rather elements—responsible for the change from one stage to the other. It is difficult to explain why a given set of data can happen to act as a trigger, why and how it has an effect in the child's grammar. In spite of these problems, appealing to the notion of trigger makes it possible to sketch an answer to the problem of developmental linguistic change.

The triggering data have usually been associated to the Lexical Learning Hypothesis. This hypothesis predicts that the emergence of syntactic properties is determined by the acquisition of the properties of lexical and morphological elements. Thus, for instance, the discovery of an inflectional morpheme can trigger the setting of a value for a given parameter or even can provide the clue for establishing a certain functional category. I will now proceed within the line of reasoning just sketched.

The hypothesis I want to defend here is that it is the acquisition of the TP functional category that determines the setting of the NegP-1 value of the negation parameter.

One further requirement we expect from the triggering data is that they must find justification within the theory itself. Proposing that TP is the triggering factor meets this requirement, since according to several authors (Laka, Zanuttini and Ouhalla, among others) the parameter associated to Neg is defined on the basis of the presence or absence of TP in its domain (see section 3).

Let us now consider the empirical arguments. In sections 2.1 and 4.1 I have argued that, in the first phase of development of Catalan, verbal forms of several tenses are present, namely present indicative, imperative, present subjunctive (used as a negative imperative), and non-finite forms (infinitive, gerund and past participle). As for the past participle, I think that it can be assumed to be a constitutive element of the present perfective from a very early stage, at the first phase, and it is consistently used, as can be seen in the productions (28) and (29), where present perfective and simple present are used appropriately. These transcriptions correspond to (23;23), which is the first recording in the first phase:

- (28) Father: Què ha fet la mama?
 'What has mummy done?'
- Child: Ha manat. [Se n'ha anat]
 Has gone

- (29) Mother: Què fa als matins el papa?
 'What does papa in the mornings?'
 Child: Atata. [s'afaita]
 Shaves

One could argue that these verbal forms convey aspect rather than tense, as some authors have suggested.²⁰ In any event, though, the appearance of such a variety of forms confirms the idea that by this first phase there must already be some syntactic projection which contains all this information, which in addition is used appropriately.²¹

Let us now consider the first recording from the second phase, corresponding to (25;11). It is in this recording where a sentence with postverbal negation appears for the last time: *No, posa no* 'No, put not' (the child indicates that the doll cannot fold her legs). It is in this recording that a verb in the past imperfective is first attested:

- (30) The mother has hidden a toy behind her, on her back, and soon after she shows it to the little girl. The following dialogue ensues:
 Child: La Júlia *no pobava. No pobava.* [No trobava]
 the Júlia not find-PAST IMPF
 Mother: Què havia fet la mama?
 'What had mummy done?'
 Child: Amagar això. Tonta, mama tonta.
 to-hide this fool mama fool

From this moment on the presence of past imperfective increases among the verbal forms she uses, and the position of the negative marker becomes systematically preverbal, both in the past imperfective and in the other forms (see examples in (7) and (6f)-(6g) and footnote 5).

20. See, in this connection, Cortés and Vila (1991), who report roughly the same sequence of appearance of the verbal morphology as the one presented here.

21. In case it was assumed that the functional projection responsible for this morphology is Aspect Phrase (AspP), we would have to slightly modify the representations in (27) in the following way:

- (i) a. [NegP-I [TP [AspP]]]
 b. [TP [AspP [NegP-2]]]

(ia) would be the representation corresponding to *No menja, No mengis*, with verb movement to Asp, and (ib) would correspond to *Menja no*, with verb movement to Asp too.

From the perspective of the theory of acquisition, there are two alternative ways of interpreting the structures in (i): either we postulate that all functional categories, including TP, are present from the beginning, even if some are empty; or we postulate that not all of them are present and, specifically, TP appears later. The hypothesis postulating the presence of functional categories from the very beginning oscillate between these two positions.

The appearance of the data with past imperfective, which is clearly a past tense and is used as such,²² constitutes definitive evidence for the existence of the notion of tense (if we assume that the presence of the present perfective in (29) is only evidence for a certain notion of aspect). We can establish a distinction between present and past from the very moment there is evidence for a certain tense that stands in opposition to the present, such as the past imperfective in the data under discussion.

To conclude this section, it is to be remarked that there seems to be evidence that the development of the notion of tense, which has TP as its correlate and is linked to clear morphological manifestations in Catalan, is what triggers change and stabilizes the parameter setting for the position of the negative marker in the same value as in adult Catalan. To sum up, the acquisition of Tense morphology, which would reinforce some previous abstract notion of tense, is at the basis of change, in accordance with the Lexical Learning Hypothesis.

5. Conclusions

The data on acquisition analyzed in the present paper afford evidence for the presence of functional categories in the grammar of Catalan and Spanish children from the earliest syntactic manifestations. The data in other studies suggest that this can be maintained for other languages as well, even if the different morphological characteristics of these languages may give as a result that either they are less evident, or they develop later.

The fact that in Catalan the position of negation does not vacillate in the case of verbal forms with more evident tense markings, while in cases of less evident tense morphology it does vacillate, must be explained by resorting to elements that linguistic theory provides us with. From an early age, children show knowledge of properly linguistic restrictions provided by UG, which they put to use and guide them in the analysis of the data. They, however, try all the parameter values until they show a more or less sound mastery of the triggering factor for the parameter—in the present case TP for negation. I must admit that the reasons for this change may be external to the theory itself, and that at present they are not entirely clear.

In my view, it is plausible that somehow the particular characteristics of a certain language may guide or facilitate the complete representation of functional categories. As I said above, in the spirit of Chomsky (1989) it is morphological properties which are most probably responsible for variation. Hence, an earlier or later manifestation of functional categories, and the corresponding earlier or later setting of the parameter, may be attributed to the degree of morphological evidence. This could explain, at least partly, the developmental differences we find when

22. Obviously, we are dealing with the immediate past. At this age, children do not have a very developed notion of abstract tense from the viewpoint of production. For instance, there is no attested use of the past perfective in Catalan, according to the data in Cortés and Vila (1991), up until very late, from 2,5 years on or even later, depending on the subject. I have pointed out that these limitations are only for production since, for comprehension, children show a rather precocious knowledge of tenses.

we study languages with 'rich' or 'poor' morphology: the early appearance of modal verbs in languages of the first kind, as opposed to languages of the second kind; the early manifestation of agreement in the former,²³ as well as a quick development of the notion of tense and its associated morphology, etc.

From this perspective, I do not deny the possibility of intervention of external factors, such as maturation of certain cognitive capacities —an increase in memory, for example—, which may somehow modify the perception of the data. But in my view it is essential not to neglect the clear evidence provided by particular languages. It is then plausible that, independently of whether the notion of abstract tense may be evolving along the development of the child, all the linguistic clues that give flesh to this notion act as a guide in the construction of the corresponding category. It is plausible, too, that children learning languages which clearly show these clues reveal the use of these functional categories before children learning languages without such clues, namely languages with a poorer morphology. If, for instance, in a language verbal inflection for number and person is not lexicalized, as in Swedish, it is unlikely that we find evidence for such categories in the child language. If in a language, such as English, these notions are poorly lexicalized, it becomes difficult, or impossible, for these morphological markings to appear in early child language.

The preceding discussion leads to the question whether all languages have some kind of representation of functional categories from the earliest stages, or only those with lexical evidence for them. From the analysis of the raw data, the answer should be No for the first part of the question and Yes for the second. From a broader theoretical view, which is probably more desirable, the answer should be yes in both cases. At this point, I take a cautious stand: we should look for cross-linguistic evidence if we want to argue for the second view.

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23. Even if agreement is not the topic of this paper, I would like to point out that the notion of number appears rather early from what the data in this study reveal. From the first recordings there is a consistent use of number agreement: *Epanten, oi?* 'They're scaring, aren't they?' (23;23), *Epimen* 'They love each other' (24;26). This is not the case with the notion of person: at the beginning Júlia only used the third person. When there is morphological evidence for other persons, such as the first, its usage is not correct: *A Júlia no tinc* 'The Júlia not have-1s' (25;11). Similar cases appear in the Spanish data. For a different view on the development of agreement features for number and person in these languages, see Grinstead (1995).

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