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Subjects, Sentential Negation and Imperatives in Child Spanish and Catalan

A dissertation submitted in partial satisfaction of the

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by

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This dissertation is gratefully dedicated to:

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not a word would have been written;

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for their patience and perspective;

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“Tense, Number and Nominative Case Assignment in Child Catalan and Spanish.” Journal of Child Language (to appear).

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"Wh- Movement in Child Catalan." Issues in Applied Linguistics (accepted with revisions).

"Interest, Relevance and Common Sense in Content-Based Instruction." Issues in Applied Linguistics, 8.2 (1997) : 203-08.

“Negation and Independent Morphological Development.” Romance Linguistics: Theoretical Perspectives. Ed. Armin Schwegler, Bernard Tranel and Myriam Uribe-Etxebarria. Amsterdam/Philadelphia: John Benjamins, 1998. 97-110.

"Evidence for Early Convergence from Child Russian and Catalan Imperatives." Proceedings of the 23rd Boston University Conference on Language Development, with Véronique van Gelderen and Teun Hoekstra. (to appear).

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"Consequences of the Maturation of Number Morphology in Spanish and Catalan." Proceedings of the 19th Boston University Conference on Language Development. 1994. 216-27.

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"Evidence from Child Grammars for Overt Subjects as Clitic Doubles in Spanish and Catalan." presented at the 27th Annual Meeting of the Linguistic Association of the Southwest, Tempe, Arizona, 1998.

"Relativized Minimality and Early Convergence in Child Catalan." presented at the Western Conference On Linguistics, Tempe, Arizona, 1998.

"Wh- Movement and Subject-Verb Inversion in Child Catalan and Spanish." presented at the 1998 Annual Meeting of the Linguistic Society of America, New York.

"The Independence of Number and Grammar." co-authored with Jeff MacSwan, Susan Curtiss and Rochel Gelman, presented at the 22nd Annual Boston University Conference on Language Development, 1997.

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"Teaching Articles in the Content-Based Instruction Classroom." presented at California Teachers of English as a Second Language, Los Angeles Conference, Mount San Antonio College, 1997.

"La flexión verbal, las preguntas y los sujetos en la adquisición del Catalán y el Castellano como lengua materna," presented at the Fifth International Symposium on Social Communication, Santiago, Cuba, 1997.

“Morphological Underspecification and Overt Subjects in Child Catalan and Spanish,” presented at the Penn. State Conference on the Acquisition of Spanish as a First or Second Language, University Park, Pennsylvania, 1996.

“Nominative Case in Child Catalan,” presented at the 26th Linguistic Symposium on Romance Languages in Mexico City, 1996.

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ABSTRACT OF THE DISSERTATION

Subjects, Sentential Negation and Imperatives in Child Spanish and Catalan

by

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Using naturalistic child Spanish data collected from an original study as well as Catalan data from the CHILDES data base (MacWhinney and Snow, 1985), I observe that in an early stage of child Catalan and Spanish, no overt subjects are used. At this same age and MLU, child speakers of overt subject languages such as Dutch and English use at least some overt subjects optionally. I explain this cross-linguistic variation by suggesting that the adult target grammars vary with respect to the position in which overt subjects are real-

ized. In the overt subject languages, subjects are realized in the canonical specifier of IP position, whereas in the null subject languages (such as Catalan and Spanish) subjects are located in a topic/focus position. I further argue that an early stage of development, the topic-focus field is inactive, hence overt subjects fail to be realized by children acquiring these languages. Related to this difference in the position of the overt subject, is a parameter which I call the Pronominal Argument Subject Parameter (PASP), which determines whether verb morphology may express a pronominal subject argument or not. By this parameter, AGR is either sufficiently specified with respect to referential features, or not. If it is not, the full specification is derived from a relationship with a DP in its specifier, the overt subject, as in the overt subject languages. In the former case, there is no motivation for such a specifier, and therefore, by economy, it is blocked. This gives the AGR in pro-drop languages the status of an overt subject, as proposed by Jelinek (1984), Baker (1988, 1996), Taraldsen (1992) and Fassi-Fehri (1993). So, children acquiring pro-drop languages apparently converge on the target value of AGR, as a referentially fully specified category, very early, as do children learning overt subject languages. The non-pronominal correlate of the incorporated pronominal subject in pro-drop languages is analyzed as a topic or focus constituent, which is absent from child grammars as a result of their inability to access certain aspects of pragmatic competence necessary to manipulate notions of topic-comment and focus-presupposition. Another gap noticed in early child Spanish and Catalan grammars is their inability to produce negative commands. During the period in which no overt subjects are produced, the children in question nonetheless produce negative declaratives and affirmative imperatives. One might conclude, given this repertoire of

grammatical elements, that children might simply concatenate negation and affirmative imperatives to produce a negative command, which would be ungrammatical in the adult grammar. However, they do not produce these ungrammatical utterances. I argue that this results from their grammars being constrained by the same principle of Universal Grammar which constrains the adult grammar: Relativized Minimality.

1. Introduction

1.1 Early Morphosyntactic Convergence

A principle theme running through this dissertation is the notion of Early Morphosyntactic Convergence (cf. Hoekstra and Hyams, 1998). What this means is that children converge on the great majority of the properties of the adult grammar at a very early stage. Some of these properties can be formalized as parameters and I will endeavor to show that a number of such parameters are set very early in child Spanish and Catalan.

What properties do we already know are acquired early in the acquisition process? A rather robust finding at this point is that children demonstrate an early understanding of finiteness. Thus, Pierce (1989) shows that Phillipe (Lightbown, 1977 corpora) correctly place finite verbs above negation and non-finite verbs below negation, as illustrated in Table 1.1.

	Finite Verbs	Non-finite Verbs
neg V	11 (12%)	77 (88%)
V neg	185 (99%)	2 (1%)

Table 1.1 - Phillipe's Placement of Negation with Finite and Non-finite Verbs (from Pierce, 1989, p. 40)

Given that verbs apparently do not raise to the same position in all languages, this fact about child French illustrates Phillipe's early convergence on a language-particular property.

Similarly, Andreas of the Wagner corpus, is reported by Poeppel and Wexler to have acquired quite adult-like verb raising in that he consistently raises finite verbs to the adult-like V2 position. Again, this illustrates early child convergence on the contingency between morphological form and syntactic position. Andreas's verb raising data are given in Table 1.2, in which we see a very high correlation between finiteness and V2 position, as in the adult language.

	Finite Verb	Non-finite Verb
V2 Position	197 (97%)	6 (3%)
V-final Position	11 (23%)	37 (77%)

Table 1.2 - Andreas's Placement of Finite and Non-finite Verbs in V2 and V-final Position

Finally, Guasti (1994) reports that although there is an early stage during which some clitics are omitted, they are always placed correctly with respect to the verb. Thus, finite verbs occur after the verb while infinitives occur before the verb. Grinstead (to appear) makes a similar point (repeated in section 4.3.3 and 5.4.1 of this dissertation) with respect to the fact that clitics are always placed after imperative verbs and before finite verbs in child Spanish and Catalan.

Similarly, I will show that a number of properties which I will formalize as parameters are set very early on in child Spanish and Catalan. In chapter 4., I will argue that child Spanish and Catalan speakers set a parameter which determines that their languages incorporate Agreement into the verb as a pronominal subject and prevent subjects from occurring in the specifier of Agreement. In chapter 5., I will similarly argue that child

Spanish and Catalan speakers set two parameters: one which determines that negation can incorporate in their languages an another which determines that illocutionary force features are located in C. In what follows, however, we will not only see evidence for Early Convergence on language-particular properties, but rather for the operation of invariant principles of Universal Grammar as well.

1.2 Principles of Universal Grammar and Child Language

Perhaps the most well-known example of a Universal Principle operating in child language is the Empty Category Principle (ECP). Thus, De Villiers, Roeper and Vainikka (1990) show experimentally that child English speakers respect the ECP. De Villiers et al. asked children two types of questions, both of which were biased by contextual factors to produce a subordinate clause-oriented answer. A subordinate clause answer to the first question type, illustrated in (1), does not violate the ECP, while a subordinate clause answer to the second type of question, illustrated in (2), does violate the ECP because the trace of the adjunct wh- element 'how' is not properly governed.

(1) Who did Big Bird ask how to paint?

(2) How did Kermit ask who to help?

The children they studied (aged 3;7-6;11) were much more likely to give a subordinate clause-oriented answer to the question type in (1) than they were for the question type in (2). This result suggests that these children's grammars were constrained by the ECP.

Similarly, I will suggest in chapter 5. that one of the ECP's decendents, Relativized Minimality, is active in child Spanish and Catalan. I will suggest that it is active because this assumption explains how the production of sentential negation with affirmative imperatives is blocked in an early stage in which producing such an ungrammatical form would otherwise make sense.

1.3 Discourse Competence in Child Grammar

While many syntactic phenomena are best explained internal to the syntactic subdomain of grammar, it is important to keep in mind that grammar interfaces with other components of the mind and these interfaces may impose constraints on grammar not only in development but in the adult state (cf. Landau and Jackendoff, 1993). Following this logic, Maratsos (1974) suggested that the early overuse of definite articles in child English stemmed from children's early assumption that their interlocutors shared their perspective. Thus, definite articles are only used when a particular noun is specific to both the speaker and the listener. Maratsos suggests that children in the "Egocentric" stage of develepment (cf. Piaget, 1955). These children, in Maratsos's estimation, were failing to correctly produce indefinite articles in certain contexts where they were required. Instead of attributing this non-adult-like behavior to the children's syntax, Maratsos instead suggested that incomplete cognitive developement was precluding children from correctly using the article system.

In a more modern incarnation, this idea of discourse competence infringing on syntax at the interface is found in Hyams' (1996) explanation of how children may option-

ally leave verb forms temporally unspecified in an early stage of development. Hyams argues that children produce root infinitives because they lack the pragmatic knowledge which dictates that a grammatical versus a deictic temporal anchoring mechanism is used when possible. The result is that children use the deictic rather than the morpho-syntactic option for determining the temporal specification of verbs, making it unncessesary to produce grammatical tense morphology on every verb.

In this same way, I will suggest in chapter 4. that the inability of child Spanish and Catalan speakers to access discourse competence for use in topic-comment and focus-presupposition structures, makes the syntactic positions to which overt subjects unavailable. This modular interaction of cognitive faculties is argued to prevent the expression of overt subjects early on.

1.4 Previous Work on Child Spanish and Catalan

Much previous work has been done on child Catalan and Spanish grammar (cf. Rodríguez and Berruecos, 1993 for a broad overview of the literature on child Spanish and Pérez-Pereira, 1994 for a large compilation of work on child Spanish and Catalan). However, much of this work has not been done in the generative tradition and has not been based on longitudinal data. Early longitudinal work on the acquisition of Spanish syntax included Hernández Pina (1984) and González (1978). These studies provided valuable early insights into child Spanish, however neither produced transcripts that could be further evaluated by other researchers. López-Ornat (1994) was the first to produce a well-transcribed, frequently recorded data set of one child, starting at a sufficiently early age so

as to make it possible to see the development of inflection and other early morphosyntactic phenomena. This data base was made available to the CHILDES data base. While the other data bases contributed to the CHILDES data base are valuable for studying chronologically and grammatically older children, they were not appropriate for the purpose of this study. That is, the child Catalan data produced by the Serrà and Solé (1986) project clearly showed that there was an early stage in which no overt subjects were used. All of the Spanish-speaking children on CHILDES, with the exception of Juan from the Linaza corpus, use overt subjects in their earliest files. Juan, unfortunately was not recorded very often or for very long sessions, making his data difficult to evaluate. In this context, it seemed worthwhile to undertake a data collection project which would collect data from multiple children starting at a chronological age (1;6) at which it would seem possible to study the development of inflection and overt subject use from the beginning.

There have been a number of oustanding studies of child Catalan and Spanish syntax. Some of the most recent of these which have been carried out in the generative tradition include: Pérez-Leroux (1993) on the acquisition of Wh- questions and relative clauses in Spanish, Padilla (1985) and Varela (1988) on the acquisition of the Binding Principles in Spanish, Torrens and Wexler on the acquisition of clitics in Spanish, and Bel (1994) on the acquisition of negation in Catalan and Spanish. I attempt to follow in the tradition of these researchers and hope to shed greater light the acquisition of these languages, which are, in spite of being spoken widely throughout the world, are relatively poorly studied.

2. Research Methods and Data Collection

The data used in this dissertation comes from two sources, primarily. The source for the Catalan child data are the four monolingual Catalan-speaking children recorded in the Serrà and Solé study in 1986, which now form part of the CHILDES data base. These children were recorded during monthly visits which lasted approximately 30 to 45 minutes and were transcribed in CHAT format. These children (two boys and two girls) were studied for approximately two and a half years each, in their homes, as they interacted with their parents, caregivers and the investigators.

The second source of data are three monolingual Spanish-speaking children who I have studied. My study was a longitudinal project following the grammatical development of three monolingual Spanish speakers being cared for by stay-at-home parents. Each child was followed over the course of a year. The study began when the subjects were all 1;6 and continued until the children reached 2;6.[1] The subjects were video-taped once a week for approximately one hour while they played and interacted with their relatives and the investigator for the first year. Subsequent taping has occurred monthly for approximately one hour per session.

In the main, I will develop an analysis of child Catalan and Spanish syntax, although data from other child and adult languages will be brought to bear on the questions addressed.

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1. This year-long period is what will be addressed in this dissertation. In fact, after the first year, I continued visiting the children (monthly instead of weekly) and at the time of writing have been following them for two and a half years.

2.1 The Spanish Acquisition Study

The data from this Spanish acquisition study was gathered from two male children and one female child located using UCLA medical center birth records.They were chosen from a list generated using a computer sort of the Medical Center's birth records on the basis of the following criteria: a birth date in January or February of 1995, a local zip code, a Spanish surname, and a high enough birth weight to suggest good health. From this list of several hundred, I called and made further inquiry with the families to determine a number of further criteria for participating in the study: 1) was the household monolingual Spanish, 2) was the child in day care or did the parents plan to put the child in day care, 3) did the family plan on staying in the Los Angeles area for the next several years and 4) was the child the oldest child in the family. When children matched these criteria, the investigator did an initial visit to determine if the children would be likely to speak in front of a camera, whether they had any articulatory abnormalities that their parents had not mentioned on the phone and whether the home would in general be a reasonable location for the study.

The families in this study were all Mexican. The families of the two boys, Carlos and Eduardo, were from the state of Oaxaca and the family of the girl, Graciela, was from the state of Aguas Calientes. Both of the Oaxacan families were composed of the nuclear family unit plus several aunts, uncles, cousins and grand parents - all living in relatively close proximity. Graciela's family had occasional visits from extended family, but primarily consisted of only the nuclear unit. All three families were of working class socio-economic status, and all three were from rural areas in their respective states. The primary

care-givers in each case had less than a high school education, although all were literate. The primary care-giver was the mother in the case of Carlos and Graciela, but varied between the mother and father in the case of Eduardo, after the father was laid off from his factory job.

2.2 Data Collection Procedure

The subjects were recorded in their homes using 8mm video tape on a commercial Sony TR-99. The recorder was placed on a tripod in the living room of the children's houses. No special microphone was used. During the one hour sessions, the only real objective was to get the children to speak. Sometimes this meant that I quietly sat back and watched the child interact with family, friends or simply played and talked by him or herself. Other times this meant that I would have to engage the child more directly using toys, games, music or whatever else would be likely to draw the child into conversation. In general, I would say that when the children were more active and their play was more self-directed, they produced more spontaneous speech, whereas when I engaged them more directly, there was much more question and answer interaction, with me asking most of the questions.

The circumstances under which the recording sessions took place did not vary much. I had a set of toys which I would rotate, and occasionally add to if the children seemed bored with, but the sessions mostly consisted of very similar activities. This is important because to the degree I could perceive, there was nothing about the exterior cir-

cumstances that changed very much, while the children's grammars changed extensively and dramatically over the short period of time I visited them.

2.3 Transcription and Coding

Approximately 60 of the roughly 140 hours of video tape recorded data were transcribed and coded for this study. In the first step of the process, audio lifts of the video tapes were transcribed by undergraduates at UCLA. Some of them were paid to do this using funds from a grant awarded to this project by the National Science Foundation and others did so as assignments in an independent studies course on Spanish language acquisition in UCLA's Spanish and Portuguese department. All of the transcribers were native speakers of Spanish. All were given an initial transcription test. They were subsequently trained in the basics of the CHAT (Codes for the Human Analysis of Transcripts - MacWhinney and Snow, 1985) format. They received additional training on Spanish orthography, if they needed it. The children's speech was transcribed initially in Spanish orthography, because of its relatively tight sound-symbol correspondence. This transcription will later be converted into a CHAT compatible form.The transcripts were made in the CHAT format to facillitate eventual inclusion of the data in the CHILDES data base.

After the initial version of the transcript was produced from the audio-lift, I then checked the transcripts using the video tape. In this way, the initial transcription, which was done from audio tape, necessarily paid closer attention to the acoustic signal produced by the interlocutors, while the "second listen" added contextual information which is only

available when using a video tape. This is especially useful in child speech in which arguments are frequently dropped and it is unclear to whom or what the child is referring.

I then coded the transcripts for subject type (null, post-verbal, pre-verbal), verb tense and clause type (question, declarative or imperative). For the majority of the analyses presented here, specific structures had to be manually searched for and counted. Where possible, a computer search program was used to facillitate culling and tallying the data. This program consisted of a routine written in PERL for use on a UNIX machine, graciously provided my Joseph Allen.[1]

1. My thanks to Joe Allen for his patience and help in this regard.

3. Subject Occurrence in Child Language

3.1 The Occurrence of Overt Subjects in Child Catalan and Spanish

In child Catalan, Spanish (and child Italian, too), there is an early period during which no overt subjects are used. This phenomenon is interesting because it contrasts markedly with the early stage of overt subject languages, such as English, Dutch, German and French, where overt subjects are used from the very beginning. Thus, as shown in Tables 3.1, 3.2 and 3.3, four Catalan-speaking children, three Spanish-speaking children and one Italian-speaking child all pass through an early period during which many verbal utterances are produced, none of which includes an overt subject.[1]

	Verbs with Null Subjects	Verbs with Overt Subjects	Total
Early Stage	249	0	249
Later Stage	1390	290 (21%)	1680

Table 3.1 - Verbs with Null Subjects versus Verbs with Overt Subjects in the Early and Later Stages of Child Catalan (Chi-square = 49.24. $p < 0.000001$.).

	Verbs with Null Subjects	Verbs with Overt Subjects	Total
Early Stage	199	0	199
Later Stage	565	64 (11%)	629

Table 3.2 - Verbs with Null Subjects versus Verbs with Overt Subjects in the Early and Later Stages of Child Spanish (Chi-square = 20.54. $p < 0.00001$.).

1. A similar early no overt subject stage is reported in Berman (1990) and Armon-Lotem (1997) for child Hebrew, but the kind of quantitative data necessary to compare child Hebrew to the languages reviewed here is not available.

	Verbs with Null Subjects	Verbs with Overt Subjects	Total
Early Stage	136	0	136
Later Stage	430	62 (13%)	492

Table 3.3 - Verbs with Null Subjects versus Verbs with Overt Subjects in the Early and Later Stages of the Child Italian of Rosa, of the Calambrone Corpus (Chi-square = 19.01. $p < 0.001$.).

The Early Stage is defined by the fact that no overt subjects are used. When overt subjects begin to be used, the children have moved to what I have referred to as the Later Stage. All overt subjects that co-occurred with a verb were counted, excluding repetitions of immediately preceding utterances, lexically-learned utterances, lexicalized tags and unclear utterances. The codes were then tallied on a UNIX machine using a PERL script.

To determine the length of the stages, I took the point in time at which the first overt subject was used in the speech of each child and then examined the children's speech both before and after that point for a roughly symmetrical number of files and months. To illustrate, in the case of Laura, in Table 3.4, the first overt subject is found in the seventh file, when she is 2;4.11. We then compare the preceding 6 files, which cover 7 months, with the subsequent 6 files, which also cover 7 months. The number of files, months and total verbal utterances for both stages of each child, are given in Table 3.4 for the Catalan-speaking children and in Table 3.5 for the Spanish-speaking children.

	No. of Files	No. of Months	Total Verbal Utterances
Gisela I (1;7.14 - 1;11.11)	6	4	35
Gisela II (2;1.23 - 2;9.16)	6	7	463
Guillem I (1;0.0 - 1;9.24)	12	9	55
Guillem II (1;11.13 - 2;7.9)	12	8	306
Laura I (1;7.20 - 2;2.13)	6	7	114
Laura II (2;4.11 - 2;11.17)	6	7	513
Pep I (1;0.27 - 1;8.30)	9	8	45
Pep II (1;10.6 - 2;4.4)	9	6	493

Table 3.4 - The Number of Files, Months and Total Verbal Utterances Per Each Catalan-Speaking Child's Early and Late Stage

	No. of Files	No. of Months	Total Verbal Utterances
Eduardo I (1;5.18 - 1;10.19)	7	5	109
Eduardo II (1;11.28 - 2;2.14)	7	4	55
Graciela I (1;11.8 - 2;1.1)	4	2	23
Graciela II (2;1.26 - 2;3.26)	4	3	120
Carlos I (1;4.17 - 1;10.10)	9	7	67
Carlos II (1;10.13 - 2;4.14)	10	7	390

Table 3.5 - The Number of Files, Months and Total Verbal Utterances Per Each Spanish-Speaking Child's Early and Late Stage

Chronologically, the cutoff point between the two stages appears to be around 2 years old.

There is, nonetheless, individual variation, as the ages next to the children’s names in

Table 3.4 and Table 3.5 indicate. For this reason the stages are considered to be grammatical, not chronological stages.

3.1.1 Subjects of Non-Verbal Predicates

While overt subjects with verbs are not produced in the Early Stage, it is not the case that there is any kind of general ban on subjects. Thus, during the period in which verbs do not occur with lexical subjects, we find lexical subjects with other constituents Particularly, we find locative clauses, as in (3), (4), (5), (6), (9), (10), (11) and (12), as well as participial clauses, as in (7) and (8).

CATALAN

(3) Gisela (1;8.24)
Aquest aquí.
'This here.'

(4) Gisela (1;8.30)
Aquí llapis.
'Here pencil.'

(5) Gisela (1;10.7)
Ara això.
'Now this.'

(6) Gisela (1;10.7)
Aquí la iaia.
'Here the granny.'

(7) Laura (2;2.13)
Boca oberta.
'Open mouth.'

(8) Pep (1;6.23)
Llapis perdut.
'Pencil lost.'

(9) Pep (1;8.0)
Una coseta aquí.
'A little thing here.'

SPANISH

(10) Graciela (2;1.1)

Aquí la chu-chu.

'Here the choo-choo.'

(11) Carlos (1;10.3)

Aquí ratón.

'Here mouse.'

(12) Eduardo (1;10.12)

Uno aquí.

'One here.'

The existence of these utterances supports the contention that early verbal utterances which lack overt subjects are not missing overt subjects as the result of any kind of general grammatical[2] prohibition on overt subjects. Rather it is only verbs which appear to follow this restriction.

3.2 THE OCCURRENCE OF OVERT SUBJECTS IN CHILD OVERT SUBJECT LANGUAGES

Unlike these child speakers of null subject languages, child speakers of overt subject languages use overt subjects from the very beginning. More precisely stated, at similar MLUs (Mean Length of Utterance), child speakers of overt subject languages use overt subjects while child speaker of null subject languages do not. It is important to match chil-

2. see Grinstead (to appear) for evidence against a processing explanation of the absence of overt subjects based on utterance length (as in Bloom, 1990, 1993) in child Catalan and Spanish.

dren by MLU because chronological age does not provide a good indicator of grammatical development.[3]

The MLUs of the four Catalan children in the files just preceding the ones in which overt subjects appeared are listed in Table 3.6. The corresponding MLUs for the three Spanish-speaking children are given in Table 3.7.

	Age	MLU
Gisela	1;11.11	1.25
Guillem	1;9.12	1.43
Laura	2;2.13	1.67
Pep	1;8.30	1.56

Table 3.6 - The MLUs of the Files Just Preceding the Files in Which Overt Subjects First Appeared in Child Catalan (Average = 1.48)

	Age	MLU
Eduardo	1;10.12	1.60
Graciela	2;1.1	1.66
Carlos	1;10.10	1.35

Table 3.7 - The MLUs of the Files Just Preceding the Files in Which Overt Subjects First Appeared in Child Spanish (Average = 1.53)

3. For example, Table 3.4 illustrates that there was substantial variation regarding the *age* of onset of overt subject use (1;8 in the case of Pep and 2;2 in the case of Laura) in the four Catalan children studied here.

As we can see their MLUs range from 1.25 to 1.67 (average = 1.48). In general, then, we will try to find overt subject language-speaking children whose MLUs are close to this average or range in order to make a fair comparison.

Nina, for example, from the Suppes Corpus, retrieved from the CHILDES data base (MacWhinney and Snow, 1985), has an MLU of 1.78 for her earliest file and consequently is comparable to the Catalan children studied here. In that file, 36% of the verbs she produced occurred with overt subjects, as illustrated in Table 3.8. In general, we can see that a substantial number of her verbal utterances contained overt subjects.

Filename	Age	Null Subjects	Overt Subjects	Total
nina01.cha	1;11.16	93 (64%)	52 (36%)	145
nina02.cha	1;11.24	41 (64%)	23 (36%)	64
nina03.cha	1;11.29	88 (53%)	77 (47%)	165
nina04.cha	2;0.3	83 (67%)	40 (33%)	123
nina05.cha	2;0.10	39 (21%)	43 (79%)	82
nina06.cha	2;0.17	26 (62%)	16 (38%)	42
nina07.cha	2;0.24	99 (58%)	72 (42%)	171
nina09.cha	2;1.6	58 (41%)	85 (59%)	143
nina10.cha	2;1.15	77 (35%)	143 (65%)	220
nina11.cha	2;1.22	53 (29%)	131 (71%)	184
nina12.cha	2;1.29	66 (31%)	148 (69%)	214
Total		723 (47%)	830 (53%)	1553

Table 3.8 - Overt vs. Null Subjects in Nina’s First 12 Files

Percentages like these contrast dramatically with the complete absence of overt subjects in child Catalan, Spanish and Italian.

While Nina's first recordings occur at 1;11 with an MLU of 1.78, there is a younger English-speaking child, with a lower MLU who also use overt subjects. Thus, Eve from the Brown corpus (CHILDES data base, ibid.), used overt subjects, at least optionally in her earliest file. In this file her age was 1;6 and her MLU was 1.52. This MLU falls in the middle of the range of child Catalan speaker's MLUs (1.25, 1.43, 1.56, 1.67), making her extremely comparable to them. Some of her utterances are illustrated in (13) a. - f.

(13) Eve (Age: 1;6.0; MLU:1.52)

a. block broke.

b. I did it.

c. Eve find it.

d. Neil sit?

e. car coming.

f. doll eat celery.

In this file, Eve used overt subjects 40% of the time (42/106), in contrast with null subjects which were used 60% of the time (64/106).Thus, it seems clear that overt subjects are used frequently at an MLU in child English at which overt subjects do not occur in child Catalan.

Similarly, we find that child speakers of French and Dutch use overt subjects from similar MLUs. Thus, Gregoire (Champaud corpus), of the CHILDES data base (ibid), uses overt subjects in his earliest files, as in (14) a. - c.[4]

(14) Gregoire (1;9.18)

a. est bobé@c [= tombé] éfant@c.
‘is fallen elephant.’

b. est pas là Zounours@c.
‘is not there Zounours.’

c. où il est?
‘where is he?’

Gregoire was quite young in the file in question and he is the youngest French-speaking child on the CHILDES data base. His MLU in his earliest file was 2.11 and is the lowest of the French-speaking children on CHILDES. This is somewhat higher than the Catalan-speaking children, but is nonetheless suggestive.

Similarly in child German, Katrina (Wagner, 1985, corpus; CHILDES, ibid.) also uses overt subjects from very early, as in (15) a. - c. In this, her earliest file, Katrina’s MLU was 2.01; also somewhat higher than the Catalan children, but again suggestive.

4. Phillipe of the Suppes, Smith and Leveillé corpus had an MLU of 3.01 in his earliest file and was thus not an appropriate choice for comparison with the grammatically younger Catalan children.

(15) Katrina (1;5.15)

a. Papa eibt.

Papa is writing.

b. Ei ißt Papa.

Egg, eats Papa.

c. Datin macht baput.

Katrina makes broken. [Katrina breaks it.]

In child Dutch, we find a very close MLU match to the Catalan-speaking children in the speech of Peter (Groningen Corpus; CHILDES, ibid). Peter's MLU was 1.68 when his age was 1;9.20. In this file, he produced many verbal utterances with overt subjects, some of which are illustrated in (16) a. - d.

(16) Peter (1;9.20)

a. Peter doen.

Peter do (inf).

'Peter to do.'

b. Mama roere.

Mama stir (inf.)

'Mama to stir.'

c. Peter duwen.

Peter push (inf.)

'Peter to push.'

d. Peter vangen.

Peter catch (inf.)

'Peter to catch.'

In summary, we have seen that at similar MLUs, children speaking overt subject languages use overt subjects while child speaker of Catalan do not. I take this to be evidence of fundamentally different developmental sequences in the two language families.

3.3 A Previous Account and The Current Proposal

A reasonable explanation of the facts in child Catalan, Spanish and Italian is to suggest that overt subjects are missing in the Early Stage because nominative Case checking is impossible. This seems plausible in light of the fact that overt subjects appear at the same point at which tense and number morphology begin to be used in much more adult-like ways. A Case-theoretic analysis of this kind was proposed in Grinstead (1994, to appear).

The basic facts of child Catalan and Spanish morphological development are that person morphology develops very early while tense and number morphology are later developments (see sections 4.4, 4.7 and 4.8 for details). When verbs forms inflected for plural number and other than present tense begin to be used, overt subjects also begin to be used. The conclusion drawn on the basis of these facts in earlier work, then, was that in the early period inflection is not sufficiently specified so as to allow nominative Case checking to take place. As a consequence, no overt subjects are used. Later, when inflection comes

to have its target grammar value, nominative Case checking becomes possible and overt subjects begin to be used.

This account suffered from two problems, fundamentally. First, as we have just seen, overt subjects begin to be used from much earlier in the overt subject languages, in spite of the fact that Tense and Number appear to be similarly unspecified early on (see Grinstead, to appear, for details). Consequently, the account of Spanish, Catalan and Italian cannot be extended to the overt subject languages. This is clearly undesirable if there is one universal subject licensing principle, as is frequently assumed (Chomsky, 1981, 1995; Schütze, 1997; Rothstein, 1983; Marantz, 1991).

A second weakness in the Case-based account was that the early ban on overt subjects did not naturally follow from the null subject nature of the adult target grammar. Such a formulation would be desirable because it would capture the generalization that this phenomena is limited to null subject languages. In the following chapter, I will attempt to construct an account along these lines by suggesting that the early absence of overt subjects results from the child grammar possessing only a subset of the adult system. Thus, the adult grammar consists of the child grammar plus an additional component. What child and adult grammars have in common is being pronominal argument subject languages, as I argue in section 4.4. In languages of this type, it is the incorporated pronominal subject in the head of agreement which satisfies the Case and Theta requirements of the subject. I assume, by economy, that if the subject can be expressed in the head of agreement, it cannot be expressed in its specifier as well. I suggest that children set this parameter to the adult value very early, and are, consequently, like adults in that their

grammars cannot express overt subjects in [Spec, Agr_SP]. I further argue, in section 4.2, that, in adult Catalan and Spanish, the non-pronominal correlate to the pronominal argument subject (referred to as the "overt subject" in Catalan and Spanish up until now) occurs in topic or focus positions in the left periphery of clause structure. This is the aspect of the adult grammar which I suggest that children lack. Thus, as I argue in section 4.3, the child A-bar system is generally unavailable to host topicalized or focussed constituents, including correlates of the pronominal argument subject. Once the A-bar system becomes generally available, these subjects and other topicalized and focussed constituents begin to be used.

4. Subjects as Left-Peripheral Elements in Catalan and Spanish

4.1 Introduction

In what follows, I will show that, in adult languages such as Catalan and Spanish, the overt nominal elements which appear to be subjects are not structural subjects, but rather occur external to AGR_SP in a left peripheral position. I will further aruge that the reason that Spanish, Catalan and Italian children fail to produce overt subjects is because the relevant positions of the left-periphery to which subjects move in the adult grammar are not yet active. In English, French and German, in contrast, subjects occur in [Spec, AGR_SP], and move there by mechanisms that are also available in early child grammars of those languages. Finally, I will show that child speakers of Spanish, Catalan and Italian do not make the "mistake" of moving subjects to [Spec, AGR_SP] because they quickly

acquire that aspect of their adult target grammars which tells them that they are in a language which moves subjects not to this position, but rather to the left periphery.

In section 4.2, we will review evidence from ellipsis and negative quantifier extraction which shows that, in adult Catalan and Spanish, pre-verbal overt subjects occur not in [Spec, IP], but in a left-peripheral (A-bar) position. We will also see evidence from quantifier scope that the left-peripheral position of some pre-verbal subjects is in a topic position.

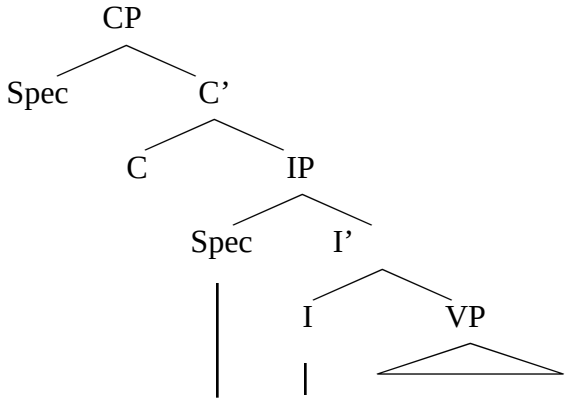
In section 4.3, I will argue that early verbal utterances in Spanish and Catalan lack overt subjects because movement to the left-peripheral position is generally not available. First, we will see that overt subjects emerge at the same time that fronted objects do. Then we will see that during the period in which overt subjects are impossible with verbs, they are nonetheless possible with other predicates. This suggests that the absence of overt subjects with verbs is not the result of any general constraint on or developmental deficiency with respect to subject licensing, but rather the result of a deficit specific to the verbal system, as it extends to the left periphery. Additionally, we will see that other left-peripheral processes, such as topicalization, focus and wh- movement also appear to be inactive in early Catalan. On the basis of evidence from early imperative use, I will suggest that the early absence of A-bar movement is not the result of the absence or inactivity of the entire C projection. Rather, I will assume a fine structured C-system along the lines of Rizzi (1995) and propose that the aspects of this system which are “discourse-dependent” are inactive, while those aspects which are sensitive to clause-internal properties (Finiteness P) or which carry the illocutionary force features (Force P) are active.

4.2 Overt Subjects as Left-Peripheral Elements

In this section, we will review evidence from ellipsis, negative quantifier extraction and quantifier scope that overt subjects are not in [Spec, IP] and that instead they appear to be in an IP-external A-bar position.

Ordóñez (1997) presents a number of arguments against the traditional idea (Belletti, 1990, Rizzi, 1990; Cardinaletti, 1996) that overt subjects occupy the specifier of IP, as in (17).

(17)



El cantinero/pro trajo la cuenta.
The bartender/pro bring (3rd, past) the bill.
The bartender brought the bill.

The traditional approach assumes that when direct objects and indirect objects are preposed, as in (18) and (19), these constituents are IP-external, and that [Spec, IP] is occupied by pro or the overt subject.

(18) Las llaves [$_{IP}$ pro se las dio Juan a Pedro.]

the keys cl (dat.) cl (acc.) give (3rd, past) Juan to Pedro

'It was the keys that Juan gave Pedro.'

(19) A Pedro [$_{IP}$ pro le dio Juan las llaves.]

to Pedro cl (dat.) give (3rd, past) Juan the keys

'It was Pedro that Juan gave the keys to.'

While the pre-verbal objects in (18) and (19) are assumed to be IP-external, the pre-verbal overt subject of a sentence such as (20) is taken to be IP-internal.

(20) [$_{IP}$ Juan/pro le dio las llaves a Pedro.]

Juan/pro cl (dat.) give (3rd, past) the keys to Pedro

'Juan/pro gave the keys to Pedro.'

Ordóñez suggests that this asymmetrical treatment of subjects and objects conflicts with evidence from ellipsis and extraction of quantificational elements.

4.2.1 Ellipsis

Following Brucart (1987), Ordóñez points out that VP ellipsis under certain particles (*también* 'also', *tampoco* 'neither', *sí* 'yes' and *no* 'no') seems to treat the first position of the sentence the same way regardless of whether the element in the first position is a subject or an object, as illustrated in (21) through (23) (the material deleted by ellipsis appears within "[]" square brackets).

(21) Él le dio unos libros a Pía y Pepe también [le dio unos libros a Pía].

He cl (dat., sg.) give (3rd, past) some books to Pía and Pepe also [cl (dat, sg.) give (3rd, past) some books to Pía.]

He gave some books to Pía and Pepe did, too.

(22) Unos libros le dio Juan a Pía y unos cuadros también [le dio Juan a Pía].

Some books cl (dat., sg.) give (3rd, past) Juan to Pía and some paintings also [cl (dat., sg.) give (3rd, past) Juan to Pía.]

Juan gave some books to Pía and some paintings, too.

(23) A Pía le dio Juan unos libros y a Sara también [le dio Juan unos libros].

To Pía cl (dat., sg.) give (3rd, past) some books and to Sara also [cl (dat., sg.) give (3rd, past) some books]

'Juan gave some books to Pía and (some) to Sara also.'

If the same consituent is elided in every example, as seems a reasonable assumption, then it would appear that the subject is as IP-external as objects are. That is, ellipsis does not appear to treat first position as if it were IP-internal for subjects, as in (24), and IP-external for objects, as in (25), but rather as if it were the same for both subjects and objects, as in (26). Ordóñez indeed proposes that, when preposed, all of these elements move to single IP-external Topic position, as in (26).

(24) Pre-posed Subjects: $[_{IP}$ subject $[_{VP}$ ...]]

(25) Pre-posed Objects: $[_{Topic}$ DO/IO$[_{IP}$ subject $[_{VP}$ ...]]

(26) $[_{TopP}$ XP(subject/DO/IO) Top] V

Thus evidence from ellipsis supports the position that pre-verbal subjects occur external to IP, in the left periphery.

4.2.2 Negative Quantifier Extraction

More evidence provided by Ordóñez for the position that pre-verbal overt subjects do not inhabit [Spec, IP] comes from Negative quantifiers. Negative quantifier subjects, direct objects and indirect objects can all occur in pre-verbal position, as in (27) through (29).

(27) Nadie le debe la renta a María.
No one cl (dat., sg.) owes the rent to María
'No one owes rent to María.'

(28) Nada les debe Juan a sus amigos.
Nothing cl (dat., pl.) owes Juan to his friends
'Juan does not owe anything to his friends.'

(29) A nadie le debe Juan la renta.
to no one cl (dat., sg.) owes Juan the rent
'Juan owes rent to no one.'

Again, the traditional assumption is that overt subjects occupy [Spec, IP]. This assumption implies that the structure of the fronted negative quantifier sentences in (27) through (29) would be as in (30) through (32), where the fronted objects in (31) and (32) are IP-external and the fronted subject in (30) is IP-internal.

(30) [$_{IP}$Nadie le debe la renta a María]

no one cl (dat., sg.) owes the rent to María

‘No one owes rent to María.’

(31) Nada [$_{IP}$ pro les debe (Juan) a sus amigos.]

Nothing cl (dat., pl.) owes (Juan) to his friends

‘There is nothing that Juan owes to his friends.’

(32) A nadie [$_{IP}$ pro (le) debe (Juan) la renta.]

to no one cl (dat., sg.) owes (Juan) the rent

‘There is no one to whom Juan owes the rent.’

If the structures in (31) and (32) were correct, it would be difficult to explain (34) and (36) in which negative quantifier objects cannot occur with a preverbal subject. Examples (33) and (35) illustrate that such examples are possible with post-verbal subjects.

(33) Nada le debe Juan a sus amigos.

nothing cl (dat., sg.) owes Juan to his friends

‘Juan owes nothing to his friends.’’

(34) *Nada Juan le debe a sus amigos.

nothing Juan cl (dat., sg.) owes to his friends

‘Juan owes nothing to his friends.’

(35) A nadie le debe Juan la renta.

to no one cl (dat., sg.) owes Juan the rent

‘Juan owes the rent to no one.’

(36) *A nadie Juan le debe la renta.

to no one Juan cl (dat., sg.) owes the rent

'Juan owes the rent to no one.'

The examples in (33) through (36) can be explained as cases of complementary distribution if there is one left-peripheral position to which both pre-verbal subjects and fronted objects move. Now we turn to evidence from quantifier scope from Ordóñez (1997) which also suggests that overt subjects are in a left-peripheral position.

4.2.3 Quantifier Scope

English and Spanish contrast with respect to the availability of narrow and wide scope readings between a subordinate clause universal quantifier and a wh- element which has been extracted from that subordinate clause. Thus, in English both readings are available, as illustrated in (37), where the interpretation may either be that there is one thing that everyone bought (narrow scope) or that each person bought a different thing (wide scope).

(37) What do you think that everyone bought? (May, 1985)

In Spanish, however, both readings are only available when the universal quantifier subject is post-verbal (as pointed out by Uribe-Etxebarria, 1992):

(38) ¿A quién dices que amaba cada senador? - **wide and narrow**

to whom said (2nd, sg., pres) that love (3rd, sg., past) each Senator

'Who did you say each Senator loved?'

(39) ¿A quién dices que cada senador amaba? - **narrow only (one loved person)**

to whom said (2nd, sg., pres) that each Senator love (3rd, sg., past)

'Who did you say each Senator loved?'

This is explained if the universal quantifier in pre-verbal positions is in an A-bar position, given the fact that wide scope interpretations are frequently denied to elements which have been topicalized:

(40) Someone thinks that Mary solved every problem. **wide and narrow**

(41) Someone thinks that every problem, Mary solved. **narrow only (one someone)**

This contrast constitutes further evidence that preposed subjects in Spanish occur in A-bar positions.

Thus, the standard assumption that overt subjects occur in [Spec, IP] is unsupported by the parallel ellipsis facts between constructions with pre-verbal subjects and constructions with pre-verbal objects. Moreover, we have seen evidence that the position occupied by overt subjects displays the same properties as left-dislocated objects, lending

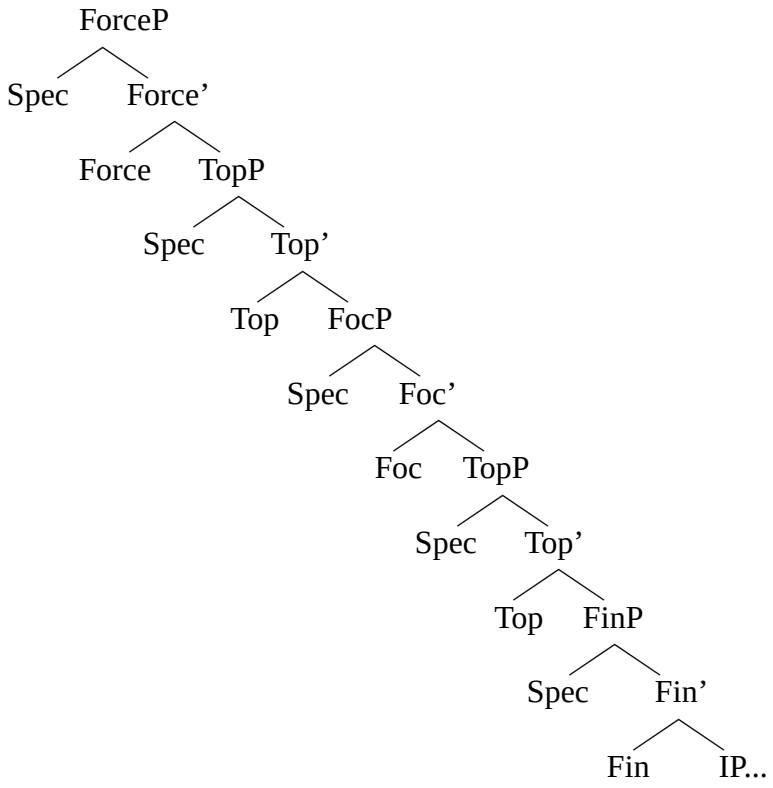
credence to Ordóñez's proposal that all of these arguments occupy a left peripheral (A-bar) position when they occur in the pre-verbal environments described.

4.2.4 Subjects as Topics

The evidence just presented leads to the conclusion that overt, pre-verbal subjects are IP-external in Spanish. Ordóñez suggests that the same holds true for Catalan. So now the question becomes: where on the left periphery do these constituents reside? Let us begin by laying out our assumptions regarding the structure of the left periphery.

Rizzi (1995) suggests that the functional projection referred to as CP is in fact made up of four separate projections, much in the same way Pollock (1989) argued that IP should be broken down into smaller atomic units. The Left Periphery (LP) in this view serves as a kind of interface between the clause and its superordinate structure (either a matrix clause in the case of subordinate clauses or the larger discourse for root clauses). The LP is made up of two obligatory projections (Force P and Finiteness P) as well as two optional projections (Topic P and Focus P). Force P is the outward-facing projection which indicates the clause's type, as in Cheng (1991), and Finiteness P is the projection which more directly reflects clause-internal properties, such as whether a clause is tensed or not. In between these two obligatory projections, we find Topic P and Focus P, which are only projected when the clause contains either a focussed element or a topicalized element. The basic structure of the left-periphery in this view is as in (42).

(42)



According to Rizzi, topicalized elements move to the specifier of TopP, a functional projection which takes a “comment” as its complement. Focussed elements, similarly, move to the specifier of the FocP, a functional projection which takes a presupposition as its complement. Wh- elements also move to the specifier of FocP. Movement to these positions is forced by the economy principle “last resort”, suggested in Chomsky (1993), in order to satisfy criteria, as in the “Wh- Criterion” in Rizzi (1991), the “Negation Criterion” in Haegeman (1995) and the “Clitic Criterion” in Sportiche (1992). [5]

5. The fact that TopP occurs twice in (42) results from the fact that more than one topic per sentence is possible, while only one focus is possible, leading Rizzi to suggest that TopP is recursive, while FocP is not.

Assuming Rizzi's framework for concreteness, let us return to the question of where in the Left Periphery overt subjects sit. Ordóñez argues on the basis of the quantifier scope data that they appear to be in an A-bar position, which he assumes to be the Topic position. It is unclear that this assumption is warranted, however.

As Rizzi (1986b, 1995) points out, Topics do not appear to support quantifiers, as illustrated in (43), (44) and (45).

(43) **Italian**

*Nessuno, lo ho visto.

'Noone, I saw him.'

(44) **Catalan**

*A ningú, ho vaig veure.

'Noone, I saw him.''

(45) **Spanish**

*A nadie, lo vi.

'Noone, I saw him.'

Rizzi distinguishes topics from focus constructions on the basis of two further diagnostics: the occurrence of a clitic and intonation. According to Rizzi, topics carry a clitic and have an unmarked intonation pattern. Their focus counterparts, as in (46) - (48), on the other hand, require both increased loudness on the focussed constituent and exclude the possibility of a clitic.

(46) **Italian**

NESSUNO ho visto.

‘NOONE I saw.’

(47) **Catalan**

A NINGÚ vaig veure.

‘NOONE I saw.’

(48) **Spanish**

A NADIE lo ví.

‘NOONE I saw.’

Rizzi accounts for the ungrammaticality of (43) through (45) by suggesting that topics cannot be quantificational. If this is true, then Ordóñez’s proposal that preverbal subjects are topics seems less plausible in light of the fact that negative quantifiers may occur in pre-verbal subject position, as in (49).

(49) Nadie comió las manzanas.

‘Noone ate the apples.’

In response to this objection, Ordóñez argues that the ungrammaticality of (43) - (45) results not from the inability of quantifiers to occur in topic position, but rather from the incompatibility of accusative clitics and negative quantifiers, citing analogous evidence of the incompatibility of accusative clitics with negative quantifiers in clitic dou-

bling constructions in Romanian (Dobrovie-Sorin, 1990) and River Plate Spanish (Suñer, 1988).

Assuming Ordóñez is right in his topic analysis, we are still left with the question of why pre-verbal subjects in topic position do not require the presence of an overt clitic, as do all other topicalizations. An obvious answer is that Italian, Spanish and Catalan simply lack subject clitics. If this is the right solution, then, we predict that a null subject romance language which had subject clitics would require them in the presence of overt subjects (which we now take to be topics). Of relevance here is the Northern Italian dialect Fiorentino described in Brandi and Cordin (1989). Fiorentino has subject clitics, and indeed, as predicted, overt pronominal or lexical subjects must be accompanied by a subject clitic. This is illustrated in the following examples from Brandi and Cordin (1989, pp. 112-113). In (50) we have the subject clitic by itself with the verb. In (51) we have the clitic with a tonic subject pronoun and in (52) we have the clitic with a lexical subject.

(50) Tu parli.

(cl., nom., 2nd, sg.) speak

‘You speak.’

(51) Te tu parli.

You (cl., nom., 2nd, sg.) speak

‘You speak.’

(52) Mario e parla.

Mario cl.(3rd, sg., masc.) speaks (3rd, sg., pres.)

‘Mario speaks.’

The example in (53), however, in which the verb occurs without a clitic is ungrammatical.

(53) *Parli.

speak (2nd, sg., pres.)

‘You speak.’

Thus, Brandi and Cordin state that subject clitics “...obligatorily appear...” (ibid.) with overt subjects. The Fiorentino facts contrast with French, in which subject clitics occur in complementary distribution with overt subjects in declaratives.

(54) Il parle.

cl (3rd, sg., masc, nom.) speaks

‘He speaks.’

(55) Jean parle.

‘Jean speaks.’

(56) *Jean il parle.

Jean cl. (3rd, sg., masc, nom.) speaks

‘Jean speaks.’

We propose that subject clitics are obligatory in these Italian dialects because these subjects are in fact topics which (for reasons that are unclear to us) require a clitic. In this way, the obligatory nature of the clitics follows from the obligatory nature of the subject argument. One could further suggest that subject agreement in Catalan, Spanish and stan-

dard Italian is simply a topic-induced (subject) clitic of the same kind produced in the Italian dialects.[6] We will return to this point below.

Thus we see that Ordóñez presents evidence that overt subjects occur IP-externally and claims that they move to a topic position. While this claim is not uncontroversial, the clitic facts reviewed similarly point to the topic position as the likely landing site for subjects. In the next section we will see evidence from child Catalan that overt subjects indeed move to some left-peripheral position, although this evidence is consistent with movement to the specifier of either the Topic or Focus projection.

4.3 Overt Subjects as Left-Peripheral Elements in Child Spanish and Catalan

In section 3., we posed the question of why overt subjects are available to child speakers of German, Dutch and English from the very beginning, while child speakers of Catalan, Spanish and Italian pass through an initial period during which no overt subjects are used. My hypothesis is that overt subjects do not show up in child Catalan, Spanish or Italian because these languages do not have overt subjects, where "overt subject" is defined as the element which occurs in [Spec, AGR_SP].

Rather, as we showed in the previous section, the overt nominal elements which are used in a subject-like way in these languages are located in the left periphery in Rizzi's (1995) Topic-Focus field. While there is evidence for the early activity of at least one of

6. In this view, the topic-induced subject clitic in Fiorentino and Trentino would have two phonological exponents (in the sense of Noyer, 1992): the agreement morpheme on the verb and the subject clitic itself. Catalan, Spanish and Italian, in contrast, would have single exponents of this clitic: subject agreement.

Rizzi's four left-peripheral projections (Force P, to which we return below), I will argue that the Topic-Focus field is not active in the beginning. As mentioned, these projections are optional in adult clause structure, by hypothesis, and are discourse-dependent. Thus, I will suggest that these projections are inactive in child Catalan as a result of children not understanding the discourse considerations necessary to use them. Consequently, none of the constituents which would move to these positions, including overt subjects, appear in early child Catalan.

4.3.1 The Emergence of the Left Periphery

If overt subjects occur in the Topic-Focus field and if their absence in early language results from the initial inactivity of the Topic-Focus field, then we would expect other Topic and Focus-related constituents to be absent at the same time. Further, if there is one underlying discourse deficit bleeding the occurrence of these constituents, then we might expect the emergence of discourse sensitivity to precipitate the emergence of all Topic-Focus constructions at the same time, all else being equal.

The first constructions whose emergence we will compare with overt subject emergence are Topicalized objects. When searching the child Spanish and Catalan data for topicalized objects, I used co-occurrence with a coreferent clitic, following Rizzi (1995)[7], as the criteria for determining whether a fronted object was topicalized (in which case it co-ocurred with a clitic) or was focussed (in which case in did not co-occur with a coreferent clitic. However, for reasons that will become clear, we will instead refer to topicalized

7. See section 4.2.4.

objects, more neutrally, as “fronted objects with clitics”. Some examples are given in (57) - (61).

Fronted Objects With Clitics

(57) Guillem (2;9.8)

aquest ho trec, vale?

this one cl (acc., sg., msc.) take out (1st, sg., pres), okay

‘This one I’ll take out, okay?’

(58) Gisela (2;8.0)

a mi no m’agrada.

to mi not cl (dat.) please

‘I don’t like it.’

(59) Gisela (2;11.0)

a l’altra noia li donarem un bebe.

to the other girl cl (dat., 3rd, sg) will give a baby

‘To the other girl, we will give a baby.’

(60) Pep (2;5.4)

això ja ho hem fet!

that already cl (acc., sg., masc.) have (1st, pl.) done

‘That, we have already done.’

(61) Laura (3;5.13)

es que a mi no em va be aquest espinete.

is that to me not cl (ben., 1st, sg.) goes well that espinete (name of doll)

'It's that that "espinete" doesn't work well for me.'

(62) Graciela (2;3.25)

Ese, no lo agarre.

that, not cl (acc., 1st, sg.) grab

'That, don't grab.'

Thus, direct objects have been fronted in (57), (60) and (62), indirect objects in (58), (59) and (61). All include a clause-initial DP as well as a coreferent clitic lower in the clause.[8]

In Tables 4.1 and 4.2[9], we compare the point of emergence of fronted objects with clitics with overt subjects. The criterion used to determine emergence in this instance was first occurrence of a non-repeated topicalization. It seems that overt subjects appear significantly earlier than do these fronted objects with clitics.

8. In (61), the topicalized DP occurs in the left periphery of the subordinate clause.
9. Only one of the Spanish-speaking children, Graciela, used a fronted object of any kind. C. Parodi suggests that the fact that child Catalan speakers front object more than do their child Spanish counterparts may stem from the fact that object fronting is simply less prevalent in the adult grammar of Spanish.

	Overt Subjects	Fronted Objects With Clitics
Gisela	2;1.23	2;8.0
Guillem	1;11.13	2;9.30
Laura	2;4.11	3;5.13
Pep	1;10.6	2;5.4

Table 4.1 - The Emergence of Overt Subjects and Fronted Objects With Clitics in Child Catalan.

	Overt Subjects	Fronted Objects With Clitics
Eduardo	1;11.29	--
Graciela	2;1.26	2;3.25
Carlos	1;10.13	--

Table 4.2 - The Emergence of Overt Subjects and Fronted Objects With Clitics in Child Spanish.

However, the question arises as to whether these constructions in fact constitute the first occurrence of topicalizations. It could be that topicalizations occur earlier, but do not appear to be topicalizations because they lack object clitics, which are our only means of

distinguishing topicalizations from focalizations in the transcripts.[10] In such a view the development of object clitics would be seen as independent of the ability to topicalize.

What do we know about the early occurrence of clitics in southern romance languages? Guasti (1994) and Grinstead (to appear, b) note that child speakers of Catalan, Spanish and Italian appear to use clitics correctly from the beginning in the sense that they do not commit errors of commission, such as using an accusative in the place of a dative, as in (63).

(63) @Lo di el chocolate a Miguel.
cl (acc., sg., masc.) gave the chocolate to Miguel
'I gave the chocolate to Miguel.'

Nonetheless, it has also been shown for Italian-speaking children that they do not always use object clitics where they are required. Hence, children do commit errors of omission. For instance, Schaeffer (1997) conducted an elicited production experiment in which the youngest group of children (2 year olds) failed to produce accusative clitics in obligatory contexts 64% of the time. These same children used a full DP without a clitic as an alternative strategy 14% of the time and correctly produced accusative clitics 22% of the time. These results suggest that for 2 year old Italian speakers, object clitics are optional and, in fact, not preferred.

10. This is so because the transcripts provide no indication of increased loudness of any of the fronted constituents, making it impossible to use prosodic information as a further diagnostic of whether a fronted object has been topicalized or focussed.

In light of this optionality of clitic use, what might we expect two year old topicalizations to look like? In the absence of prosodic information regarding the loudness of the fronted object, topicalizations without clitics would look just like focussed object constructions, as in (64) - (67).

Fronted Objects Without Clitics

(64) Laura (2;4.11)

un gorro ara trec.

a hat now take out (1st, sg., pres)

'A hat, I'll take out now.'

(65) Pep (1;10.6)

lleteta vol.

milk (dimin.) wants (3rd, sg., pres.)

Milk, he wants.

(66) Pep (2;3.10)

pernil dolç menja el tigre.

ham sweet eats (3rd, sg., pres.) the tigre

'Ham, the tiger eats.'

(67) Guillem (2;7.25)

això no vull jo.

that not want I

'That, I don't want.'

(68) Graciela (2;3.25)

eso, no agarre.

that, not grab

‘That, don’t grab.’

Thus, in (64) - (68) we see fronted objects with no lower coreferent clitic. Such utterances are significant because they begin to be used in *precisely* the same file as overt subjects do, in three of the four Catalan-speaking children studied, as illustrated in Table 4.3. These results provide strong confirmation of our hypothesis. The close correlation between the emergence of overt subjects and fronted objects is suggestive of a single underlying cause. I assume that this is the result of the emergence of the Topic and/or Focus Projections, to which both constituents move. In Table 4.4, we see that the one Spanish-speaking child who used any fronted objects, Graciela, produced her first fronted object two months after she produced her first overt subject. This relatively longer delay between the onset of overt subjects and the onset of fronted objects may be due the low frequency of fronted objects in the child Spanish data (Graciela produced 4 fronted objects as compared to approximately 10 per Catalan child).

	Overt Subjects	Fronted Objects Without Clitics
Gisela	2;1.23	2;1.23
Guillem	1;11.13	1;11.13
Laura	2;4.11	2;8.30
Pep	1;10.6	1;10.6

Table 4.3 - The Emergence of Overt Subjects and Fronted Objects Without Clitics in Child Catalan

	Overt Subjects	Fronted Objects Without Clitics
Eduardo	1;11.29	--
Graciela	2;1.26	2;3.25
Carlos	1;10.13	--

Table 4.4 - The Emergence of Overt Subjects and Fronted Objects With Clitics in Child Spanish.

While we cannot say definitively that the fronted objects which begin to be used at the same time as overt subjects are topics and not focussed elements, it remains a distinct possibility in light of the clitic development facts.

Further evidence that at least some of the fronted objects without clitics are actually topicalizations with unrealized clitics comes from the fact that topicalizations with clitics appear at the point at which clitic use in general becomes much more frequent. According to Schaeffer's experimental results, clitic *omission* by the child Italian speakers

she studied plummeted from 64% at 2 years old to 15% at 3 years old. Similarly, correct usage of an overt accusative clitic rose from 22% at 2 years old to 62% at 3 years old. Thus, keeping in mind that chronological ages vary with respect to grammatical development, we would expect the occurrence of clitics in topicalizations to dramatically increase between 2;0 and 3;0. Indeed, we see in Table 4.5 that fronted objects with clitics begin to be used between 2;0 and 3;0. This contrasts with fronted objects without clitics, which begin to be used substantially earlier. Again, Graciela's four fronted objects all occur in one file, which I attribute to the overall infrequency of fronting in her sample.

	Fronted Objects Without Clitics	Fronted Objects With Clitics
Gisela	2;1.23	2;8.0
Guillem	1;11.13	2;9.30
Laura	2;8.30	3;5.13
Pep	1;10.6	2;5.4

Table 4.5 - The Emergence of Fronted Objects With and Without Clitics in Child Catalan

	Fronted Objects Without Clitics	Fronted Objects With Clitics
Eduardo	--	--
Graciela	2;3.25	2;3.25
Carlos	--	--

Table 4.6 - The Emergence of Fronted Objects With and Without Clitics in Child Spanish

But how can we tell whether fronted objects without clitics are topicalized or focussed? A further prediction of the hypothesis that early fronted object constructions include at least some topicalizations with unrealized clitics is that in the early stages of development, fronted objects should occur without clitics and should only begin to be used with clitics later. For three of the four children in question, this prediction is borne out. Thus, Guillem, illustrated in Figure 4.1, Laura, illustrated in Figure 4.2, and Pep, illustrated in Figure 4.3, all have early occurrences of fronted objects without clitics which are later joined by occurrences of fronted objects both with and without objects.

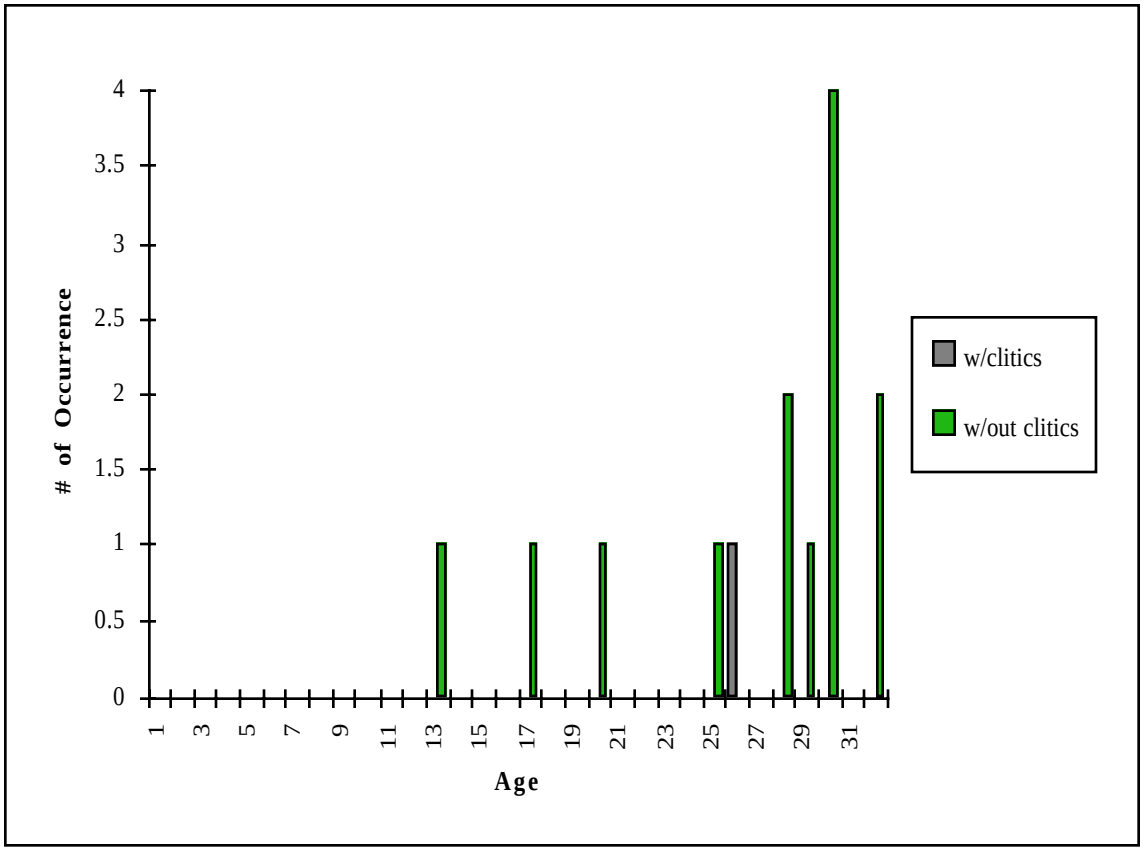


Figure 4.1- Guillem's Use of Fronted Objects (Catalan)

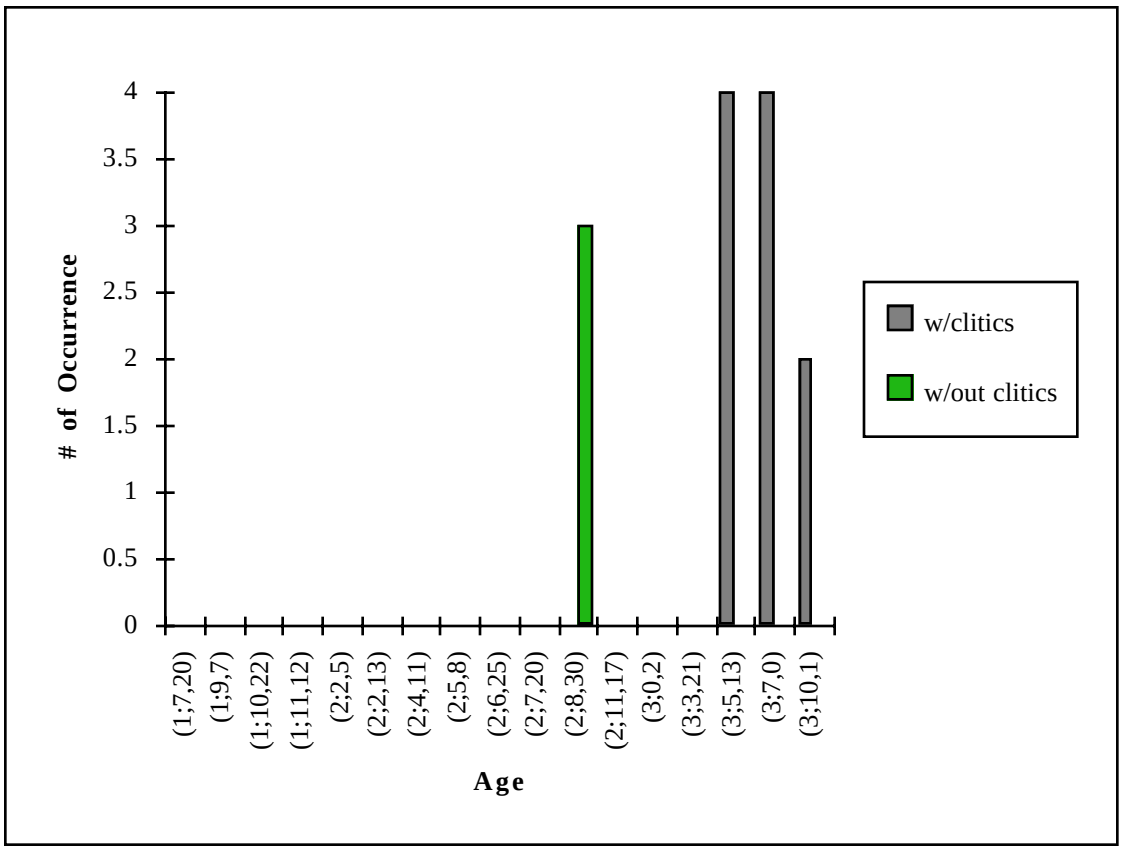


Figure 4.2 - Laura's Use of Fronted Objects (Catalan)

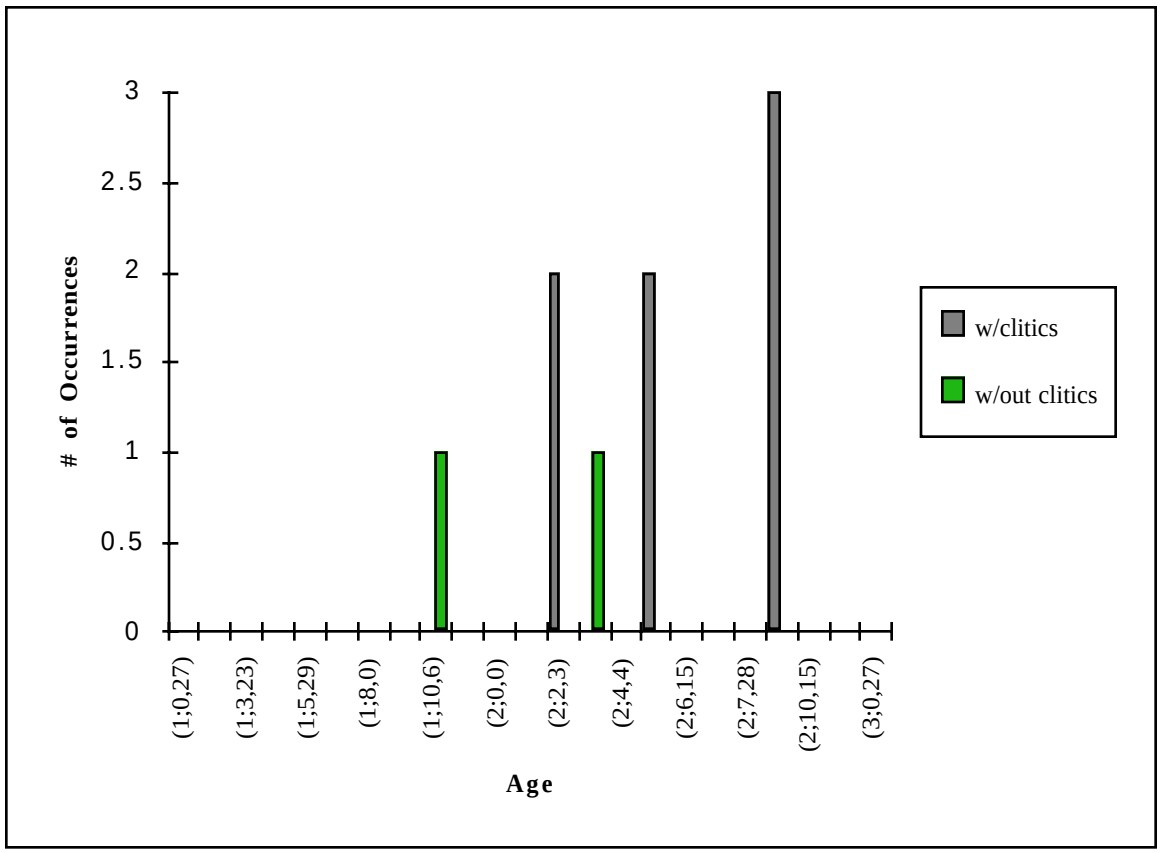


Figure 4.3 - Pep's Use of Fronted Objects (Catalan)

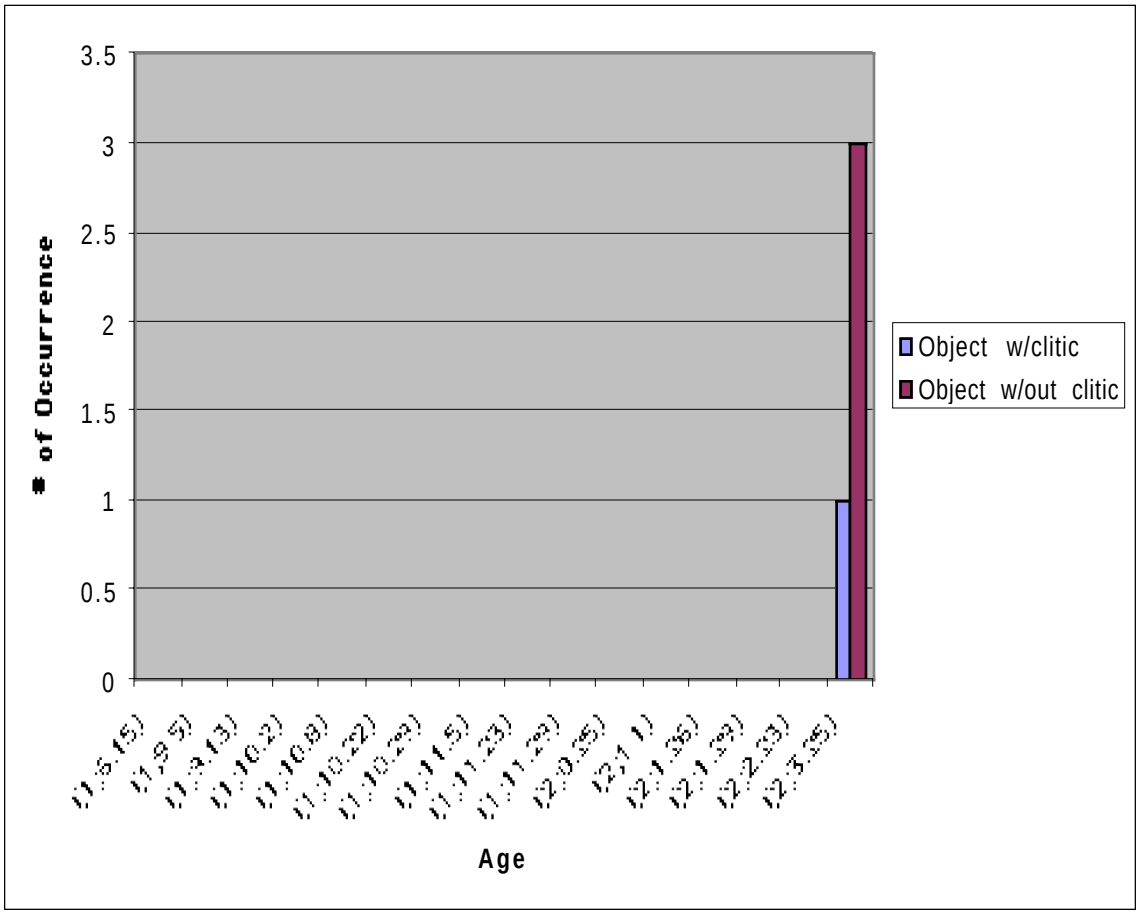


Figure 4.4 - Graciela's Use of Fronted Objects (Spanish)

Gisela (Figure 4.5) and Graciela (Figure 4.4), the lone Spanish speaker to produce fronted objects, begin to produce fronted objects both with and without clitics in the same file. Notice that they both produce twice as many fronted objects without clitics as fronted objects with clitics in the first file. This can be seen as consistent with the trend established by the other 3 children.

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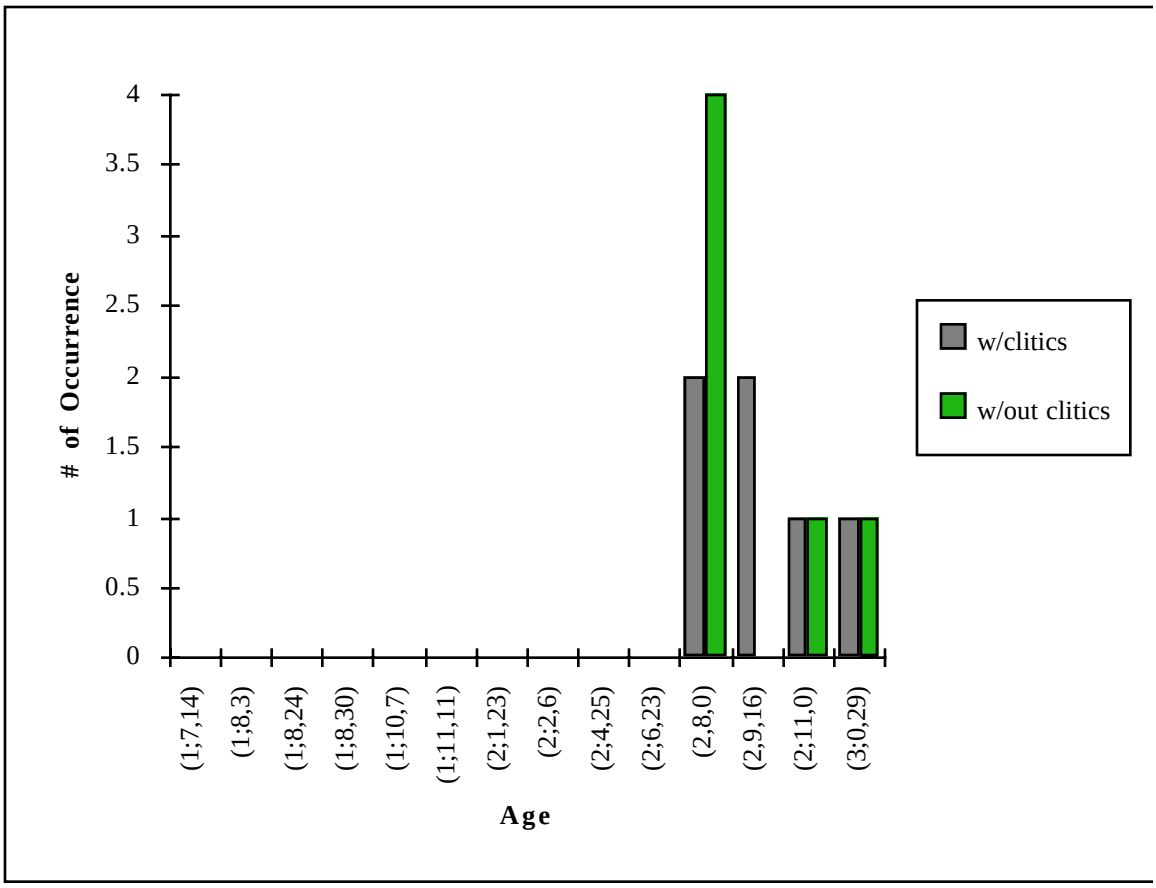


Figure 4.5 - Gisela's Fronted Object Use

In summary, the available data confirms the hypothesis that children begin to use topicalized objects at the same time that they begin to use overt subjects. The initial impression that topicalized objects began to be used before focussed objects appears mis-taken in light of the fact that more adult-like clitic use coincides with the onset of fronted objects with clitics and that early uses of fronted objects without clitics appear to precede and later be joined by fronted objects with clitics. If this assumption is correct and topical-

izations are used early and are simply clitic-less, then a left-peripheral topic position may begin to be used for fronted objects at the same time that overt subject begin to occupy the same position.[11]

Another construction which Rizzi assumes to involve movement to the left periphery is wh- movement. Rizzi assumes that wh- elements move to the specifier of Focus P.[12] While wh- questions do not emerge as close in time to overt subjects as do fronted objects, their onset is nonetheless suggestively proximate.

	Overt Subjects	Wh- Movement
Laura	2;4.11	2;4.11
Pep	1;10.6	1;11.6
Guillem	1;11.13	2;2.28
Gisela	2;1.23	2;8.0

Table 4.7 - Onset of Left-Peripheral Elements in Child Catalan

Table 4.7 shows that with the exception of Gisela, the onset of wh- questions was quite close to the onset of overt subject use in the four Catalan-speaking children. In the child

11. Note that Rizzi (1995, p.14) assumes that Topic Phrase is recursive. In this way the simultaneous occurrence of a fronted object and an overt subject in a single sentence, as in (i), do not pose a problem of complementary distribution

(i) Això nosaltres no vam menjar.
that we not aux (1st, pl.) eat (inf)
'That we didn't eat.'

12. Intuitively, this seems consistent with Rizzi's assertion that Focus P takes a presupposition as its complement. Thus, wh- questions all involve a certain kind of presupposition.

Wh- Questions and Their Presuppositions
a. Who left? - Someone left.
b. Why did you hit me? - You hit me.
c. What did he say? - He said something.

Spanish data, all of the interrogatives produced were yes-no question and as such do not involve XP movement to the left periphery. Thus, they are not informative regarding the question at hand.[13]

If wh- elements move to the specifier of Focus P while overt subjects and fronted objects (topics) move to the specifier of Topicalization P, then it appears that these two projections emerge at roughly the same time. It may be that TopP is activated slightly before FocP. Because the evidence is not completely clear in this regard, however, I will simply assume that overt subjects, fronted objects and wh- elements move to either one or both projections of the Topic or the Focus field and that the Topic-Focus field is initially inactive

4.3.2 Post- and Pre-verbal Overt Subjects Emerge Together

Up until this point we have been exclusively concerned with *pre-verbal* overt subjects. Spanish and Catalan, however, use both pre- and post-verbal subjects, as illustrated in (69) and (70).

(69) Catalan

a. Cantava cançons, en Miquel.
used to sing songs art. Miquel
'Miquel used to sing songs.'

13. The one wh- question produced by all three of the children was '¿Dónde está?' or 'Where is it?'. The fact that it was the same question in all children in all cases suggested that these were lexicalized units and not syntactically generated. Consequently, they were not counted as wh-questions.

b. En Miquel cantava cançons.

art. Miquel used to sing songs

‘Miquel used to sing songs.’

(70) Spanish

a. Cantaba canciones, Miguel.

used to sing songs Miguel

‘Miguel used to sing songs.’

b. Miguel cantaba canciones.

‘Miguel sang songs.’

Above, where we said that no overt subjects occurred in the Early Stage of child Catalan and Spanish (cf. section 3.), we meant that neither pre-verbal nor post-verbal overt subjects were used. Indeed, when overt subjects begin to be used, not only pre-verbal subjects, but also post-verbal subjects begin emerge at the same time. We attempt to illustrate this simultaneous emergence in Tables 4.8 and 4.9. In Tables 4.8 and 4.9, the third row corresponds to the first file in which children used an overt subject (i.e. we do not include any of the earlier files because they lacked overt subjects).

Gisela II			**Guillem II**			**Laura II**			**Pep II**		
AGE	PRE	POST	AGE	PRE	POST	AGE	PRE	POST	AGE	PRE	POST
2;2.6	1	0	1;11.13	1	1	2;4.11	1	0	1;10.6	2	2
2;4.25	5	2	2;0.12	0	0	2;5.8	2	2	1;11.6	2	1
2;6.3	10	2	2;1.4	1	0	2;6.5	1	1	2;0.0	0	0
2;8.0	35	23	2;2.11	2	1	2;7.20	4	6	2;1.1	0	3
2;9.16	22	6	2;2.28	9	1	2;8.30	4	6	2;2.3	2	10
2;11.0	13	3	2;3.12	1	0	2;11.17	4	8	2;3.10	3	7
			2;3.18	7	1				2;4.4	9	3
			2;4.24	10	1						
			2;5.25	6	2						
			2;5.29	4	0						
			2;6.10	1	1						
			2;7.9	10	0						
Total	**86**	**36**		**52**	**8**		**16**	**23**		**18**	**26**
%	70	30		87	13		41	59		41	59

Table 4.8 - Pre-verbal and Post-verbal Subjects in the Later Stage of Catalan

Eduardo II			**Graciela II**			**Carlos II**		
AGE	PRE	POST	AGE	PRE	POST	AGE	PRE	POST
(1;11.29)	0	3	(2;1.26)	2	1	(1;10.13)	0	1
(2;0.4)	0	0	(2;1.29)	3	1	(1;11.0)	0	0
(2;0.14)	1	3	(2;2.23)	0	0	(2;0.4)	0	0
(2;0.20)	0	0	(2;3.25)	12	0	(2;1.1)	0	0
(2;1.11)	0	0				(2;2.0)	0	0
(2;1.18)	0	1				(2;2.7)	1	1
(2;2.14)	0	1				(2;3.3)	4	4
						(2;3.10)	8	4
						(2;4.8)	3	3
						(2;4.14)	2	5
Total	**1**	**8**		**17**	**2**		**18**	**18**
%	11	89		89	11		50	50

Table 4.9 - Pre-verbal and Post-verbal Subjects in the Later Stage of Catalan

Notice that for Guillem and Pep, in Table 4.8, pre- and post-verbal subjects emerge in the same file. In fact, if we average across the first two files in which overt subjects occurred for both children, we see that pre-verbal subjects were used 15 times and post-verbal subjects were used 13 times. We also see that the Catalan children were evenly divided, with two of them (Gisela and Guillem) using pre-verbal subjects more often and two of them (Laura and Pep) using post-verbal subjects more often. In the child Spanish data, the results are also quite symmetrical: Eduardo uses mostly post-verbal subjects, Graciela uses mostly pre-verbal subjects and Carlos uses both pre- and post-verbal subjects in exactly equal proportions. This suggests a relatively symmetrical use of the two

subject types. Thus, any account of the early absence of overt subjects must account not only for the absence and subsequent appearance of pre-verbal subjects, but also for post-verbal subjects.

Bonet (1989), for Catalan, and Zubizarreta (1992), for Spanish, argue that post-verbal subjects are either right-dislocated or VP-internal elements. With respect to right-dislocated post-verbal subjects, I will adopt Kayne's proposal that these subjects move leftward at LF. In such an analysis, the pre-verbal subject in (71) occurs in a left peripheral position before spellout, while in (73), the post-verbal subjects occur in a left-peripheral position at LF (examples from Bonet, 1989).

(71) L'Oriol ha ficat les sabates a l'armari.

Oriol has put the shoes in the closet

'Oriol has put the shoes in the closet.'

(72) Pre-verbal Subject in Left Periphery Before Spellout

$[_{LP}$ L'Oriol $[_{IP}$ ha ficat les sabates a l'armari.]]

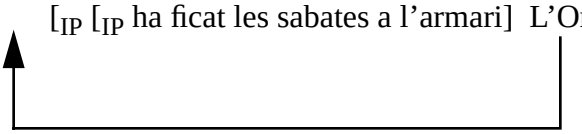
(73) Ha ficat les sabates a l'armari, l'Oriol.

has put the shoes in the closet Oriol

'Oriol has put the shoes in the closet.'

(74) Pre-verbal Subject in Left Periphery At LF

$[_{LP}$ $[_{IP}$ $[_{IP}$ ha ficat les sabates a l'armari] L'Oriol]]



Hence, pre-verbal subjects, as in (71), and post-verbal subjects, as in (73), are predicted to show a similar pattern of behavior: if their left-peripheral position is inactive, then neither pre- not post-verbal subjects will occur.

How do we explain the other type of post-verbal subject, which Bonet and Zubizarreta suggest occurs VP-internally? Notice that the right-dislocated post-verbal subject in (73) yields what Bonet refers to as a "non-contrastive" reading. Conversely, post-verbal subjects which occur with no intonation break, which Bonet suggests are VP-internal, are contrastive as indicated by Bonet's gloss in (75).

(75) Ha ficat les sabates a l'armari l'Oriol.
has put the shoes in the closet Oriol
'Oriol is the one who put the shoes in the closet.'

In the spirit of the proposal made by Gutiérrez & Silva (1995) for bare plural subjects, let us assume that the post-verbal subject in (75) gets its contrastive focus, in spite of not being fronted, and in this way moves to check a morphological focus feature in [Spec, Focus P] at LF. I am proposing, then, that both types of post-verbal subjects involve LF-movement to the topic-focus field. Non-contrastive post-verbal subjects move to [Spec, Topic P], while contrastive post-verbal subjects move to [Spec, Focus P]. In this framework, both pre-verbal and post-verbal subjects move to the left periphery of the clause. The only distinction between the two is whether this movement takes place before LF, in the case of pre-verbal subjects, or at LF in the case of post-verbal subjects. Because both pre- and post-verbal subjects crucially involve movement to the left-periphery, no overt

subjects will be possible until the left-periphery is active. Summarizing, I propose that the initial absence of overt subjects is due to a delay in the availability of the Topic-Focus field

4.3.3 Topic-Focus Delay and Theories of Delay

In support this proposal, we saw that fronted objects and wh- questions begin to be used at approximately the same time and, that previous to this emergence, these elements are not used by the four children in question. There are a number of current theoretical proposals which might plausibly account for the early absence of these elements. The first is what we might call the "no-CP" hypothesis, variants of which have been proposed by Radford (1990), Clahsen (1990) and Meisel and Müller (1992). What these proposals hold in common is the position that the entire C projection is initially absent from clause structure. If this position is correct, we would have an explanation for the parallel absence and simultaneous emergence of overt subjects, focussed objects and wh- questions, because there would be no landing sites for these elements to move to.

Another theoretical account which might explain the phenomena in question is Rizzi's (1994) "truncation" hypothesis. This hypothesis is geared to explaining the occurrence of root infinitives in child language, which it accounts for by suggesting that children may "truncate" their clause structure at any point below CP. Thus, the IP and CP layer are optionally absent in child grammar. This explains the appearance of verbs without inflectional material, as in root non-finite verbs. In support of this analysis, Rizzi points out that if children did possess a higher node in their clause structure in root infinitive constructions, one might expect to find at least some root infinitives occurring in wh-

questions. However, these are unattested. It is important to point out that, unlike the "no-CP" proponents, Rizzi does not argue that the C-system is categorically unavailable. Rather, children may produce either a truncated clause or a full clause at the same stage of development. This point is crucial because root infinitives occur in child grammars at the same time that finite verbs do.

In evaluating relevance of these theoretical accounts to the left peripheral delay observed here, we should look at imperatives in early Catalan, Spanish and Italian. Imperatives are relevant because, at least in the analysis presented by Rivero and Terzi (1995), imperatives move to C in adult southern romance languages. This movement is visible in clitic constructions.To illustrate, notice that imperative verbs precede clitics, as in (76) and (78), while declarative verbs normally follow clitics, as illustrated by (77) and (79)(79).

(76) ¡Termínalo!
Finish it (cl)
'Finish it!'

(77) Lo terminé.
it (cl) finished (1st sg.)
'I finished it.'

(78) ¡Dámelo!
Give me (cl) it (cl)
'Give it to me!'

(79) Me lo dio.
me it gave (3rd sg. p)
'He gave it to me.'

Under the assumption that clitics have a stable position, as in Sportiche (1992), imperatives are assumed to move over clitics, while declarative verbs stay lower down in clause structure.

Thus, if children display correct position of imperatives relative to clitics, this would argue against the “no-CP” analysis. Indeed, imperatives are placed correctly with respect to clitics from the very beginning of verb usage in child Catalan, Spanish and Italian[14]. Thus, in the first two files in which Guillem begins to use verbs, he places a clitic correctly after the imperative verb in (80) and the infinitive verb in (81), while correctly placing a clitic before the verb in finite, present tense utterances, such as (82).

(80) Guillem (1;9.12)

Ajuda’m.

help cl (acc., 1st, sg., masc.)

‘Help me.’

(81) Guillem (1;8.0)

Papa, vull probar+ho.

Papa, I want to try cl (acc, sg., masc.)

‘Papa, I want to try it.’

(82) Guillem (1;9.12)

Et rento.

cl (acc., sg., masc.) clean (1st, sg., pres.)

‘I am cleaning you.’

14.see Guasti (1992) for facts and analysis of child Italian clitic use.

Graciela, a Spanish-speaking child, similarly uses enclitics correctly with imperatives, as in (83), and proclitics correctly with finite verbs, as in (84).

(83) Graciela (1;10.2)

Da-me.

give (2nd, sg., imp.) cl (dat., 1st, sg.)

'Give me (that).'

(84) Graciela (1;10.2)

¿La pone aquí?

cl (acc., fem., sg.) put (3rd, sg., pres.) here

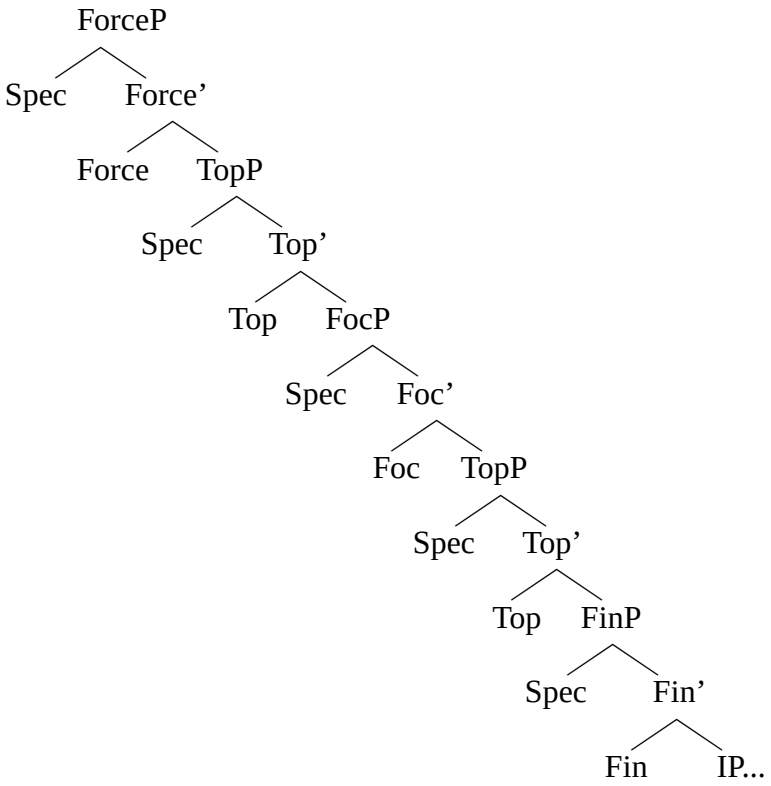
'Will you put it here?'

The fact that imperatives occur to the left of clitics while finite verbs occur to the right of clitics in early child Spanish and Catalan suggests that this movement is adult-like. If Rivero and Terzi are correct with respect to the position to which imperatives move, then the categorical claim made by the "no-CP" hypothesis that (no part of) the C projection is available must be mistaken. We return to this data in chapter 5.

According to Rivero and Terzi, imperatives move to check imperative "illocutionary foce" features in C. Translating this proposal into a split CP framework, in which clause structure would be represented as in (85), imperatives move to check imperative "illocutionary force" features in the head of ForceP.[15]

15.Notice that this is similar in spirit to Cheng's (1991) clause typing hypothesis for wh- questions.

(85)



If Rizzi’s truncation hypothesis is correct, and if Rivero and Terzi are correct about imperatives moving to check force features, then the imperative utterances found in child Catalan, Spanish and Italian imply the projection of the entire left periphery, at least in imperative sentences. Notice that the existence of these sentences does not imply that any part of the left periphery must *always* be present in Rizzi’s theory. Because Rizzi’s proposal allows *optional* truncation anywhere below CP, his account could permit the projection of CP in imperatives, for example, while optionally allowing CP to not project in the cases in which truncation would explain the absence of overt subjects and wh- questions.

Perhaps the most serious problem for the truncation hypothesis, posed by this data, is precisely the non-optionality of the phenomena in question. That is, if children were

optionally able to project the all the functional categories of the left periphery, then we might expect at least one overt subject, wh- question or fronted object in this early period. The fact that we do not find these constituents at all suggests that something more categorical is at work.

In summary, we have argued that overt subjects occur in the topic-focus field in null subject languages, and that the topic-focus field is inactive in early development. This explains why overt subjects are available from the very beginning in child overt subject languages, while they are absent in the beginning in child null subject languages. Two basic approaches to explaining the absence of the left peripheral constituents in child language were examined. The "no-CP" hypothesis meets the empirical challenge of accounting for the fact that imperatives are used productively and correctly from the beginning of child Spanish and Catalan, which, if we follow Rivero and Terzi (1995), implies that at least some part of the left periphery is available from the very beginning. On the other hand, Rizzi's (1994) truncation hypothesis predicts the optional expression of finiteness on verbs. Thus, in and of itself, the truncation hypothesis does not explain the fact that the occurrence of left peripheral constituents is not optional, but rather completely prohibited at the early stage.

4.3.4 Left-Peripheral Delay As a Discourse Deficit

In the tradition of generative linguistics, it has been assumed that the mind is constructed in a modular fashion. Thus, grammar, though an autonomous module, interacts with other cognitive components. For example, sentence processing research has provided

insight into the relation between grammar and memory (King and Just, 1991; Gibson, in press). Similarly, work has been done on the interface between spatial cognition and grammar (Landau and Jackendoff, 1993) as well as on the interface between the mental modules of grammar and number (Grinstead, MacSwan, Gelman and Curtiss, 1998). The essential insight from much of this work is that non-grammatical domains of the mind may affect the way in which grammatical principles are manifested.

Another aspect of cognition which interacts with grammar is discourse or pragmatics. Certain apparently grammatical delays and deficits may be attributed to the delayed development of the child's understanding of discourse. For example, Maratsos (1974) suggested that children's use of definite articles in contexts in which an indefinite article is required is due to the child's inability to understand that the definite article is only used after the noun to which it refers has been made specific to both listener and hearer.

Similarly, in Hyams (1996) it is argued that children produce root infinitives because they lack the pragmatic knowledge which dictates that a grammatical versus a pragmatic temporal anchoring mechanism is used when possible. The result is that children use the deictic rather than the morpho-syntactic option for determining the temporal specification of verbs.

Returning to the Topic-Focus field, Rizzi notes that these categories are projected on an "as needed" basis. I suggest that children do not have pragmatic knowedge of new vs. old information or an understanding of presupposition and that as a consequence, their Topic-Focus field is not be realized. This not a grammatical deficit per se, but rather a deficit which is manifested in that part of clause structure which interfaces with that aspect of

cognition which regulates understanding of presupposition and information structure. Once the grammar-discourse interface begins to handle this information, the Topic-Focus field can be projected and movement of subjects, objects and wh- elements can take place. This is worded ambiguously because it is in principle possible that the deficit could reside in pragmatic cognition itself or in the interface between pragmatics and grammar. If the deficit resides in pragmatic cognition itself, I would not want to suggest that this deficit results from the general unavailability of pragmatic or discourse competence. It has been suggested, by Kagan, et al (1978) and Muir and Field (1978), that from infancy children show an ability to distinguish new and old information outside of the linguistic domain. Thus, the cognitive underpinnings of Topic and Comment appear available.

4.3.5 Summary

In summary, we have seen that a number of left-peripheral processes emerge at the same time as overt subjects do in child Spanish and Catalan, adding plausibility to the hypothesis, independently motivated by adult Spanish and Catalan facts, that overt subjects are constituents of the topic-focus field. We have accounted for the absence of post-verbal as well as pre-verbal subjects by suggesting that post-verbal subjects are topic-focus elements which do not move until LF. After examining theories of topic-focus delay I argued that the “no-CP” hypothesis was too powerful in that it hypothesized the total absence of left-peripheral positions. This is contradicted by the adult-like use of imperatives in child Spanish and Catalan. Rizzi’s “truncation” hypothesis, conversely, appeared not strong enough in that it predicts the optionality of overt subjects, wh- constructions

and fronted objects, while the absence of these constructions appears to be categorical or total in its scope. Finally, I suggested that the absence of overt subjects, as topic-focus elements, is explicable as a discourse deficit in that children may not be able to access knowledge of discourse structure. A lingering question at this point is why Catalan, Spanish and Italian speaking children do not pass through an intermediate stage, before their left periphery is active, in which they allow subjects to occur in [Spec, $Agr_S P$], as do child and adult speakers of French and English. In what follows I will suggest that this does not occur because Catalan, Spanish and Italian children set a parameter which confines overt subjects to the head of Agr_S, disallowing them in [Spec, Agr_S].

4.4 The Pronominal Argument Hypothesis and Overt Subject Licensing

I will assume that there is a general principle which underlies the licensing of overt subjects. There are theories which suggest that subject licensing is a function of inflectional morphology (Chomsky, 1995; Davies and Dubinsky, 1998) as well as those which suggest that more semantic notions are involved (Rothstein, 1983; Marantz, 1991; Schütze, 1997). For the moment, I remain agnostic as to which of these theories will ultimately prove to be correct. I simply suggest that it would be advantageous if one of them were universally applicable. Assuming that a principle of universal overt subject licensing is generally desirable, let us ask how such a principle could possibly apply to Catalan and Spanish, in the face of the evidence that there are no overt subjects.

An intriguing speculation is that subjects may be incorporated pronominal arguments in Spanish, Catalan and Italian, in the spirit of Jelinek (1984), Fassi-Fehri (1993)

and Baker (1996). In these frameworks, subject agreement itself is pronominal and thus receives nominative Case, subject theta roles and otherwise plays the role of subject of the clause. Thus, Fassi-Fehri suggests, regarding Standard Arabic:

> "It is argued that this weakness of the inflection in VSO languages (even of the mixed type) is traceable to a parametric categorial property of AGR: AGR is *nominal* in some languages, and *non-nominal* in others." (Fassi-Fehri, 1993, p. 16)

I will refer to this parametric option as the Pronominal Argument Subject Parameter (PASP).

(86) Pronominal Argument Subject Parameter (PASP) - overt subject licensing may either permit subjects in the specifier of AGR_SP or in its head.

I suggest that, like Arabic and other languages, Spanish and Catalan realize overt subjects pronominally on the verb and that this pronominal subject is licensed by the same mechanism which licenses subjects in [Spec, AGR_SP] in English and French. In what follows, I will present evidence from adult Spanish grammar as well as from child Catalan to this effect. This evidence suggests that a universal theory of overt subject licensing is, in addition to being desirable, plausible.

4.4.1Spanish and Catalan as Pronominal Argument Languages

Jelinek (1984) and Ordóñez (1997) propose that the subject of finite clauses in Spanish is agreement. If this were true, it would explain how in sentences like (87) (Ordóñez, p.196, ex. 73b), the overt subject can occur in 3rd person plural, while the pronoun bound by the subject is in 1st person plural.

(87) Los estudiantes$_i$ salimos de la reunión después de que nos$_i$ acusaron.
the students leave (1st, pl., past) the meeting after that us (acc.) accuse (3rd, pl., past, impersonal)
'(We) students$_i$ left the meeting after we$_i$ were accused.'

That is, the two elements whose person features match in (87) are the agreement morphology on the verb and the accusative pronoun. This suggests that it is subject agreement morphology, which Ordóñez assumes to be a pronominal argument, and not the overt DP, which is crucial for determining the antecedent of the accusative pronoun. Notice also that this binding relationship is not the result of some kind of default binding rule for plurals. If we change the person features of the accusative pronoun to 3rd person plural (which should presumably make a coreferent reading with the 3rd person overt DP easier), a coreferent reading with the overt DP becomes impossible, as in (88) (Ordóñez, p. 196, ex. 73a).

(88) *Los estudiantes$_i$ salimos de la reunión después de que los$_i$ acusaron.
the students leave (1st, pl., past) from the meeting after of that them (acc.) accuse (3rd, pl., past, impersonal)
'(We) students$_i$ left the meeting after they were accused.'

Therefore, if agreement (person agreement in Ordóñez's terms) is in fact the pronominal subject of the finite clause in Spanish, then we have an explanantion for the binding facts in discordant person constructions.

An additional argument presented by Ordóñez, based largely on Harris (1996), points out the parallel morphological structure of subject agreement and object clitics in Spanish. I take this parallelism to imply that subject agreement is a nominal element, just like the object clitics they resemble. Thus, the 1st person plural morpheme in Spanish is *-mos*. *-m-* is taken to be person root of the morpheme in light of the fact that other first person morphemes such as 1st, singular accusative *me* share this consonant. Harris (1996) claims that plural object clitics *los* (3rd, pl.), *os* (2nd plural) and *nos* (1st, pl.), belong to the set of class I nominals, as do other words which end in *-o*, such as *palo*, *ajo* and *lado*. Ordóñez suggests that *-mos* fits in the same class by virtue of its phonological similarity. He further suggests that *-s*, the final consonant of *-mos*, is the same plural marker found in the nominal system. Thus, a morphological analysis of subject agreement is possible which suggests that agreement in nominal in character.

In conclusion, binding facts as well as the morphological similarity between subject agreement and other nominal elements makes it appear likely that subject agreement may indeed constitute a pronominal argument.

4.4.2 Person Agreement and Root Non-finite Forms in Child Spanish and Catalan

Recall that overt subjects in overt subject languages are optional in the early stage. If subject agreement constitutes an incorporated pronominal overt subject in Catalan and Spanish, and is licensed in the same way that overt subjects are in overt subject languages (whatever that may ultimately prove to be), then we might expect to find some instances in which these overt subjects are missing, as they are in child overt subject languages.

In order to present a clearer picture of child Spanish and Catalan grammars with respect to agreement, let us first examine the adult agreement paradigms of present tense verbs in Catalan and Spanish. In (89) and (90), notice that each person has a distinct morphological ending attached to the verb. I follow Harris (1983) in assuming that that 'a' theme vowel which is attached to the verbal root *habl-* in Spanish and *parl-* in Catalan in all of the persons in present tense, except 1st singular, is a derivational, and not an inflectional, morpheme. I assume the same is true for Catalan, where a similar theme vowel is present, though obscured by the orthography.[16]

16. In Harris's formulation, the theme vowel is present even in first singular, but is deleted in the course of the derivation.

(89) Spanish Present

	Sg.	**Pl.**
1	hablo	hablamos
2	hablas	habláis
3	habla	hablan

(90) Catalan Present

	Sg.	**Pl.**
1	parlo	parlem
2	parles	parleu
3	parla	parlan

These person and number features, then, have a pronominal character in the adult language. However, there is a construction in adult Catalan and Spanish in which the occurrence of person and number features appears to be optional. Thus, impersonal constructions involve a third person form of the verb, a clitic (se), and an argument which, when plural, does not require plural agreement on the verb. Thus, the third person form on the verb may either agree with the subject or not. The agreeing version is frequently referred to as the “impersonal active” while the non-agreeing version is referred to as the “impersonal passive”. The native speakers consulted find no difference in interpretation between the two with respect to passivity or anything else.

Thus, in (91) and (95), a singular verb occurs with a plural argument. In (92) and (96), a plural verb with a plural argument occurs. These are grammatical impersonal con-strucitons. Notice also that a plural verb cannot occur with a singular argument, as in (93) and (97). Although this might lead one to believe that (93) and (97) are ungrammatical because the agreement does not match, it is more likely that these are ungrammatical as a result of the arguments not being generic. This conclusion is supported by the fact that the singular verbs in (94) and (98) do agree with their singular arguments, and nonetheless produce an ungrammatical sentence.

SPANISH

(91) Se alquila habitaciones.
cl (impers.) rent (3rd, sg., pres.) rooms
“Rooms are rented.”

(92) Se alquilan habitaciones.
cl (impers.) rent (3rd, pl., pres.) rooms
“Rooms are rented.”

(93) *Se alquilan habitación.
cl (impers.) rent (3rd, pl., pres.) room
“Room are rented.”

(94) *Se alquila habitación.
cl (impers.) rent (3rd, sg., pres.) room
“Room is rented.”

CATALAN

(95) Es lloga habitacions.

cl (impers.) rent (3rd, sg., pres.) rooms

“Rooms are rented.”

(96) Es llogan habitacions.

cl (impers.) rent (3rd, pl., pres.) rooms

“Rooms are rented.”

(97) *Es llogan habitació.

cl (impers.) rent (3rd, pl., pres.) room

“Room are rented.”

(98) *Es lloga habitació.

cl (impers.) rent (3rd, sg., pres.) room

“Room is rented.”

Here, then, we have a construction which appears mean the same thing regardless of whether the verb agrees with the subject or not. In the framework developed so far, the non-agreeing version of this construction would, in fact, lack an overt subject, while the agreeing version would have one.[17] I will assume that these verbs, in fact, lack pronominal argument subjects, in contrast to the basic third person singular forms given in (89) and (90), which I assume to possess phonetically null person and number features.

17. I will assume, in the spirit of Raposo and Uriagereka (1996), that in these constructions, it is the impersonal clitic that checks the Case features of Tense.

This assumption is plausible if we compare these languages to Hebrew, for example, where, as Shlonsky (1997, p. 184) points out, third person singular lacks the features necessary to license a null subject. In Hebrew, agreement licenses null subjects in non-third person contexts, while in Spanish, Catalan and Italian null subjects are licensed in all persons.

I conclude, then, that the impersonal verbs in the constructions in (91) and (95) lack agreement entirely and consequently lack incorporated pronominal subjects. I will assume that these verbs constitute a kind of default or minimally inflected verb, which are analogous to the bare stems of English and other overt subject languages, with the exception that languages like Spanish and Catalan do not allow verbs to occur without at least the theme vowel (cf. the "Stem Parameter" of Hyams, 1987).

Given these assumptions, let us examine child use of person forms. What we find is that from very early, the Spanish and Catalan-speaking children use first and third person forms. Second person and plurals are later acquistions (more on this in section 4.7). In Tables 4.10 and 4.11 we see that all of the children in the study began to use first and third person inflection very early. The dates given in the table represent the first file in which both first and third person forms were used.

	Gisela	Guillem	Laura	Pep
Person	1;8.3	1;7.15	1.10.22	1;4.24

Table 4.10 - The Onset of Person Inflection in Child Catalan.

	Eduardo	Graciela	Carlos
Person	1;8.21	1;9.13	1;4.26

Table 4.11 - The Onset of Person Inflection in Child Spanish.

There are large number of third person, singular utterances used in child speech during this period. Such a large number, that one is tempted to wonder if these forms are in fact third person forms and not something else. I will propose these forms are in reality non-finite, in a manner similar to the root infinitive or "optional infintive" phenomenon described in child overt subject languages (Weverink, 1989; Wexler 1993; Pierce, 1992; Santelmann, 1995). Concretely, I am suggesting that some of the third person forms produced by the children are actually third person singular forms, as attested by the fact that they agree with third person, singular non-pronominal subjects. I assume that these forms have an incorporated pronominal subjects, as in the adult language. I further propose, however, that at the same time that child Spanish and Catalan speakers produce these adult-like forms, they also produce form which *appear* to be third person, singular forms, but are in fact bare, non-finite forms, similar to the non-agreeing forms used in adult impersonal constructions. I will return to this point below. Thus, Gisela's utterance in (99) has one of two possible structures.

(99) Gisela (1;8.24)

cau.

fall (3rd, sg., pres).

It falls

The first structure, given in (100), is the adult-like structure in which a subject is incorporated into the verb, although it is phonetically null in the case of 3rd person singular, as discussed above. I suggest that children use this form some of the time.

(100) $[_{AGRSP}\ [_{AGRS}$ cau + 3rd, sg. pronoun]]$[_{VP}$ ...]]

The second structure, given in (101), is unique to child Catalan, Spanish and Italian grammars, and is analogous to the structure null subject utterances in the child versions of overt subject languages.

(101) $[_{AGRSP}\ [_{Spec}$ PRO]$[_{AGRS'}\ [_{AGRS}$ cau]]$[_{VP}$ ...]]

These structures would presumably carry a PRO subject, on analogy with the adult "se" constructions suggested by Raposo and Uriagereka. PRO has independently been argued to be the subject of non-finite utterances for other child languages (cf. Krämer, 1993 for German and Dutch, Tsimpli, 1992 for Greek and Sano and Hyams, 1994 for English).

It is important to point out that during this same period, each child uses correctly marked, morphologically first person utterances as well, as illustrated in Table 4.12 and Table 4.13. In Tables 4.12 and 4.13, we see that first and third person morphology begin to be used very early in child Spanish and Catalan.

GUILLEM			GISELA			LAURA			PEP		
AGE	#	%	AGE	#	%	AGE	#	%	AGE	#	%
(1;5,29)	0	0	(1;7,14)	0	0	(1;7,20)	0	0	(1;0,27)	0	0
(1;6,26)	0	0	(1;8,3)	6	75	(1;9,7)	0	0	(1;1,28)	0	0
(1;7,15)	0	0	(1;8,24)	5	45	(1;10,22)	0	0	(1;3,23)	0	0
(1;7,22)	0	0	(1;8,30)	0	0	(1;11,12)	1	04	(1;4,24)	1	20
(1;8,0)	6	40	(1;10,7)	0	0	(2;2,5)	10	56	(1;5,29)	1	07
(1;9,12)	3	12	(1;11,11)	0	0	(2;2,13)	0	0	(1;6,23)	0	0
(1;9,24)	4	40	(2;1,23)	1	14	(2;4,11)	0	0	(1;8,0)	0	0
(1;11,13)	9	25	(2;2,6)	0	0	(2;5,8)	6	11	(1;8,30)	0	0
(2;0,12)	1	06	(2;4,25)	3	06	(2;6,25)	8	24	(1;10,6)	8	12
(2;1,14)	0	0	(2;6,23)	15	53	(2;7,20)	22	22	(1;11,6)	0	0
(2;2,11)	0	0	(2,8,0)	64	28	(2;8,30)	23	18	(2;0,0)	1	07
(2;2,28)	5	28	(2,9,16)	33	21	(2;11,17)	28	20	(2;1,1)	3	06
(2,3,12)	1	25	(2;11,0)	30	27	(3;0,2)	70	27	(2;2,3)	15	18
(2;3,18)	3	11	(3;0,29)	4	18	(3;3,21)	41	21	(2;3,10)	19	20
(2;4,24)	1	3							(2;4,4)	23	25
(2;5,25)	4	13							(2;5,4)	35	25
(2;5,29)	3	12							(2;6,15)	4	22
(2;6,10)	5	14							(2;7,8)	28	25
(2;7,9)	1	2							(2;7,28)	1	08
(2;7,25)	10	14							(2;9,10)	30	17
(2;9,8)	18	18							(2;10,15)	22	24
(2;10,3)	10	32							(2;11,10)	11	12
(2;11,5)	9	26							(3;0,27)	33	29
(2;11,21)	6	9									

Table 4.12 - Verbs Inflected for 1st Person, Over Total Verbs, in Child Catalan

Carlos			Graciela			Eduardo		
Age	#	%	Age	#	%	Age	#	%
(1;4.17)	0	0	(1;6.15)	0	0	(1.5.12)	0	0
(1;4.26)	0	0	(1;9.5)	0	0	(1;7.15)	0	0
(1;6.18)	0	0	(1;9.13)	0	0	(1;8.7)	0	0
(1;7.18)	0	0	(1;10.2)	1	3	(1;8.21)	2	76
(1;8.26)	0	0	(1;10.8)	0	0	(1;9.14)	0	0
(1;9.5)	1	8	(1;10.22)	0	0	(1;9.19)	1	4
(1;9.16)	0	0	(1;10.29)	0	0	(1;9.25)	0	0
(1;10.3)	1	9	(1;11.5)	0	0	(1;10.12)	0	0
(1;10.10)	1	25	(1;11.23)	0	0	(1;11.29)	0	0
(1;10.13)	2	8	(1;11.29)	0	0	(2;0.4)	0	0
(1;11.0)	1	4	(2;0.25)	0	0	(2;0.14)	12	63
(2;0.4)	5	24	(2;1.1)	0	0	(2;0.20)	0	0
(2;1.1)	5	21	(2;1.26)	2	14	(2;1.11)	0	0
(2;2.0)	6	13	(2;1.29)	4	9	(2;1.18)	0	0
(2;2.7)	2	7	(2;2.23)	4	14	(2;2.14)	0	0
(2;3.3)	9	15	(2;3.25)	2	6			
(2;3.10)	9	15						
(2;4.8)	18	29						
(2;4.14)	2	5						

Table 4.13 - Verbs Inflected for 1st Person, Over Total Verbs, in Child Spanish

This is significant because it means that these children have knowledge of 1st person morphology and are capable of producing it. Thus, if the agreement morphemes on these 1st person verbs are pronominal argument subjects, Spanish and Catalan-speaking children are using overt subjects optionally from the very beginning. If this is true then we see a

pattern of subject use in child Spanish and Catalan which parallels that found in the child overt subject languages.

One kind of evidence for the existence of these truly “null subject” utterances, as in (101), are third person forms which, from context, appear to refer to a first person subject. For example, we find the following utterances for the four Catalan children studied here in which they appear to be using third person, singular forms to refer to actions taken by the speaker. Only one such utterance was found in the speech of one of the Spanish speakers, Graciela. My interpretations of the context are included below each example.

GISELA

(102) 1;10.7

no pot.

not can (3rd, sg., pres.)

(Gisela cannot put a puzzle piece in a puzzle and complains.)

(103) 1;10.7

ja està dalt.

already is (3rd, sg. present) on top

(Gisela has climbed on top of a story book.)

GUILLEM

(104) 1;9.24

no pot.

not can (3rd, sg., pres.)

(Guillem is standing on his tiptoes holding on to the door knob trying to open the door.)

LAURA

(105) 1;10.24

treu.

take out (3rd, sg., pres.)

(Laura is trying to take a ring off her foot.)

PEP

(106) 1;4.24

les toca.

cl. (pl., fem.) touch (3rd, sg., pres.)

(Pep appears to want to grab some strawberries.)

(107) 1;4.24

no vol.

not want (3rd, sg., pres.)

(Pep does not want an adult to play with his toy car.)

(108) 1;5.29

pot.

can (3rd, sg., pres.)

(Pep responds to his mother's question as to whether he can take a puzzle piece out of a box.)

(109) 1;5.29

galeta vol.

cookie want (3rd, sg., pres.)

(Pep responds to his mother's asking Pep what she has in her hand.)

GRACIELA

(110) sí quiere.

emph. want (3rd, sg., pres.)

(Graciela responds to the investigator asking her if she wants some cards he is offerring her.)

Such 3rd person self-reference is a well know phenomenon in child language. I suggest that these are utterances which there is no specification of subject features, analogous to the null subject utterances of child overt subject languages. In that they occur with null subjects (PRO), these utterances are also analogous to the root infintive forms found in child overt subject languages.

An important point of contact between this work and work being done on child overt subject languages is the similarity between the forms I am describing and root infin-

itives. These forms occur in many child overt subject languages at the same time that finite forms occur. Typically, they occur with infinitive morphology, although Wexler (1993) has argued that the bare stem in English is the relevant non-finite form. Another of the most salient properties of root infinitives is that they correlate with null subjects. In Table 4.14, from Hoekstra and Hyams (1998), we see that in overt subject language non-finite verbs correlate very highly with null subjects. Thus in the column representing null subjects that occur with non-finite verbs, we see that the numbers are consistently above chance, English being an exception.

		Finite Verbs			Non-finite Verbs			
language	child	overt	null	total	overt	null	total	source
Flemish	Maarten 1;11	75%	25%	92	11%	89%	100	Krämer, 1993
German	Simone 1;8-4;1	80%	20%	3636	11%	89%	2477	Behrens, 1993
German	Andreas 2;1	92%	8%	220	32%	68%	68	Krämer, 1993
French[a]	Nathalie 1;9-2;3	70%	30%	299	27%	73%	180	Krämer, 1993
French[a]	Philippe 2;1-2;6	74%	26%	705	7%	93%	164	Krämer, 1993
Dutch	Hein 2;3-3;1	68%	32%	3768	15%	85%	721	Haegeman, 1995
English	Eve 1;6-2;3	90%	10%	86	89%	11%	155	Phillips, 1995
English	Adam 2;3-3;0	69%	31%	113	80%	20%	242	Phillips, 1995

Table 4.14 - Percentage of Null and Overt Subjects in Finite and Non-finite Clauses (From Hoekstra and Hyams, 1998, p. 16, Table 11)

a. For French, only preverbal subjects were counted.

My claim is that these apparently third person forms are root non-finite forms, parallel to the root infinitive forms found in the child overt subject languages. Let us review how their fundamental characteristics are analogous to those of root infinitives. First, they optionally occur at the same time as finite forms. This is illustrated by the occurrence of first person forms in Tables 4.12 and 4.13, which I take to be finite, as well as the occurrence of the apparently non-finite examples given in (102) through (110). Second, they

lack finiteness. Here I am defining finiteness as agreement, which the examples in (102) through (110) lack. Lastly, they occur with null subjects. I have argued that agreement is an incorporated pronominal subject in Spanish and Catalan. Consequently, these bare verb forms, by hypothesis, lack an overt subject.

Notice that in this framework agreement serves both as an overt subject and as a finiteness marker. These two features are morphologically conflated. In contrast, in overt subject languages, finiteness and overt subjects are not conflated, but rather occur as independent elements. It is worth pointing out that in spite of not being conflated in one constituent in overt subject languages, they nonetheless co-occur. Hence, it is not surprising that finiteness and overt subjects would in fact be the same element in null subject languages.

Given this view of language variation, we may ask why it is that the child versions of some languages use non-agreeing verbs of the kind seen here in child Spanish and Catalan, while others use root infintives, as in child Dutch, German and French. The answer to this question will have to be left for future research.

4.4.3 Early Morphosyntactic Convergence

Early Morphosyntactic Convergence is a term used to express the generalization that children seem to converge on the mrophosyntactic properties of their adult grammars at an extremely early age. Many of these properties can be formalized as parameters. Hoekstra and Hyams (1998) suggest that this explains children's early understanding of the modal properties of infinitive verb forms in their language, accounting for the fact that

children in some languages use actual root infinitives in some languages (German and Dutch, for instance) while the use other forms, such as verb stems in English.

In the present study we have shown that, contrary to appearances, child speakers of Catalan, Spanish and Italian obey the same universal principle of subject licensing that child speakers of French and English do. Beyond early understanding of this principle of Universal Grammar, the children in this study also converged on the language particular parameter setting of their language regarding the expression of overt subjects. That is, before these children even begin to speak, they have set a parameter (PASP) which dictates that overt subjects will be expressed as an incorporated pronominal argument. This explains why they do not pass through a stage in which overt subject appear in [Spec, AGR_SP]. Further they have set the parameter which determines that the lexical "double" of this pronominal argument will move to the Topic-Focus field.

4.5 Subjects and Learnability

Let us take a moment to consider the consequences of the view just presented for the developmental problem of language acquisition. I would like to suggest that previous problems for learnability principles such as the "Subset Principle" (Berwick, 1985), disappear if languages like Catalan, Spanish and Italian are pronominal argument languages.

4.5.1 Learning Principles

It has been argued that children appear to learn language without the aid of negative evidence (Brown and Hanlon, 1970). This assumption arises from the fact that correc-

tion from parents is not reliable in that it is not provided for all ungrammatical sentences. Further, not all parents provide correction. Nonetheless, children come to have a uniform ability to judge an infinite array of ungrammatical sentences as such. This aspect of the logical problem of language acquisition is formalized through the Subset Principle. This principle asserts that a grammar which generates *n-1* sentences is a subset of a grammar which generates *n* sentences.[18] This principle has been applied to the development of subjects before.

For example, with respect to the Null Subject Parameter, Rizzi (1982) speculated that if there were an "unmarked" parameter setting for whether a language was an overt or a null subject language, this setting should be specified as [- null subject]. His reasoning was that if Italian-speaking children begin with the assumption that overt subjects must always be used, then the occurrence of null subject utterances in their language will suffice to re-set their grammars to [+ null subject]. Child speakers of English, will end with the same assumption that they begin with, namely, that overt subjects are always used. The converse assumption would be that children begin with a [+null subject] parameter setting which would imply that both overt and null subjects are possible. If English-speaking children began with this parameter setting, they would never hear positive evidence capable of resetting their parameter. Consequently, Rizzi concluded that the unmarked setting of the pro-drop parameter must be [-null subject]. Thus, a "smaller" grammar, in the sense of the

18. See Wexler and Manzini (1987) who argue that the principle should apply not to entire grammars, but to lexical items. See Safir (1987) for discussion.

Subset Principle is the one which generates only overt subjects, as in English, which constitutes a subset of Italian, which generates both null and overt subjects.

4.5.2 Expletive Subjects

Hyams (1983), however, came to the initial conclusion that the grammar that used both overt and null subjects was the default parameter setting. This conclusion captured the empirical generalization that almost all children used some combination of null and overt subjects from very early. Hyams then went on to argue that no Subset Principle problem arose because each grammar generated sentences that the other did not, and consequently, neither could be a super-set of the other. Thus, Italian and Spanish have null subject sentences, as in (112), while English does not, and English has expletive subjects, as in (114), while Spanish and Italian do not. Thus, while logically necessary, the Subset Principle did not apply in this case because the grammars simply constituted disjoint sets.

(111) Yo como verduras.

'I eat vegetables.'

(112) Como verduras.

'(I) eat vegatables.'

(113) *Eat vegetables.

(114) It's raining.

(115) *Ello llueve.

'It is raining'.[19]

(116) Llueve.

'(It) is raining.'

However, the application of the Subset Principle depends crucially on a correct characterization of grammatical phenomena.[20] If Catalan, Spanish and Italian are properly understood as pronominal argument languages, then they do in fact have overt expletive subjects. Thus, (116) carries an expletive subject as a bound morpheme. Furthermore, these adult languages lack "null subject utterances" because agreement on utterances such as (112) constitutes an overt subject. In this view, there is no "null subject parameter", in so far as Romance languages are concerned. Rather, there are [+ Pronominal Argument Subject Parameter] (PASP) languages and [- Pronominal Argument Subject] languages.

4.5.3 The Subset Principle Revisited

What this means for the Subset Principle is that English, Catalan, Spanish and French are identical from the perspective of null subjects. That is, they are both overt subject languages once we accept the Pronominal Argument Subject Parameter. This parameter simply divides languages into two non-intersecting sets. Both possible parameter settings produce a grammar of equal size vis-a-vis the overtness of subjects. Hence, the

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19. See Silva-Villar (1998) for examples of (free morpheme) expletive subjects in null subject languages such as European Portuguese, Dominican Spanish, Galegan, Sisternian and others. Such examples may be explicable as clitic doubles, similar to the case of Trentino and Fiorentino, mentioned in section 4.2.4.
20. A similar dependency inhered in the Derivational Theory of Complexity and explained its fall from favor once the theory of transformations changed.

question of whether English or Spanish represents the unmarked or default setting does not arise.

A plausible parameter setting trigger for the PASP are null subject utterances. The idea is that Agreement is either sufficiently specified for referential features or not. If not, it must get these features by specifier-head agreement with a DP in its specifier. If agreement is fully specified, then it is barred from projecting a specifier. Given these two settings, a child would only have to hear utterances in which Agreement could not be getting its referential features from the DP in its specifier, because none is there. This should suffice to set the parameter to the [+ PASP] value.

4.6 Conclusion

In this section we saw evidence from ellipsis, negative quantifier extraction and quantifier scope from adult Spanish supporting the hypothesis that pre-verbal subjects in Spanish and Catalan occur in the topic-focus field. We then saw that overt subjects emerge in the development of child Catalan at the same time as do certain other left peripheral elements, such as fronted objects and wh- questions. We explained the fact that post-verbal subjects are also absent in the early stage of child Catalan by suggesting that post-verbal subjects are also left-peripheral elements which move to the topic-focus field at LF. We then discussed two theories of left-peripheral delay (no-CP, truncation) and found that neither of them adequately accounts for the data presented. We then proposed that a deficit in discourse-linked phenomena was responsible for the general absence of left-peripheral constructions. Finally, we suggested that a general theory of overt subject licensing is pos-

sible under the assumption that Spanish and Catalan are languages with positive setting for Pronominal Argument Subject Parameter (PASP). Support for this assumption was provided by adult Spanish binding and morphological evidence as well as from the apparently optional occurrence of person morphology in child Catalan.

As pointed out above, if the facts presented are explicable in more or less the terms outlined, then children in both language families obey universal principles of subject licensing from the very beginning. Further, they converge on the language particular strategy for expressing overt subjects from the very beginning. Overt subject language-speakers use [Spec, AGR_SP], while null subject language-speakers use agreement itself as a referentially specified subject. This was seen to be further evidence of Early Morphosyntactic Convergence. The one deficit encountered is that Catalan and Spanish-speaking children do not begin to take advantage of left-peripheral movement until their discourse competence has matured.

Finally, we observed that the formulation of the PASP presented here replaces the Pro-drop Parameter, which has consequences for the application of the Subset Principle. Concretely, as before in Hyams formulation, [+ pronominal argument] languages and [- pronominal argument] languages simply constitute dijoint sets. If agreement can count as an overt subject, then both English and Catalan are overt subject languages from the perspective of *whether* overt subjects are licensed.

One overall consequence of this work for linguistic theory is that the left-periphery does appear to have a fine structure, perhaps along the lines suggested by Rizzi. This idea gains plausibility from the evidence presented here that aspects of the left periphery

develop asynchronously, suggesting distinct positions. In particular, I suggested that Force P was available from the very beginning, while the Topic-Focus projections developed later. Furthermore, I will assume that the lowest projection in Rizzi's formulation, Finiteness P, is available from very early by virtue of child use of finite verbs. In the following section, I will discuss the morphological expression of finiteness: person, number and tense in the development of Spanish and Catalan.

4.7 The Development of Number Agreement in Child Catalan and Spanish

In contrast to the early development of person in child Catalan and Spanish, described in section 4.4, verbal number morphology is a somewhat later acquisition. In Tables 4.15 and 4.16, we see a comparison of the onset of verbs with person and number morphology. In this case, the onset of person marking was determined by the use of more than one person (1st and 3rd, for example) in one file. Similarly, the onset of number marking was determined by the first use of a plural and a singular verb in one file.We see that in both languages plural inflection begins to be used substantially later than does singular inflection, which is used from very early in both languages.When number and person begin to be used in contrastive ways, I refer to them as being "specified", as in Grinstead (to appear).

	Gisela	Guillem	Laura	Pep
Person	1;8.3	1;7.15	1.10.22	1;4.24
Number	2;4.25	2;5.25	1;9.7	1;8.30

Table 4.15 - The Onset of Person and Number Inflection in Child Catalan.

	Eduardo	Graciela	Carlos
Person	1;8.21	1;9.13	1;4.26
Number	*[a]	2;1.29	2;1.1

Table 4.16 - The Onset of Person and Number Inflection in Child Spanish.

a. Eduardo did not use a plural verb form in the entire corpus (1;5.12 - 2;2.14).

What Tables 4.15 and 4.16 show, then, is that number morphology has a later onset than does person morphology. This can be seen in greater detail in Tables 4.17 through 4.20 for child Catalan and in Tables 4.21 through 4.23 for child Spanish. In Table 4.17, we see that Gisela begins to use singular utterances well before she begins to use plural utterances. This pattern is typical. Even in Laura's data, given in Table 4.18, where plural utterances begin to be used soon after singular utterances, they are consistently used in small numbers relative to singular utterances. In Tables 4.19 through 4.23 we see that the remaining Catalan-speaking children Pep and Guillem, as well as the Spanish-speaking children follow Gisela's pattern of early use of singular verbs and later use of plural.

Gisela				
AGE	Singular		Plural	
	#	%	#	%
(1;7,14)	0	0	0	0
(1;8,3)	8	100	0	0
(1;8,24)	11	100	0	0
(1;8,30)	2	100	0	0
(1;10,7)	10	100	0	0
(1;11,11)	2	100	0	0
(2;1,23)	7	100	0	0
(2;2,6)	0	0	0	0
(2;4,25)	46	97	1	2
(2;6,23)	28	96	1	3
(2,8,0)	220	97	6	3
(2,9,16)	147	94	9	6
(2;11,0)	111	99	1	1
(3;0,29)	20	86	3	13

Table 4.17 - Child Catalan: The Number and Percentage of Singular and Plural Verbs Out of the Total of Singular and Plural Verbs in the Speech of Gisela.

Laura				
AGE	Singular		Plural	
	#	%	#	%
(1;7,20)	0	0	0	0
(1;9,7)	2	66	1	3
(1;10,22)	19	100	0	0
(1;11,12)	24	96	1	4
(2;2,5)	18	100	0	0
(2;2,13)	39	97	1	2
(2;4,11)	13	100	0	0
(2;5,8)	55	94	3	5
(2;6,25)	33	100	0	0
(2;7,20)	100	98	2	2
(2;8,30)	127	98	2	1
(2;11,17)	142	98	2	1
(3;0,2)	242	93	17	6
(3;3,21)	181	86	28	13

Table 4.18 - Child Catalan: The Number and Percentage of Singular and Plural Verbs Out of the Total of Singular and Plural Verbs in the Speech of Laura.

Pep				
AGE	Singular		PluraL	
	#	%	#	%
(1;0,27)	0	0	0	0
(1;1,28)	0	0	0	0
(1;3,23)	0	0	0	0
(1;4,24)	5	100	0	0
(1;5,29)	13	100	0	0
(1;6,23)	6	100	0	0
(1;8,0)	3	100	0	0
(1;8,30)	9	90	1	10
(1;10,6)	63	95	3	4
(1;11,6)	42	93	3	6
(2;0,0)	15	100	0	0
(2;1,1)	48	90	5	09
(2;2,3)	74	87	11	13
(2;3,10)	93	91	9	8
(2;4,4)	89	95	4	4
(2;5,4)	133	86	20	13
(2;6,15)	18	100	0	0
(2;7,8)	102	83	20	16
(2;7,28)	11	84	2	15
(2;9,10)	177	98	14	7
(2;10,15)	93	100	12	11
(2;11,10)	90	97	10	10
(3;0,27)	104	91	14	12

Table 4.19 - Child Catalan: The Number and Percentage of Singular and Plural Verbs Out of the Total of Singular and Plural Verbs in the Speech of Pep.

Guillem				
AGE	Singular		Plural	
	#	%	#	%
(1;5,29)	0	0	0	0
(1;6,26)	2	100	0	0
(1;7,15)	2	100	0	0
(1;7,22)	0	0	0	0
(1;8,0)	15	100	0	0
(1;9,12)	25	100	0	0
(1;9,24)	10	100	0	0
(1;11,13)	36	100	0	0
(2;0,12)	16	100	0	0
(2;1,14)	27	100	0	0
(2;2,11)	8	100	0	0
(2;2,28)	18	100	0	0
(2,3,12)	4	100	0	0
(2;3,18)	26	100	0	0
(2;4,24)	35	100	0	0
(2;5,25)	29	96	1	3
(2;5,29)	22	91	2	8
(2;6,10)	33	94	2	6
(2;7,9)	43	100	0	0
(2;7,25)	67	95	3	4
(2;9,8)	99	97	3	3
(2;10,3)	30	96	1	3
(2;11,5)	34	97	1	3
(2;11,21)	65	92	5	7

Table 4.20 - Child Catalan: The Number and Percentage of Singular and Plural Verbs Out of the Total of Singular and Plural Verbs in the Speech of Guillem.

Eduardo				
AGE	Singular		PluraL	
	#	%	#	%
(1.5.12)	2	100	0	0
(1;7.15)	1	100	0	0
(1;8.7)	24	100	0	0
(1;8.21)	24	100	0	0
(1;9.14)	6	100	0	0
(1;9.19)	15	100	0	0
(1;9.25)	17	100	0	0
(1;10.12)	10	100	0	0
(1;11.29)	8	100	0	0
(2;0.4)	6	100	0	0
(2;0.14)	19	100	0	0
(2;0.20)	2	100	0	0
(2;1.11)	3	100	0	0
(2;1.18)	8	100	0	0
(2;2.14)	8	100	0	0

Table 4.21 - Child Spanish: The Number and Percentage of Singular and Plural Verbs Out of the Total of Singular and Plural Verbs in the Speech of Eduardo.

Graciela				
AGE	Singular		Plural	
	#	%	#	%
(1;6.15)	6	100	0	0
(1;9.5)	19	100	0	0
(1;9.13)	11	100	0	0
(1;10.2)	36	100	0	0
(1;10.8)	49	100	0	0
(1;10.22)	5	100	0	0
(1;10.29)	21	100	0	0
(1;11.5)	6	100	0	0
(1;11.23)	4	100	0	0
(1;11.29)	13	100	0	0
(2;0.25)	5	100	0	0
(2;1.1)	1	100	0	0
(2;1.26)	14	100	0	0
(2;1.29)	42	97	1	2
(2;2.23)	29	100	0	0
(2;3.25)	34	100	0	0

Table 4.22 - Child Spanish: The Number and Percentage of Singular and Plural Verbs Out of the Total of Singular and Plural Verbs in the Speech of Graciela.

Carlos				
AGE	Singular		Plural	
	#	%	#	%
(1;4.17)	3	100	0	0
(1;4.26)	8	100	0	0
(1;6.18)	5	100	0	0
(1;7.18)	12	100	0	0
(1;8.26)	6	100	0	0
(1;9.5)	12	100	0	0
(1;9.16)	6	100	0	0
(1;10.3)	11	100	0	0
(1;10.10)	4	100	0	0
(1;10.13)	25	100	0	0
(1;11.0)	27	100	0	0
(2;0.4)	21	100	0	0
(2;1.1)	23	95	1	4
(2;2.0)	47	100	0	0
(2;2.7)	28	100	0	0
(2;3.3)	53	92	4	7
(2;3.10)	56	91	5	8
(2;4.8)	61	98	1	1
(2;4.14)	36	9	4	10

Table 4.23 - Child Spanish: The Number and Percentage of Singular and Plural Verbs Out of the Total of Singular and Plural Verbs in the Speech of Carlos.

Besides being a later acquistion, plural utterances are also much less prevalent in child Spanish and Catalan, once they begin to be used, than in adult Spanish and Catalan. Notice that even in adult Catalan and Spanish, singular utterance far outnumber plural utterances,

as illustrated in Table 4.24 and Table 4.25, from Grinstead, Camargo, Andrade and Hyams (in preparation).

The utterances in Table 4.24come from the speech of Pep's mother over the course of Pep's 15 recorded sessions. They illustrate that plural utterances are indeed rare in adult Catalan. Similarly, in Table 4.25, we see that Juan's Father (from the Linaza Corpus, from the CHILDES Data Base, MacWhinney and Snow, 1985) produces many more plural utterances than he does singular utterances.

Singular	2731 (90%)
Plural	308 (10%)

Table 4.24 - Singular and Plural Utterances in the Speech of Pep's Mother.

Singular	365 (87%)
Plural	56 (13%)

Table 4.25 - Singular and Plural Utterances in the Speech of Juan's Father.

As children produce fewer utterances overall, we may expect them to produce no plural utterances whatsoever when their overall output is relatively low. This explains the absence of plurals in some of the child files, but not in others, where the ratio found in Pep's mother's speech (roughly 9 to 1, singulars to plurals) or the ratio found in Juan's father's speech (roughly 8 to 1, singulars to plurals) would predict at least some plurals where there are none. For example, Laura uses plural utterances relatively earlier than do

the other children. Nonetheless, with the exception of the first file in which there are only 3 utterances in total, Laura's early singular-to-plural ratios (from Table 4.15) are 24-1, 39-1, 55-3, 100-2 and 127-2. It is only in her last two files that she begins to approach adult like ratios: 242-17 (7% plural utterances) and 181-28 (13% plural utterances).

We see a particular absence of plural utterances in child Spanish, as can be seen in Tables 4.21 through 4.23. To see just how different the adult singular-plural ratios are from the child ratios, we may perform chi-square tests. If we compare the ratio of singulars to plurals in child Catalan and Spanish with the adult ratio of singulars to plurals, the difference is highly significant, as illustrated in Table 4.26 and Table 4.27.

	Singular	Plural
Children	3607	233
Adult	2731	308

Table 4.26 - Catalan: The Ratio of Singular to Plural Verbs Used By the Catalan-Speaking Children Compared with the Same Ratio in the Speech of Pep's Mother (Chi-Square = 38.72 $p < .001$).

	Singular	Plural
Children	892	16
Adult	365	56

Table 4.27 - Spanish: The Ratio of Singular to Plural Verbs Used By the Catalan-Speaking Children Compared with the Same Ratio in the Speech of Juan's Father (Chi-Square = 74.74 $p < .001$).

The result is that the ratios are significantly different when all of the children's utterances are compared to all of the adult's utterances.[21] These statistics confirm the intuition that the children avoid plurals.

4.8 The Development of Tense in Child Catalan and Spanish

While it appears clear that number agreement begins to be used later than person agreement does, the question of when tense morphology begins to be used is somewhat less clear. Obviously, the determination of when tense morphology begins to be used depends on what one counts as tense morphology and there are divergent views on this question. Thus, Hoekstra and Hyams (1995) argue that in languages like Catalan and Spanish there is no tense morphology in the present tense. These languages inflect for person and perhaps number in the present tense. The idea is that Tense chains are established in language-particular ways. Thus, finiteness (which they define as the grammatical fixation of temporal reference) results from the connection of the VP to the to a Tense operator in C via Number in Dutch, but via person in the present tense of Spanish and Catalan. Consequently, while Hoekstra and Hyams assume that there is no tense morphology in the present tense of Catalan and Spanish, they nonetheless assume that temporal reference is established in the present via person morphology. In this framework, the fact that Catalan and Spanish-speaking children use person morphology from very early in the present tense is evidence that they use temporal reference from very early.

21. It is true that doing the calculation in this way glosses over the fact that children's use of plural utterances increases as they get older. This point, however, is irrelevant to the assertion that children use fewer plurals than do adults, which is nevertheless supported by this data.

Grinstead (to appear), to the contrary, takes the position that tense morphology and temporal reference are isomorphic in Spanish and Catalan and that the present tense, as part of larger, language-particular tense morphological system, represents tense through a null tense morpheme. Hence, the absence of a segmental tense morpheme is precisely what makes the temporal reference of present tense visible. Further Grinstead assumes that until children begin to use tenses which represent speech time and event time as other than simultaneous, their grammars do not represent tense syntactically. This entails that the forms that they use which are inflected for person in the present tense are only inflected for person and that they have not yet acquired the syntactic mechanisms necessary to represent Tense. In this view, present tense forms only come to represent tense when contrasting forms (past, future) become part of the lexicon. This criteria is similar to the one adopted in section 4.7 to determine when person and number morphology were productive. This criteria stems from the observation that all of the forms used in the early period have the characterstic of simultaneous speech and event time, namely: verbs inflected with present tense, imperative, present progressive, root infinitive, root gerund and root participle morphology. I take these verbs to form a syntactic natural class of temporally unspecified forms. On the other hand, verbs inflected for present perfect, present progressive, preterit, imperfect, periphrastic future and simple future are taken to form a syntactic natural class of temporally specified forms. These forms begin to be used at a later point in development. Aware of these distinctions, the purpose of this section is not to decide which of these approaches is correct. Rather, we will adopt Grinstead's framework

for concreteness and simply present the Spanish and Catalan data, divided into the syntactic natural classes just alluded to, without argument.

Dividing the data up into the two natural classes just proposed, we find that there is an initial period during which only temporally unspecified forms are used. The number and percentage of these forms are given for each child in the following tables. As with Number, we see in Tables 4.28 through 4.34 that there specified tenses (given in the left hand columns) begin to be used after the unspecified tenses in every child and when they begin to be used, they are used less frequently.

Gisela				
AGE	Specified		Unspecified	
	#	%	#	%
(1;7,14)	0	0	0	0
(1;8,3)	0	0	8	100
(1;8,24)	0	0	11	100
(1;8,30)	0	0	4	100
(1;10,7)	0	0	10	100
(1;11,11)	0	0	2	100
(2;1,23)	0	0	7	100
(2;2,6)	0	0	0	0
(2;4,25)	3	6	46	93
(2;6,23)	0	0	25	100
(2,8,0)	15	7	194	92
(2,9,16)	27	17	126	82
(2;11,0)	23	21	84	78
(3;0,29)	5	2	18	78

Table 4.28 - Child Catalan: The Number and Percentage of Specified and Unspecified Tense Verbs Out of the Total of Specified and Unspecified Verbs in the Speech of Gisela.

Laura				
AGE	Specified		Unspecified	
	#	%	#	%
(1;7,20)	0	0	0	0
(1;9,7)	0	0	3	100
(1;10,22)	0	0	25	100
(1;11,12)	0	0	28	100
(2;2,5)	0	0	21	100
(2;2,13)	0	0	42	100
(2;4,11)	1	7	12	92
(2;5,8)	1	1	64	98
(2;6,25)	3	8	32	91
(2;7,20)	10	9	100	90
(2;8,30)	12	8	125	91
(2;11,17)	18	11	134	88
(3;0,2)	27	10	233	89
(3;3,21)	49	23	162	76

Table 4.29 - Child Catalan: The Number and Percentage of Specified and Unspecified Tense Verbs Out of the Total of Specified and Unspecified Verbs in the Speech of Laura.

Guillem				
AGE	Specified		Unspecified	
	#	%	#	%
(1;5,29)	0	0	0	0
(1;6,26)	0	0	2	100
(1;7,15)	0	0	2	100
(1;7,22)	0	0	0	0
(1;8,0)	0	0	15	100
(1;9,12)	0	0	24	100
(1;9,24)	1	8	11	91
(1;11,13)	3	8	33	91
(2;0,12)	0	0	16	100
(2;1,14)	0	0	26	100
(2;2,11)	0	0	8	100
(2;2,28)	2	10	17	89
(2,3,12)	0	0	4	100
(2;3,18)	0	0	27	100
(2;4,24)	0	0	37	100
(2;5,25)	4	13	26	86
(2;5,29)	0	0	24	100
(2;6,10)	1	2	33	97
(2;7,9)	1	2	45	97
(2;7,25)	7	9	65	90
(2;9,8)	12	11	92	88
(2;10,3)	3	10	26	89
(2;11,5)	7	20	27	79
(2;11,21)	18	25	53	74

Table 4.30 - Child Catalan: The Number and Percentage of Specified and Unspecified Tense Verbs Out of the Total of Specified and Unspecified Verbs in the Speech of Guillem.

Pep				
AGE	Specified		Unspecified	
	#	%	#	%
(1;0,27)	0	0	0	0
(1;1,28)	0	0	0	0
(1;3,23)	0	0	0	0
(1;4,24)	0	0	5	100
(1;5,29)	0	0	13	100
(1;6,23)	2	25	6	75
(1;8,0)	0	0	7	100
(1;8,30)	0	0	11	100
(1;10,6)	10	13	63	86
(1;11,6)	11	23	37	77
(2;0,0)	2	11	16	88
(2;1,1)	11	19	45	80
(2;2,3)	27	29	64	70
(2;3,10)	19	18	84	81
(2;4,4)	12	12	81	87
(2;5,4)	23	14	138	85
(2;6,15)	3	15	16	84
(2;7,8)	33	25	98	74
(2;7,28)	3	21	11	78
(2;9,10)	80	40	118	59
(2;10,15)	26	25	77	74
(2;11,10)	13	13	83	86
(3;0,27)	17	14	98	85

Table 4.31 - Child Catalan: The Number and Percentage of Specified and Unspecified Tense Verbs Out of the Total of Specified and Unspecified Verbs in the Speech of Pep.

Eduardo				
Age	Specified		Unspecified	
	#	%	#	%
(1.5.12)	0	0	1	100
(1;7.15)	0	0	2	100
(1;8.7)	2	7	25	92
(1;8.21)	0	0	26	100
(1;9.14)	0	0	6	100
(1;9.19)	0	0	21	100
(1;9.25)	1	5	17	94
(1;10.12)	0	0	10	100
(1;11.29)	1	12	7	87
(2;0.4)	0	0	6	100
(2;0.14)	12	63	7	36
(2;0.20)	0	0	2	100
(2;1.11)	0	0	4	100
(2;1.18)	0	0	8	100
(2;2.14)	0	0	9	100

Table 4.32 - Child Spanish: The Number and Percentage of Specified and Unspecified Tense Verbs Out of the Total of Specified and Unspecified Verbs in the Speech of Eduardo.

Graciela				
Age	Specified		Unspecified	
	#	%	#	%
(1;6.15)	0	0	6	100
(1;9.5)	0	0	19	100
(1;9.13)	0	0	11	100
(1;10.2)	0	0	36	100
(1;10.8)	0	0	49	100
(1;10.22)	0	0	5	100
(1;10.29)	0	0	21	100
(1;11.5)	0	0	6	100
(1;11.23)	0	0	4	100
(1;11.29)	0	0	13	100
(2;0.25)	0	0	5	100
(2;1.1)	0	0	1	100
(2;1.26)	2	14	12	85
(2;1.29)	3	6	40	93
(2;2.23)	14	48	15	51
(2;3.25)	2	5	33	94

Table 4.33 - Child Spanish: The Number and Percentage of Specified and Unspecified Tense Verbs Out of the Total of Specified and Unspecified Verbs in the Speech of Graciela.

Carlos				
Age	Specified		Unspecified	
	#	%	#	%
(1;4.17)	0	0	3	100
(1;4.26)	0	0	8	100
(1;6.18)	0	0	5	100
(1;7.18)	0	0	12	100
(1;8.26)	0	0	6	100
(1;9.5)	0	0	12	100
(1;9.16)	1	16	5	83
(1;10.3)	0	0	11	100
(1;10.10)	0	0	4	100
(1;10.13)	0	0	25	100
(1;11.0)	0	0	27	100
(2;0.4)	0	0	21	100
(2;1.1)	2	8	22	91
(2;2.0)	3	6	44	93
(2;2.7)	4	14	23	85
(2;3.3)	7	11	56	88
(2;3.10)	5	8	56	91
(2;4.8)	1	1	61	98
(2;4.14)	4	1	36	90

Table 4.34 - Child Spanish: The Number and Percentage of Specified and Unspecified Tense Verbs Out of the Total of Specified and Unspecified Verbs in the Speech of Carlos.

Again to get some perspective on how child use compares to adult use let us return to Pep's mother and Juan's Father. If we once again compare the ratio of specified tense forms in the children's speech to the same ratio in the adult speech, we see that while adults also use more unspecified tense forms than specified tense forms, they do not limit

themselves to unspecified forms as dramatically as do children. Thus the difference between the adult ratio and the child ratio was signficant according to the chi-square test, given in Tables 4.35 and 4.36, suggesting that something other than chance is behind this phenomena. The finding was much stronger in child Spanish than it was in child Catalan, as illustrated by the difference between the child ratios (86%-14%, unspecified to specified tense in child Catalan and 93%-7%, in child Spanish) and the chi-square values (11.55 for child Catalan, 83.95 for child Spanish).

	Unspecified Tense	Specified Tense
Adult	2511 (83%)	525 (17%)
Children	3348 (86%)	559 (14%)

Table 4.35 - Specified and Unspecified Tense Forms in Speech of Pep's Mother Compared with Those of the Catalan-Speaking Children (Chi-Square = 11.55, p. < 0.001).

	Unspecified Tense	Specified Tense
Adult	278 (75%)	94 (25%)
Children	864 (93%)	64 (7%)

Table 4.36 - Specified and Unspecified Tense Forms in Speech of Juan's Father Compared with Those of the Spanish-Speaking Children (Chi-Square = 83.95, p. < 0.001).

In summary, we have seen that person morphology arises before either number or tense morphology. With respect to tense morphology this claim must be tempered by pointing out that the definition of what constitutes tense morphology is not an uncontro-

versial question. In Hoekstra and Hyams (1995), the early use of person morphology indicates that children are grammatically fixing temporal reference. In Grinstead, who assumes that tense morphology and temporal interpretation are isomorphic and that the absence of tenses other than present suggests that the ability to grammatically fix temporal interpretation is not yet adult-like.

A more interesting contrast between Hoekstra and Hyams and the current proposal, however, concerns underspecification of Person and Number. As we have seen, Hoekstra and Hyams allow temporal reference to be grammatically fixed through different morphemes in different languages. In their analysis, only Number can be underspecified. This means that only languages that use Number to fix temporal reference in the adult form, will produce child languages with root infinitives (the result of an underspecified Number projection). This explains why languages such as Dutch and English, which use Number to fix their temporal interpretation, have child languages with root infinitives, while languages such as Spanish and Catalan, which use Person to fix their temporal interpretation, do not have child languages with root infinitives. In contrast to Hoekstra and Hyams' underspecification of number hypothesis, I proposed in section 4.4.2 that not only number, but also person can be underspecified, with the result that we find root non-finite forms in child Spanish and Catalan as well. As with other child languages, these non-finite forms occur simultaneously with finite forms.

5. Negation and Imperatives

In the previous chapter I argued that certain parts of the left periphery (Topic P and Focus P) are delayed in their emergence, given the absence of overt subjects, which I suggest are discourse-sensitive elements in Catalan and Spanish. In contrast, we saw that other parts of the left-periphery were active from the very beginning, given children's correct syntactic placement of clitics after imperatives and Rivero and Terzi's (R&T's) assumption that imperatives move to C (Force P). Moreover, I argued that these facts constitute evidence that Catalan and Spanish-speaking children converge on their language-particular parameter settings with respect to the expression of subjects and verb movement in imperatives in children younger than 2;0.

In this chapter, I will continue to examine the syntactic processes located in the left periphery. In particular, we will explore the development of imperatives and their interaction with negation. I will conclude that early correct use of imperatives and negation as well as the non-use of plausible, but incorrect forms provides evidence for the role of Relativized Minimality, in guiding syntactic development in child Spanish and Catalan. To bring the influence of these principles of Universal Grammar into more stark relief, the development of negation and imperatives in Spanish and Catalan will be contrasted with the development of negation and imperatives in child Russian, a language in which negation and imperatives interact in a very distinct fashion.[1] The Russian case provides further evidence of the role of principles of Universal Grammar in language development, all be they distinct principles from those relevant to child Spanish and Catalan, and provides fur-

1. This work is being carried out in collaboration with Véronique van Gelderen and Teun Hoekstra.

ther evidence of language-particular parameters being set before children reach their second birthday.

In child Spanish and Catalan, I notice the absence of two constructions. Most obviously, children do not produce negative subjunctive commands, as in (117) and (118).

SPANISH

(117) ¡No cantes esa canción!
not sing (2nd, sg., subj.) that song
'Don't sing that song!'

CATALAN

(118) No cantis aquesta cançó!
not sing (2nd, sg., subj.) that song
'Don't sing that song!'

Somewhat less obviously, but more important for our purposes is the absence of the ungrammatical sequence [negation - imperative verb] or [Neg-V_{imp}], as in (119) and (120).

SPANISH

(119) *¡No canta esa canción!
not sing (2nd, sg., imp.) that song
'Don't sing that song!'

CATALAN

(120) *No canta aquesta cançó!

not sing (2nd, sg., imp.) that song

'Don't sing that song!'

The absence of these latter examples is most interesting because in the absence of negative subjunctive commands in (117) and (118), children lack the adult-like means of expressing any negative commands. The unattested examples in (119) and (120) are plausible alternatives for (117) and (118) because during the period that children lack negative commands, they possess both negative declaratives, suggesting that they have no general problem with negation, and affirmative imperatives, suggesting that they have no general problem with commands. Given these facts, why do children not simply concatenate negation and affirmative imperatives, as in (119) and (120)? I argue that they do not because Universal Grammar and a number of early set syntactic parameters prevent them from doing so, in the same way that UG and these parameter settings prohibit adults from doing so.

Furthermore, it is not the case that child Spanish and Catalan speakers fail to produce the [Neg-V_{imp}] for cognitive or conceptual reasons, because if this were the underlying cause of the gap, we would expect it to be a general developmental problem, common to speakers of all languages, not just child Spanish and Catalan speakers.[2] As we will see

2. The "avoid plural" generalization pointed out in Grinstead (1994), for example, appears to hold cross-linguistically in that children learning all of the languages I am aware of, appear to pass through an early period during which they do not refer to plural subjects.

in section 5.5, data from child Russian shows that children produce exactly this combination ([Neg-V_{imp}]) from very young. Below we will show how Spanish, Catalan and Russian grammars differ such that this combination is blocked in Spanish and Catalan, but not in Russian.

In adult Spanish and Catalan, following R&T, the combination [Neg-V_{imp}] is blocked by the fact that illocutionary force feature are located above Neg, and imperative verbs must move above Neg to check them. If they do not move, their imperative illocutionary force features will not be checked and the derivation will crash. In Russian, however, the combination [Neg-V_{imp}] is permissable. This follows from the fact that illocutionary force features are located below negation in Russian.[3] As a result of this fact, Russian imperative verbs can check their illocutionary force features without raising over negation, preserving the [Neg-V_{imp}] order. Why do imperative verbs in Spanish and Catalan not simply move over negation and into C, rendering the order [V_{imp}-Neg]? Following R&T, I assume that such a derivation would violate Relativized Minimality, which we define in the following section.

A further difference between the two languages is that verb movement to C depends on the illocutionary force of the verb in Spanish and Catalan (imperatives move to the left periphery, declaratives do not), while in Russian, verbs of all illocutionary forces may move to C, as long as nothing else has already fronted. Thus V-to-C movement in

3. It may also be possible to derive this cross-linguistic difference by assuming that there is only one possible location for illocutionary force features in both languages and that the weak-strong feature distinction allows post-SPELLOUT checking in Russian, but requires pre-SPELLOUT checking in Spanish and Catalan. See Van Gelderen and Grinstead (in preparation) for more on this possibility.

Russian follows from the economy principle Last Resort (Chomsky, 1989) and takes place in order to satisfy the feature checking requirements of other constituents (Wackernagel particles). This kind of movement illustrates what Lasnik (1995) refers to as the principle of Enlightened Self-Interest, which means that an element moves to satisfy its own morphological needs as well as those of the target of movement. V-to-C movement in Spanish and Catalan, in contrast is licensed by Greed, as in Chomsky (1995), which says that constituents only move to satisfy their own features.

In summary, to explain the absence of (119) adn (120) in child language, I will have to explain their absence from the adult languages. First, we review R&T's proposal and consider other theories which also address the interaction of imperatives and negation in adult grammar. Then, we show how adult Spanish and Catalan and Russian exemplify the two language classes posited by R & T. Having shown what it is that children must learn, we then discuss the learning problem children face and review the facts particular to child Spanish and Catalan, on the one hand, and Russian, on the other, to be accounted for.

5.1 Negation And Imperatives in Adult Grammar

5.1.1 Rivero and Terzi (1995)

R&T divide languages into two classes depending on whether or not imperatives with a distinctive morphology have a syntax distinct from non-imperative finite verbs. Catalan, Spanish and Italian, in their framework form part of Class I. Class I imperatives have a distinctive syntax in that they raise to C to check STRONG (in the sense of Chomsky,

1995) illocutionary force features (thus, our translation to Force P). This feature resides in C and attracts its corresponding feature on the verb.

In contrast, Russian, Serbo-Croatian and Ancient Greek constitute Class II languages in that imperatives in these languages have a syntax similar to that of non-imperative finite verbs. These languages are characterized instead by Wackernagel phenomena. Hence, certain elements (Wackernagel particles) must always be in second position. They can be in second position by virtue of some constituent topicalizing or wh- moving to first position. However, if nothing else moves to first position, a verb will move to first position as a result of the economy principle Last Resort, in the sense of Chomsky (1989). Wackernaegel particles (or W-particles) and the movements associated with them will be discussed in section 5.2.2. R&T suggest that the left-peripheral position to which elements move in W-particle constructions in Class II languages carries no inherent V features. This follows from the fact that verbs of different illocutionary forces may either raise to C or not, optionally. When movement to C does take place, it takes place in order to support the W-particle, located directly below the CP.

One of the principle results of R&T's formulation is that the combination [Neg-V_{imp}] is ungrammatical in adult Class I languages. Because C carries STRONG features in imperatives, imperative verbs must always raise to check them. They cannot raise when negation is present, however, because raising over them would constitute a violation of Relativized Minimality. This follows from the fact that:

(121) *[Neg-V_{imp}]

a. NegP intervenes between CP and IP

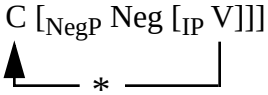
b. verbs cannot incorporate negation in Class I languages

c. sentential negation is an operator with A-bar properties, as is the logical operator feature of imperative C in Class I languages.

d. Relativized Minimality prevents one A-bar head from moving over another.

This ungrammatical movement is schematized in (122)

(122) Imperative Movement to C Blocked By Intervening Negation



The movement in (122) constitutes a violation of Relativized Minimality under the assumption that the imperative verb and negation are both A-bar heads. Following Roberts (1992), one A-bar head moving over another, as in (122), constitutes a violation of Relativized Minimality. The reason that the verb cannot be incorporated by negation and move successive cyclically to C as a unit to avoid the Relativized Minimality violation, as in (123), is that neagtion cannot incorporate verbs in Spanish and Catalan.

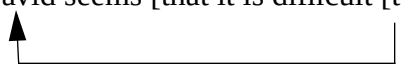
(123) Successive Cyclic Movement Blocked Because Negation Cannot Incorporate the Imperative Verb

Thus, if negation were able to incorporate the verb, then the configuration in (122) would be avoided and no violation of Relativized Minimality should result. As we will see below, however, negation does not seem able to incorporate in Class I languages, leaving us with the ungrammatical structure in (122), making imperative movement to C in negative utterances impossible.

Relativized Minimality is a constraint that evolved out of the Empty Category Principle. Chomsky (1981) proposed the ECP to account for the fact that XPs of particular type (A or A-bar) could not move over another XP of the same type. This rules out examples where an XP subject moves from an A-position over another subject XP in an A-position, as illustrated in (124) and (125).

(124) [David seems [t to peel his own carrots.]]

(125) *[David seems [that it is difficult [t to peel his own carrots.]]]



This constraint was later extended by Rizzi (1990) to apply to heads (irrespective of A/A-bar status) as well, deriving the Head Movement Constraint of Travis (1984). Thus, the

head movement suggested in (126) b. is allowed because no intervening head is skipped in moving from its base position to its landing site. In (126) c., however, the fronted verb moves over the intervening head position violating Relativized Minimality.

(126) Relativized Minimality (examples from Rizzi, 1990, p. 11)

a. They could have left.

b. Could they t have left?

c. *Have they could t left?

Roberts (1992), whose formulation we adopt here following R&T, suggested that the A/A-bar distinction was relevant for heads as well. Thus, in the Old Spanish example (originally from Lema and Rivero, 1990a) in (127), a non-finite verb-form has moved over a finite auxiliary. Because the finite auxiliary c-commands the base position of the fronted verb, the derivation constitutes a violation of Relativized Minimality. If, however, the finite auxiliary is in a position, Agreement, which is taken to be fundamentally different than the position occupied by the fronted verb, Roberts reasons, then Relativized Minimality should not treat both heads the same way. The proposal, then, is that the auxiliary is an A-head, while the fronted non-finite form is an A-bar head.

(127) **Dar**te he un exemplo.

Give-you (I) will an example

‘I will give you an example.’

In this way, Relativized Minimality is made sensitive to the distinction between A- and A-bar heads and the grammatical Old Spanish derivation in (127) is accounted for. Adopting this definition, Verbs with imperative features are A-bar heads just as is negation (in languages where negation is a head and not an XP such as Spanish and Catalan). Consequently, the movement of the imperative verb over negation is ruled out by Roberts' formulation and accounts for the non-existence of the [Neg-$Verb_{imp}$] order.

5.1.2 Other Theories of Negation and Imperatives

Other formulations also rule out the combination [Neg-$V_{imp.}$]. Zanuttini (1996) rules out the combination [Neg-V_{imp}] through the selectional requirements that Negation imposes on its complement. Specifically, she claims that the negation head selects TP. She then rules out the co-occurrence of negation and imperative verbs by taking the position that imperatives lack Tense.

Tense also plays an important role in the theory proposed in Laka (1990, 1993). She posits the existence of a functional projection she refers to as the Sigma Phrase which is located above TP and below CP in Spanish. She further proposes the Tensed C Condition, which states that Tense must c-command all propositional operators of the clause at s-structure, excluding C_0. Negation would be considered such a propositional operator and, as a result, Tense has to raise, affixed to the verb, to the ∑P so it can c-command the entire clause at s-structure. A consequence of Laka's formulation is that because imperative verbs and negation both occupy the ∑P, they can never occur in the same derivation. The elements that may occupy ∑P are given in (128).

(128) ∑P Elements

a. sentential negation

b. emphatic particles

c. affirmative particles

d. 'N-words' (never, nothing, etc.)

e. imperatives

Thus, sentential negation and imperatives are in complementary distribution. Consequently, the combination [Neg-V_{imp}] is ruled out.

While these theories provide adequate accounts of the facts of Basque and Romance, I will adopt R&T's formulation on the grounds that it allows for a broader range of cross-linguistic facts, including R&T's Class II languages, such as Russian, Greek and Serbo-Croatian. Further, there is some evidence that Tense may not be active in child language in general and in child Catalan and Spanish specifically (cf. Wexler, 1993; Grinstead, 1994, to appear).[4] Thus, while Catalan and Spanish-speaking children are able to use negation at the same time that they may lack an active Tense projection, both Laka's and Zanuttini's theories posit a crucial role for Tense in the realization of sentential negation, and possibly in the production of any sentence. As a result, a theory which does not posit a relationship between Tense and Negation is preferrable.

4. cf. also section 4.4.2.

5.1.3 Summary

Returning to R&T's formulation, two things should be clear. First, the order [V_{imp}-Neg] is ruled out in child Catalan and Spanish by Relativized Minimality. Second, the order [Neg-V_{imp}] is ruled out a) by the fact that imperative verbs must move to C to check their illocutionary force features and b) by the fact that negation cannot incorporate verbs and escape the Relativized Minimality violation by moving sucessive cyclically.

Second, not all languages are the same. Children have a number of language or Class-particular properties which they must acquire in order to reach their target grammars. Relativized Minimality, of course, is a universal principle and should be available to all children regardless of the language they are learning. That C hosts imperative features, that negation cannot incorporate the verb and that GREED is the principle which licenses movement of the imperative are language-particular facts about Class I languages that children must learn. With respect to the task faced by children learning Class II languages, children must learn that verbs are the constituents which move to C in the event that nothing else fronts and that the economy principle Last Resort or ENLIGHTENED SELF-INTEREST (in the sense of Lasnik, 1995) licenses verb movement to C in their language. Further, they must learn that C has no inherent features and that all verbal features are in I. Let us now examine how Spanish and Catalan, on one hand, and Russian, on the other, illustrate the properties just discussed and are thus representative of the two language classes posited by R&T.

5.2 Class I and Class II Languages

5.2.1 Spanish and Catalan as Class I Languages

According to Rivero and Terzi,the defining property of Class I languages is that imperatives have a distinct syntax from non-imperative verbs. In Catalan and Spanish, this is illustrated by the fact that imperatives occur with enclitics, as in (129) and (132), while non-imperative, finite verbs occur with proclitics, as in (130), (131), (133) and (134).

Catalan

(129) Dóna-me-la!

Give (2nd, sg., imp) cl. (1st, sg., dat.) cl. (3rd, sg., fem.)

‘Give it to me!’

(130) Me la vas donar.

cl. (1st, sg., dat.) cl. (3rd, sg., fem.) aux. (2nd, sg., pret.) inf. (give)

‘You gave it to me.”

(131) Vull que hi vaigis.

want (1st, sg., pres.) that cl. (loc.) go (2nd, sg., pres. subj.)

‘I want you to go there.’

Spanish

(132) ¡Dámela!

Give (2nd, sg., imp) cl. (1st, sg., dat.) cl. (3rd, sg., fem.)

‘Give it to me!’

(133) Me la diste.

cl. (1st, sg., dat.) cl. (3rd, sg., fem.) give (2nd, sg., pret.)

‘You gave it to me.”

(134) Quiero que lo comas.

want (1st, sg., pres.) that cl. (acc., sg., masc.) eat (2nd, sg., subj.)

‘I want you to eat it.’

Further, while non-imperative verbs can be negated without changing their location vis-a-vis clitics, as illustrated in (135), (136), (138) and (139), negating an imperative is ungrammatical, as illustrated in (137) and (140).

CATALAN

(135) No me la vas donar

Not cl. (1st, sg., dat.) cl. (3rd, sg., fem.) aux. (2nd, sg., pret.) inf. (give)

‘You did not give it to me.’

(136) Vull que no hi vaigis.

want (1st, sg., pres.) that not cl. (loc.) go (2nd, sg., pres. subj.)

‘I want you to not go there.’

(137) *No dóna-me-la!

not give (2nd, sg., imp) cl. (1st, sg., dat.) cl. (3rd, sg., fem.)

‘Don’t give it to me!’

SPANISH

(138) No me la diste.

Not cl. (1st, sg., dat.) cl. (3rd, sg., fem.) give (2nd, sg., pret.)

'You did not give it to me.'

(139) Quiero que no lo comas.

want (1st, sg., pres.) that not cl. (acc., sg., masc.) eat (2nd, sg., pres. subj.)

'I want you to not eat it.'

(140) *¡No dámelo!

not give (2nd, sg., imp) cl. (1st, sg., dat.) cl. (3rd, sg., fem.)

'Don't give it to me!'

Instead, a distinct form of the verb is used to make a negative command.[5] In (141) and (142), the imperative form is replaced by the subjunctive form and the verb occurs to the right of the clitics instead of to the left, as in affirmative imperatives.

CATALAN

(141) No me la donis!

Not cl. (1st, sg., dat.) cl. (3rd, sg., fem.) give (2nd, sg., pres. subj.)

'Do not give it to me!'

5. In Spanish this distinct form is always the subjunctive. In Catalan, however, it is the subjunctive in the singular, but the indicative in the plural. This will not affect the hypothesis presented below for child Catalan, because children do not use plurals during the period in question.

SPANISH

(142) ¡No me la des!

Not cl. (1st, sg., dat.) cl. (3rd, sg., fem.) give (2nd, sg., pres. subj.)

‘Do not give it to me!’

As mentioned in (121), the imperative verb cannot raise across negation without causing a violation of Relativized Minimality. One possible way to escape this violation would be for negation to incorporate the verb, as it does in Class II languages, as we shall see shortly. Evidence that negation cannot incorporate the verb in Class I languages comes from the fact that while the verb can be deleted by ellipsis under negation in Class I languages (Rivero, p.c.), it cannot be in Class II languages. For example, in Catalan and Spanish, Class I languages, the responses given in (143) and (144) b. delete the verb under negation and are grammatical.

CATALAN

(143) Deletion of the Verb Under Negation and ‘almost’ in Catalan

a. Tens diner?

have (2nd, sg., pres.) money

‘Do you have money?’

b. Quasi no (tinc diner).

almost not have (1st, sg., pres.) money

‘Almost not.’

SPANISH

(144) Deletion of the Verb Under Negation and ‘almost’ in Spanish

a. ¿Tienes dinero?

have (2nd, sg., pres.) money

‘Do you have money?’

b. Casi no (tengo dinero).

almost not have (1st, sg., pres.) money

‘Almost not.’

This contrasts sharply with deletion of a verb, leaving both negation and a clitic, which is clearly ungrammatical, as illustrated in (145) and (146). In (145) and (146) b., the verb deletes, but its clitic (which is presumably incorporated), remains. This produces sharp ungrammaticality.

CATALAN

(145) Deletion of the Verb Under Negation, a Clitic and ‘almost’ in Catalan

a. ¿Et queda diner?

cl. (2nd, sg., dat) remain (3rd, sg., pres.) money

‘Do you have any money left?’

b. Quasi no em (*queda).

almost not cl. (1st, sg., dat.) (remain [3rd, sg., pres.]).

‘Almost not me.’

SPANISH

(146) Deletion of the Verb Under Negation, a Clitic and ‘almost’ in Spanish

a. ¿Te queda dinero?

cl. (2nd, sg., dat) remain (3rd, sg., pres.) money

‘Do you have any money left?’

(147) Casi no me (*queda).

almost not cl. (1st, sg., dat.) (remain [3rd, sg., pres.]).

‘Almost not me.’

This evidence demonstrates that the elliptical deletion of incorporated elements (here the verb in the verb-clitic amalgam) results in ungrammaticality. The fact that the verb can delete in negation-verb combinations, as in (143) and (144), as well as negation-clitic-verb combinations, as in (148) and (149) b., implies that negation does not incorporate into the verb.

CATALAN

(148) Deletion of a Verb and a Clitic Under Negation and ‘almost’ in Catalan

a. ¿Et queda diner?

cl. (2nd, sg., dat) remain (3rd, sg., pres.) money

‘Do you have any money left?’

b. Quasi no (em queda).

almost not (cl. [1st, sg., dat.] remain [3rd, sg., pres.]).

‘Almost not.’

SPANISH

(149) Deletion of a Verb and a Clitic Under Negation and ‘almost’ in Spanish

a. ¿Te queda dinero?

cl. (2nd, sg., dat) remain (3rd, sg., pres.) money

‘Do you have any money left?’

b. Casi no (me queda).

almost not [cl. [1st, sg., dat.] remain [3rd, sg., pres.]).

‘Almost not me.’

In contrast, deleting the verb under negation (which is presumably incorporated) in a Class II language, like Russian, is ungrammatical, as illustrated in (150) b.

RUSSIAN

(150) Deletion of a Verb Below Negation and ‘almost’ in Russian

a. Ty deneg ne poluchil?

You money NEG(cl.) receive?

‘Did you not receive any money?’

b. *Pochti ne (poluchil).

‘Almost not’

In summary, we see that in Spanish and Catalan, imperatives must move above clitics, while negative commands cannot. This shows the syntactic nature of imperative illocutionary force features. The combination [V_{imp}-Neg] is ruled out because such a com-

bination could only be derived if imperatives were able to raise over negation, which they cannot without producing a violation of Relativized Minimality. The only way to avoid such a violation would be for negation to incorporate the verb and then move to C. However, we have seen that incorporation by negation is generally not available in Spanish or Catalan. Thus, another strategy must be employed to form negative commands, which employs subjunctive verb forms.

5.2.2 Russian as a Class II Language

Russian is an example of a Class II languages in that imperatives have no special syntax, but rather distribute as do other verbs. This is illustrated by the fact that negation may occur with verbs of all illocutionary forces. Thus, declarative, interrogative and imperative verbs all have the same syntax with respect to negation as illustrated by the affirmative-negative pairs in (151) through (156).

DECLARATIVE

(151)Ty **chital** knigu.

you read book

‘You have been reading the book.’

(154)Ty **ne chital** knigu.

you NEG read book

‘You did not read the book.’

INTERROGATIVE

(152)Ty **chital** knigu?

read you book

‘Did you read the book?’

(155)Ty **ne chital** knigu?

NEG read you book

‘Did you not read the book?’

IMPERATIVE

(153) **Chitai** knigu!

read book

‘Read the book!’

(156) **Ne chitai** knigu!

NEG read book

‘Do not read the book!’

Figure 5.1 - Negation Occurs With Verbs of All Illocutionary Forces In Russian

Notice that this differs from Spanish and Catalan. The difference between Spanish and Catalan, on one hand, and Russian, on the other, with respect to the interaction of the verb and negation is schematized in Table 5.1.

SPANISH & CATALAN	RUSSIAN
no+declarative	no+declarative
no+interrogative	no+interrogative
*no+imperative	no+imperative

Table 5.1 - Special Syntax for Imperatives in Spanish and Catalan; Imperatives Distribute Like Other Verbs in Russian

Another fact about Russian verb movement is that when a kind of clitic, called a Wackernagel particle or W-Particle, is present, something must move to C to support it. Thus, when W-particles occur in a sentence, an XP, such as a topicalized or wh- moved element, must move into the specifier of CP, as schematized in (157) a. If the W-particle utterance carries no fronted XP, then, as a last resort, the verb will move to C to support the W-particle, as schematized in (157) b.

(157) Wackernagel Particles Require Support in the CP Layer (adapted from Rivero and Terzi, p. 310, ex. (14) a.-b.).

a. $[_{CP}\ XP_i\ [_{Co}\ ø]\ [_{WP}\ \mathbf{CL}\ [_{IP}\ [_{Io}\ V]\ t_i]]]$

b. $[_{CP}\ [_{C'}\ [_{Co}\ V_i]\ [_{WP}\ \mathbf{CL}\ [_{IP}\ t_i]]]]$

Notice that this kind of verb movement to C differs from verb movement to C in Spanish and Catalan. Specifically, verbs in Russian move to C to support the W-Particle, not to check illocutionary forced features, as in Spanish and Catalan. Consequently, unlike in Spanish and Catalan, the illocutionary force of the verb has no visible effect on the verb's

position in Russian. This is illustrated by the fact that verbs may occur on the left of the W-particle, as in (158) through (160), or on the right of the W-particle, as in (161) through (163).

Verb+W-Particle	**W-Particle+Verb**
DECLARATIVE	DECLARATIVE
(158) Otkryl **zhe** ty dver'. opened WCL you door 'You opened the door.'	(161) Ty **zhe** otkryl dver'. you WCL opened door 'You opened the door.'
INTERROGATIVE	INTERROGATIVE
(159) Otkryl **li** ty dver'? open WCL you door 'Did you open the door?'	(162) Ty **li** otkryl dver'? you WCL open door 'Were you the one who opened the door?'
IMPERATIVE	IMPERATIVE
(160) Otkroj **zhe** dver'! Open WCL door 'Open the door!'	(163) Dver' **zhe** otkroj! door WCL open 'Open the door!'

Figure 5.2 - Verbs of All Illocutionary Forces May Occur Either Below or Above the W-Particle in Russian

The fact that verbs, including imperatives, only move to C if nothing else already has, leads Rivero and Terzi to suggest that C contains no features in Class II languages and that its role is to offer support for the W-Particle. This kind of last resort movement of the verb to support the W-particle is characterized by Lasnik (1995) as obeying the principle of Enlightened Self-Interest, which allows an element to move to satisfy the needs of another element.

The difference between Spanish and Catalan and Russian with respect to the position of clitics and verbs of different illocutionary forces is schematized in Table 5.2.

	SPANISH & CATALAN		RUSSIAN	
DECLARATIVE	*Verb+Clitic	Clitic+Verb	Verb+W-Particle	W-Particle+Verb
INTERROGATIVE	*Verb+Clitic	Clitic+Verb	Verb+W-Particle	W-Particle+Verb
IMPERATIVE	Verb+Clitic	*Clitic+Verb	Verb+W-Particle	W-Particle+Verb

Table 5.2 - Imperatives Have a Unique Syntax in Catalan; Imperatives Distribute Like Other Verbs in Russian

Having introduced the role played by W-particles in Russian syntax, let us now return to the question of whether negation can incorporate the verb in Russian, using the W-particle as evidence. Following R&T, I assume that the W-particle is a positionally stable element, like clitics in Spanish and Catalan. Evidence that incorporation is possible in a Class II language, such as Russian, comes from the fact that when Russian verbs front, they carry negation with them. Thus, in (164), the object DP topicalizes and supports the W-particle ‘zhe’ in second position.

(164) Etot vopros zhe **ne reshyl**.

This question WCL NEG-decided

'This problem, he did not resolve!'

(165) **Ne reshyl** zhe etot vopros.

Neg-decided WCL this question

'He did not resolve this problem!'

This allows the verb and its cliticized negative particle to stay low. In (165), however, negation and the verb move to C to support the W-particle. Their movement as a unit over the W-particle is further evidence that they are an amalgamated whole.

In Summary, imperative features are located in C in Spanish and Catalan and in I in Russian.Verbs raise to comply with GREED to satisfy their own needs in Spanish and Catalan, while they comply with ENLIGHTENED SELF-INTEREST in Russian to satisfy the needs of the W-particle. Negation can incorporate verbs in Russian, but not in Spanish and Catalan.

In light of the previous discussion, we begin to glimpse the scope of the grammatical knowledge that children must come to possess in order to use their grammars in an adult-like fashion. First, they must know the language-particular properties of the left periphery for their target grammars. Spanish and Catalan-speaking children must come to know that Force P carries certain illocutionary force features while Russian-speaking children come to know that these features are in I. Russian-speaking children must know that negation can incorporate verbs and raise to the LP to support the W-particle, while Spanish

and Catalan-speaking children must come to know that verbs cannot incorporate negation and consequently that those verbs which raise above negation (imperatives) cannot co-occur with negation. All of this language-particular knowledge is nonetheless subject to principles of Universal Grammar. For example, child Spanish and Catalan speakers cannot raise imperatives over negation because doing so would violate Relativized Minimality. Child Russian speakers must not raise verbs to the LP unless nothing else has fronted to support a W-particle. Doing so would violate the economy principle Last Resort. These are some of the universal and particular aspects of the grammars which form part of adult linguistic competence in Spanish, Catalan and Russian. Now, let us ask how children might actually come to possess such knowledge and examine the way in which their grammars, in fact, unfold.

5.3 The Projection Problem

The logical problem of language acquisition is to explain how children learn as much as they do, as quickly as they do, given the deficiency and degeneracy of the input data they receive (cf. Hornstein and Lightfoot, 1981; Baker and McCarthy, 1979). One aspect of this problem is the question of how a learner generalizes to an infinite set of sentences from a limited set of input sentences. This is sometimes refferred to as *The Projection Problem* (Peters, 1972). As an example of how generalization of morphology might function, consider the case of the imperfect past tense in Spanish. If children learn from an utterance like (166), that the morpheme -*aba*- means past, habitual or continuous tense

and aspect, then they will be able to generalize this knowledge in such a way as to comprehend (167) as meaning something similar, with respect to the tense of the verb.

(166) Daniel cant**aba** canciones.

Daniel sing (3rd, sg., imperf. past) songs

'Daniel used to sing songs.'

(167) Manuela cen**aba** en el malecón, los jueves.

Manuela eat dinner (3rd, sg., imperf. past) on the ocean front the Thursdays

'Manuela used to eat dinner on the ocean front on Thursdays.'

It seems abundantly clear that generalization of this type must play an important role in the acquisition of morphology. This role is made clearer by the fact that children in fact generalize even in cases where such generalization produces incorrect results. This is illustrated by cases of "U-shaped" learning of past tense and plural morphology in English (Cazden, 1968; Pinker and Prince, 1988; Plunkett and Marchman, 1993). In these cases, it has been observed that children initially use past tense and plural morphemes correctly, whether they are regular or not. Then, they begin to "over-regularize" irregular nouns and verbs by adding regular morphemes to them, e.g. *goed* for *went* and *foots* for *feet*. Finally, they begin to use irregular forms correctly. This pattern is taken to represent the generalization of a rule or pattern from a limited set to an infinite set.

5.4 Negation, Imperatives and Relativized Minimality in Child Spanish and-Catalan

An instance in which one might expect overgeneralization to apply in child Spanish and Catalan is sentential negation. There is an early stage in which child speakers of these languages have no means to form negative commands. I take it that the absence of negative commands is not due to their lacking this communicative function. That is, these children say "no, no" all the time, clearly intending negative commands, but their linguistic knowledge is such that they cannot give further form to this intention.

The three Spanish-speaking and four Catalan-speaking children studied use sentential negation with declaratives, from very early, as in (168) and (169).

Spanish

(168) Graciela (1;11.5)

No tiene miedo.

not has (3rd, sg., pres.) fear.

‘He isn’t afraid.’

Catalan

(169) Pep (1;4.24)

No vol.

not want. (3rd, sg., pres., declarative)

He doesn't want to.

Similarly, they produce imperatives, from very early, as in (171). In this respect their speech appears quite adult-like.

SPANISH

(170) Graciela (1;6.15)

¡Oye!

listen (2nd, sg., fam., imp.)

'Listen!'

CATALAN

(171) Pep (1;4.24)

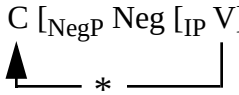
Mira.

look (2nd, sg., familiar, imp.)

Look.

However, with respect to negative commands, their speech is not adult-like. The situation in *adult* Spanish and Catalan with respect to negative commands is as follows: although there is an imperative form, this form cannot be used in combination with negation. As discussed above, in R&T's framework this follows from the necessity to check imperative features in Force P, the inability of negation to incorporate in Class II languages and the fact that the resulting configuration, given in (122), repeated here as (172), would violate Relativized Minimality.

(172) Imperative Movement to C Blocked By Intervening Negation



In order to issue negative commands, then, a "suppletive" form is used which consists of combining the negative particle *no* with the second person subjunctive, as in (173) and (174) (henceforth "negative subjunctive commands").[6]

(173) Adult Negative Subjunctive Command (unattested in the early stage of child Catalan)

No miris.

not look (2nd, sg., subj., imperative)

Don't look.

(174) Adult Negative Subjunctive Command (unattested in the early stage of child Spanish)

No mires.

not look (2nd, sg., subj., imperative)

Don't look.

---

6. As mentioned in footnote 5., adult Catalan also uses the indicative to form negative commands, but only in the plural. Because the pre-subjunctive period lacks plurals altogether, this difference between adult Spanish and Catalan is neutralized.

   Notice that in a language like Italian, which uses infinitives as suppletive forms in negative commands in the singular such as ‘Non lo fare!’ or ‘Don’t do it!’, nothing should prevent children from using negative commands, given that they use infintives correctly very early.

This suppletive strategy is not available to children because subjunctive morphology is generally not available to children in this early period.[7] To summarize, children do use the imperative form, as in (170) and (171). They also use negation in declaratives, as in (168) and (169), but they do not combine the negative particle with the imperative form, to construct ungrammatical sentences like (176). This, in spite of the fact that they also lack the adult suppletive (173).

SPANISH

(175) @No oye.

not hear (2nd, sg., fam., imp.)

'Don't hear.'

CATALAN

(176) @No mira.

not look (2nd, sg., fam., imp.)

Don't look.

Why should children not take this logical step? In answering this question, we give a partial answer to the question posed by the Logical Problem. Hence, I will argue that the absence of (175) and (176) results from the fact that they are barred by principles of UG, more particularly, the principles that are also responsible for the unavailability of (175) and (176) in the adult grammar. We shall now examine the strong grammatical motivation children have for producing these unattested forms. Then we shall consider some of the

7. The question of *why* the subjunctive is late acquisition lies outside the scope of this argument and will not be pursued here.

functional motivations they have for producin the [Neg-V_{imp}] sequence. Finally, I argue that Relativized Minimality explains the absence of the unattested forms and provides evidence that children's access to Universal Grammar in the acquisition process is what allows children to acquire as much as they do as quickly as they do.

5.4.1 Grammatical Motivations For Overgeneralization

As suggested above, if UG and language particular parameter settings did not conspire to prevent it, we might expect children to produce the [Neg-V_{imp}] form, because children use both negative declarative utterances and affirmative imperative utterances. Furthermore, the construction that this form would replace, the negative subjunctive command, is absent, as illustrated in Tables 5.3 and 5.4.

	Number of Negative Subjunctive Commands
Eduardo (1;5 - 2;2)	0/166
Graciela (1;6 - 2;3)	0/260
Carlos (1;4 - 2;4)	0/457
Total	0/888

Table 5.3 - The Number of Negative Subjunctive Commands Produced By Each Spanish-Speaking Child Before Subjunctive Morphology Emerges

	Number of Negative Subjunctive Commands
Gisela (1;7 - 2;6)	0/91
Guillem (1;0 - 2;3)	0/161
Laura (1;7 - 2;5)	0/127
Pep (1;0 - 1;8)	0/33
Total	0/379

Table 5.4 - The Number of Negative Subjunctive Commands Produced By Each Catalan-Speaking Child Before Subjunctive Morphology Emerges

Thus, the adult-like means of expressing negative commands is absent. Nonetheless, as we will now see, both of the necessary "pieces" which would have to be combined to produce the ungrammatical forms in (175) and (176) exist as part of the children's grammar.

In order to show this, I took the period preceding the emergence of adult-like negative subjunctive commands as the relevant developmental period. Hence, in Tables 5.3 and 5.4, next to the children's names in the first column, we see the period of each child's data that transpired before any subjunctives were used. In Tables 5.5 and 5.6, we see that during this period, an average of 7% of the Spanish-speaking children's verbal utterances and an average of 14% of the Catalan-speaking children's verbal utterances included sentential negation.

	Percentage of Negated Declaratives Out of Total Verbal Utterances
Eduardo (1;5 - 2;2)	0/166
Graciela (1;6 - 2;3)	25/260 (10%)
Carlos (1;4 - 2;4)	35/457 (8%)
Total	60/888 (7%)

Table 5.5 - The Percentage of Negated Declaratives Out of Total Verbal Utterances Produced By Each Spanish-Speaking Child Before Subjunctive Morphology Emerges

	Percentage of Negated Declaratives Out of Total Verbal Utterances
Gisela (1;7 - 2;8)	10/91 (11%)
Guillem (1;0 - 2;2)	26/161 (16%)
Laura (1;7 - 2;8)	15/127 (12%)
Pep (1;0 - 1;8)	1/33 (3%)
Total	52/379 (14%)

Table 5.6 - The Percentage of Negated Declaratives Out of Total Verbal Utterances Produced By Each Catalan-Speaking Child Before Subjunctive Morphology Emerges

The use of sentential negation with declaratives is significant because it instantiates the pattern [neg+verb]. This is exactly the pattern of the unattested, ungrammatical [neg+imperative verb] combinations in (175) and (176). Hence the grammars of these children included a pattern from which they could have generalized to the unattested form.

These counts did not include a number of other kinds of negation used in this “pre-subjunctive” period. For example, “no”, by itself, was uttered during this period with basi-

cally two meanings: the “answer” meaning and the imperative meaning.[8] In (177), we see an example of the “answer” meaning in which Gisela answers her mothers question.

(177) “Answer” No - Gisela (1;7.14)

Mother:no vols?

Don’t you want (one)?

Gisela:no.

No.

The imperative use of “No” is illustrated in (179), in which Gisela uses “no” to let her playmate, Mario, know that she does not want him to move a piece of the game they are playing with. I believe these to be the forms children use in place of the adult negative subjunctive commands. We will return to this point below.

---

8. It may be significant that the children also used constituent negation in which something other than a sentential predicate was negated. For example, in (i) Gisela answers her mother’s question as to whether she wants some yogurt. In (ii), Laura describes the blue ring she has in her hand, clarifying that it is not yellow.

   (i) Gisela (2;2.6)
   iogurt no.
   yogurt not.
   Not yogurt.

   (ii) Laura (1;11.12)
   groc no.
   yellow not.
   Not yellow.

   The significance of examples like (i) and (ii) is that they instantiate the pattern [predicate+neg], which, although not as similar to [neg+imperative verb] as the [neg+decalrative verb] pattern is, nonetheless might have served as the conceptual basis for the kind of generalization in question.

(178) Imperative No - Graciela (1;10.2)

Graciela's mother attempts to put a baret in Graciela's hair.

Mother:voy a ponerte ésto.

I'm going to put this on you.

Mother: espera.

wait.

Graciela:¡Noo!

(179) Imperative No - Gisela (1;7.14)

Mario (Gisela's playmate) tries to place a game piece in the construction game they are playing with.

Gisela: no [waving her arms].

No.

Mario:si.

Yes.

Mario:te pongo una pieza.

I'm going to put a piece in for you.

In summary, besides using a simple "No" to answer questions, these children also used sentential negation. As a consequence, their grammars displayed the pattern [neg-verb], which might have been sufficient to serve as the basis for the production of the ungrammatical [neg-imperative verb] combination, which are unattested.

We have just seen that negation was freely used with declarative sentences in child Spanish and Catalan. Now we will see that the same children used imperative verbs even more frequently during this same “pre-subjunctive” period. Thus, we see that in Table 5.7 an average of 39% of the Spanish-speaking children’s utterances were affirmative imperatives and that in Table 5.8 an average of 51% of the Catalan-speaking children’s utterances during this period were affirmative imperatives.

	Number and Percentage of Imperatives Out of the Number of Total Verbal Utterances
Eduardo (1;5 - 2;2)	6/166 (4%)
Graciela (1;6 - 2;3)	195/260 (75%)
Carlos (1;4 - 2;4)	143/457 (31%)
Total	344/888 (39%)

Table 5.7 - Number and Percentage of Imperatives Out of the Number of Total Verbal Utterances Produced By Each Child Before Subjunctive Morphology Emerges in Child Spanish

	Number and Percentage of Imperatives Out of the Number of Total Verbal Utterances
Gisela (1;7 - 2;8)	31/120 (26%)
Guillem (1;0 - 2;2)	80/134 (60%)
Laura (1;7 - 2;8)	64/340 (19%)
Pep (1;0 - 1;8)	19/33 (58%)
Total	194/379 (51%)

Table 5.8 - Number and Percentage of Imperatives Out of the Number of Total Verbal Utterances Produced By Each Child Before Subjunctive Morphology Emerges in Child Catalan

Parenthetically, notice that imperatives used correctly with enclitics are available from very early. In (180) through (185), we see children's correct use of imperative verbs with enclitics from as early as 1;5, in the case of Pep. A consequence of this data, alluded to in section 4.3, is that some part of the left periphery is available from the very beginning. Thus, with respect to arguments put forth by Radford (1990), Clahsen (1990) and Meisel and Müller (1992) to the effect that CP is not active or is otherwise unavailable in early stages of language development, the occurrence of imperatives correctly placed with respect to clitics serves as counterevidence. This is, of course, under the assumption that imperatives move to the left periphery, as assumed by Rivero and Terzi, whose assumption I adopt.

CATALAN

(180) Pep (1;5.29)

dóna+me+la.

Give me (cl. dat.) that (cl. acc. fm. sg.).

(181) Pep (1;6.23)

busca+la

Look for it (cl. acc. fm. sg.).

(182) Laura (2;2.13)

dona 'm.

Give me (cl. dat.).

(183) Laura (2;2.13)

tornem+hi.

return (1 pl. imp.) there (cl. loc.)

Let's go back there.

(184) Guillem (1;8.0)

tu dona 'm iogurt.

You, give me (cl. acc.) yogurt.

(185) Guillem (1;9.12)

ajuda 'm.

Help me (cl. acc.).

SPANISH

(186) Graciela (1;11.23)

Míra+lo.

Look (at) it (cl. acc.).

(187) Graciela (1;11.29)

Pon+lo.

Put it (cl. acc.) (there).

(188) Carlos (2;4.8)

Ven+te.

Come (cl. refl.) on.

(189) Carlos (2;4.8)

Da+me.

Give me (cl. dat.).

These imperatives and more specifically the tallies of their occurrence in Tables 5.7 and 5.8 show that the children in question did not lack the elements *to* which the [neg+verb] grammatical pattern could have been generalized. On the basis of this evidence, it appears that the grammatical pattern *from* which to generalize (negative declaratives) as well as the grammatical elements *to* which to generalize (imperative verbs) existed in these children's grammars. We are left, then, with the question of why negation did not generalize to imperative verbs. Before attempting to answer this question, however, let us examine some non-grammatical considerations which could be relevant to overgeneralization.

5.4.2 Functional Motivations For Overgeneralization

Perhaps the children fail to produce the [neg-V_{imp}] sequence because they have no functional motivation to do so, given that they can simply say "no". Concretely, one could ask whether simply saying "No!" suffices as a negative command for children at this early stage. Adults frequently use "No!" in just this way, particularly when the event one is negating is in progress.

The problem is that there arise situations in which an adult would not simply say "No!" because the context does not provide sufficient information to make the speakers intention clear. An example of this is found in the speech of Gisela, in which she shakes

her head with negative gesture, leaving her babysitter unclear as to what she was negating.[9]

(190) Gisela (1;8.3)

Gisela: (Makes a negative gesture.)

Uli: no que?

no what?

It is easy to imagine other cases in which an interlocutor is carrying out two actions at once, and a simple "No!" (or "Don't!" in English) will not satisfy a child's communicative needs.[10]

In summary, children not only have the grammatical "raw materials" necessary for generalizing from negative declaratives to negative imperatives, they also have what could be characterized as a functional need to do so. This need arises from the fact there are instances in which a simple "No!" does not provide enough information to make children's intentions clear. It seems clear, then, that children have abundant motivation to make an overgeneralization which never occurs. Why should this be so?

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9. This kind of predicate-less negation is likely to be more common in child language because children assume that the listener shares the speaker's point of view, as suggested in the previous chapter.
10. For example, one could be carrying out two actions at once: filling a child's wading pool with water from a hose, and intermittently using the same water to fill up a bucket. Under these circumstances, an English-speaking child could say "Don't!", leaving the listener unclear as to which action was being negated.

5.4.3 Early Convergence: Principles and Parameters in Child Spanish and Catalan

What knowledge is it, then, that these Spanish-speaking and Catalan-speaking children possess during this period that prevents [neg-V_{imp}] from being produced? I contend that they possess all of the grammatical knowledge necessary to distinguish Class I languages from Class II languages. This knowledge consists of both language-particular properties which instantiate Early Convergence as well as principles of Universal Grammar which are invariant. Among the early set parameters, they set the parameter which determines that negation cannot incorporate verbs. If negation could incorporate verbs, one could expect ungrammatical examples like (175) and (176) to occur, by generalization from negative declaratives (as in (169)). Further, on the basis of their correct imperative usage, they appear to have set the parameter which determines that the imperative illocutionary force features in their language are located in C and are STRONG, in the sense of Chomsky (1995). These language-particular parameter settings are set before these children produce adult-like negative commands.

We also have evidence for the influence of Relativized Minimality in early language development. Here we see the importance of child language as evidence for linguistic theory. That is, in Rivero and Terzi's view, adult Spanish and Catalan speakers use negative subjunctive commands because Relativized Minimality prevents speakers from simply concatenating negation and imperatives as Russian speakers do. But how do we rule out the possibility that negative subjunctive commands are used instead of negation plus imperatives for some completely different reason? Because the stage of child Spanish and Catalan we have been talking about lacks negative subjunctive commands, it gives us

an opportunity to see that negative imperatives are avoided regardless of whether negative subjunctive commands are available. This is strong confirmation of the hypothesis that Relativized Minimality blocks the kind of movement we've been talking about. In this way, child language acquisition contributes to the advancement of syntactic theory in the same way that abnormal language data does: namely, by providing a view into how components of grammar interact when other components are missing.

5.4.4 Summary

Despite a functional motivation for producing the [Neg-V_{imp}] sequence, children do not produce this ungrammatical form. I argue that this is a consequence of the inlfluence of Relativized Minimality on syntactic development. This principle guides these children's language acquisition even before they have acquired subjunctive morphology. Once they learn subjunctive morphology, they are able to take advantage of the adult strategy of forming negative subjunctive commands without raising imperative verbs to C.

A consequence of adopting Rivero and Terzi's division of languages into languages with a special syntax for imperatives and those without, is that we are forced to conclude that these Catalan-speaking children know that they are learning a Class I langauge from very early. A similar point is made for child Russian in van Gelderen (1998), in which it is shown that a Russian speaking child knows that she is learning a Class II language from very early as well. Now we turn to a consideration of the facts presented therein, to illustrate how negation, imperatives and the principles of UG interact in the absence of the language-particular properties of Spanish and Catalan.

5.5 Negation, Imperatives and Relativized Minimality in Child Russian

Because negation can incorporate in adult Russian, the configuration blocked by Relativized Minimality in negative imperatives in Spanish and Catalan does not arise. Given our assumptions about early parameter setting, this leads us to expect that child Russian speakers will negate imperatives as freely as they negate declaratives and interrogatives. Indeed, van Gelderen (1998) shows that this pattern is abunandantly attested with negated declarative, interrogative and imperative verbs from the age of 1;6, in the speech of Varvara (Protassova Corpus, CHILDES - MacWhinney and Snow, 1985). This is illustrated in Table 5.9 (van Gelderen's Table 5 - p.20).

	Negated Clauses			
Age	Declarative/Interrogative		Imperative	
	Number	Percent Out of Total Declarative/ Interrgotatives	Number	Percent Out of Total Imperatives
1;6	10	11%	5	25%
1;7	38	25%	2	5%
1;8	21	13%	2	18%
1;10	11	4%	2	11%
2;0	25	9%	1	5%
2;4	63	15%	5	14%
2;10	82	23%	7	24%
Total	250	15%	24	14%

Table 5.9 - The Percentage of Negated Declaratives/Interrogatives Over Total Declaratives/Interrogatives Compared With the Percentage of Negated Imperatives Over Total Imperatives in the Speech of Varvara.

As we see in Table 5.9, declaratives/interrogatives and imperatives are negated in quite similar proportions in Varvara's data. This is evidence that there is nothing special about negative imperatives which makes them generally difficult cross-linguistically, in the way that children are known to have general difficulty with other aspects of grammar (e.g. subordinate clauses are generally acquired relatively late, crosslinguistically). Thus, we have no special reason to expect child Spanish and Catalan speakers to refrain from producing them, as we have shown that they do.

Instead, the child Russian speaker examined in van Gelderen (1998) appears to converge on the adult parameter settings which allow negation to incorporate verbs and which determine that illocutionary force features are in I. We know that Varvara sets her incorporation of negation parameter to the adult Russian value very early because she raises negation and the verb as a unit over adverbs (cf. examples (164) and (165) on p. 136). Thus, van Gelderen, Grinstead and Hoekstra (1998) give the following examples, which illustrate the relevant movement over the adverb '*nikogda*'.

(191) Varvara (2;0)

Ja **ne plachu** nikogda

I NEG cry never

(192) Varvara (2;0)

On nikogda **ne plakajet**.

He never NEG cries

In the same way that Varvara has set her incorporation by negation parameter differently than have the Spanish and Catalan children, van Gelderen points out that Varvara also knows that illocutionary force features are not in C, as they are Spanish and Catalan. Thus, if Varvara's grammar put illocutionary force features in C, contra the adult grammar, then we would expect imperatives to raise over other constituents, such as subjects. Van Gelderen (1998) notes in this respect that out of 174 imperative utterences, on one contained a verb which had raised over a subject. This is evidence that Varvara understands that imperative features are not in C and suggests that she understands that they are in I, as R&T assume for the adult grammar.

While this raising evidence shows that Varvara know where illocutionary force features are, it also illustrates her understanding of the economy principle which drives verb movement to C in Russian. In Russian, the relevant economy principle of Universal Grammar is Last Resort, described here by Chomsky and Lasnik (1993).

> "The principle of economy of derivation requires that computational operations must be driven by some condition on representation, as a "last resort" to overcome a falure to meet such a condition. Interacting with other principles of UG, such economy principles have wide-ranging effects and may, when matters are properly understood, subsume much of what appears to be the specific character of particular principles." - Chomsky and Lasnik, reprinted in Chomsky (1995, p. 28).

As mentioned in section 5.2.2, when an utterance carries a W-particle, something must move to first position. If nothing else moves, then the verb will raise in accordance with the Last Resort principle, just reviewed. However, if no W-particle is present, then verbs are disallowed from raising to C, because such movement would constitute a violation of Last Resort. Consequently, in Varvara's speech, in utterances that lack W-particles, there should be no utterances in which the verb moves to C. Evidence for this movement would be the ocurrence of some constituent to the right of the verb. Van Gelderen demonstrates that out of 174 imperative verbs without W-particles in Varvara's corpus, only 1 occurred to the right of a constituent (a subject) which would suggest that the verb had raised to C. This constitutes evidence that the development of Varvara's syntax is also guided by Universal Grammar, in the form of the economy principle, Last Resort.[11]

5.6 Conclusion

Child Spanish and Catalan speakers converge on their language-particular parameter settings for the location of illocutionary force features and incorporation by negation very early. Once these two parameters are fixed, concatenating NEG and imperative verbs becomes impossible by virtue of the movement this would imply, which is barred by Rela-

11. It is incidentally worth pointing out that the W-particle 'zhe' in Russian is described by van Gelderen as playing "...a confirmative role, it emphasizes a part of the previous discourse and confirms it..." This discourse-related particle which inhabits a left-peripheral position is a late acquisition, beginning to be used at 2;4. If child Russian passes through an early period of left-peripheral delay, as do child Catalan and Spanish, we might expect other discourse-related elements such as topicalizations and wh- questions to be delayed as well. Van Gelderen (p.c) reports that topicalizations and wh- questions first begin to be used at 2;4, in the same file that W-particles begin to be used, suggesting that the left-periphery in child Russian may experience a developmental delay with respect to discourse-relevant material similar to that reported for child Catalan and Spanish in the previous chapter.

tivized Minimality. Relativized Minimality is obey in spite of the fact that disobeying it would allow the children to produce a very useful, functionally well-motivated form..

From child Russian, we see that there is nothing generally challenging about negative imperatives, because Varvara uses them from very young. Thus, there is nothing conceptually or cognitively more taxing about negating an imperative which might be causing its absence from child Spanish and Catalan, else we would expect a similar delay in child Russian. Child Russian also illustrates Early Convergence on the same parameters (incorporation by negation and location of illocutionary force features), except that they are set in the opposite direction. As a result of this opposite setting, Relativized Minimality does not come into play, barring negative imperatives.

The data reviewed, then, provide evidence of child grammars developing language-particular properties very quickly. These properties demonstrate sensitivity to UG principles from their earliest detectable use. While perhaps interesting in isolation, these cross-linguistic trends are more explanatorily expressed in a theory of syntax which encompasses the two language families involved, as does R&T's. As cross-linguistic syntactic investigation of the kind represented in their work becomes more productive and explanatory, opportunities to discern and elucidate the role of UG in language development should likewise expand.

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