

7th International Conference on Corpus Linguistics (CILC 2015) – University of Valladolid  
Panel: *Corpora, Language Acquisition and Teaching*  
7 March 2015

**The acquisition of sentential subjects:  
an analysis of English and Spanish  
monolingual and bilingual corpora**

**Raquel Fernández-Fuertes**, University of Valladolid, Spain  
**Esther Álvarez de la Fuente**, University of Valladolid, Spain  
**Juana M. Licerias**, University of Ottawa, Canada

**SUBJECT OMISSION/PRODUCTION IN CHILD LANGUAGE**

## Child L1: [+/-null subject] monolingual grammars

- |     |    |                                      |                  |                    |
|-----|----|--------------------------------------|------------------|--------------------|
| (1) | a. | Broke this                           | [Peter, 2;0.1]   | EN [-null subject] |
|     | b. | Feel better                          | [Naomi, 1;11]    |                    |
| (2) | a. | Horita viene<br>[(he/she) now comes] | [LV II: 78 -2.0] | SP [+null subject] |
|     | b. | Tengo un pelo<br>[(I) have a hair]   | [María, 2;00]    |                    |

(Hyams 1986, 1996; Frazier & De Villiers 1990; Valian 1990, 1991, 1996; Wang et al. 1992; Weissenborn 1992; Rizzi 1993/1994; Bel 2001; Guasti 2002, etc.)

**SUBJECT OMISSION/PRODUCTION IN CHILD LANGUAGE**

## Child 2L1: [+/-null subject] bilingual grammars

- |     |    |  |                 |                    |
|-----|----|--|-----------------|--------------------|
| (3) | a. | Roars                                      | [Simon, 2;05]   | EN [-null subject] |
|     | b. | Falled [=fell]                             | [Simon, 2;06]   |                    |
|     | c. | Ride it                                    | [Manuela, 1;09] |                    |
|     |    |  |                 |                    |
| (4) | a. | No puedo subir<br>[(I) cannot go upstairs] | [Leo, 2;05]     | SP [+null subject] |
|     | b. | Ahora hacemos esto<br>[now (we) do that]   | [Simon, 3;00]   |                    |
|     | c. | Tengo más<br>[(I) have more]               | [Manuela, 1;11] |                    |

(Deuchar & Quay 2000; Liceras, Fernández Fuertes & Pérez-Tattam 2008;  
Liceras Fernández Fuertes & Alba de la Fuente 2012)

## CROSS-LINGUISTIC INFLUENCE

### Effects of cross-linguistic influence

- Facilitating effect
  - (a) more adult-like forms along the acquisition process
  - (b) earlier attainment of adult grammar
- Interfering effect
  - (a) less adult-like forms along the acquisition process
  - (b) later attainment of adult grammar

Cross-linguistic influence has been accounted for in terms of

- Linguistic theory (i.e. interfaces, core syntax)
- Language dominance
- Input factors

(Paradis & Navarro 2003; Serratrice et al. 2004; Müller 2007; Argyri & Sorace 2007; Paradis 2011; Fernández Fuertes & Licerias 2010; Licerias et al. 2010; Unsworth et al. 2010; Argyri, Sorace, & Tsimpli 2010; Sorace 2011; Licerias et al. 2011; Licerias et al. 2012, among others)

## CROSS-LINGUISTIC INFLUENCE BETWEEN ENGLISH AND SPANISH: SENTENTIAL SUBJECTS

- Null/overt subjects in English and Spanish: interference or facilitation?
- Possible options for English/Spanish bilinguals:

### CHILD BILINGUAL SPANISH

- Overproduction of subject pronouns [interference?]

ENGLISH	→	SPANISH
overt subject pronouns		overt subject pronouns
- syntactic		- (non-)pragmatic
- obligatory		- optional

- For economy reasons overt subjects do not transfer (Licerias et al. 2012)
- Lexical specialization in Spanish (null; overt-weak): facilitating effect

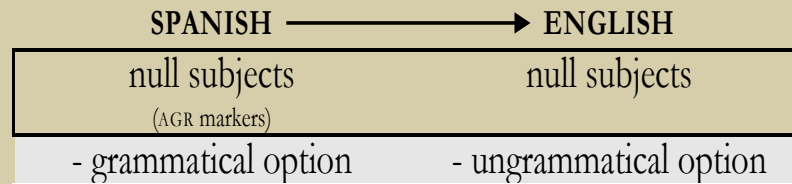
- Overproduction of null subjects??: difficulty linked to acquiring the pragmatic value of their overt counterparts??(Licerias et al. 2010)

## CROSS-LINGUISTIC INFLUENCE BETWEEN ENGLISH AND SPANISH: SENTENTIAL SUBJECTS

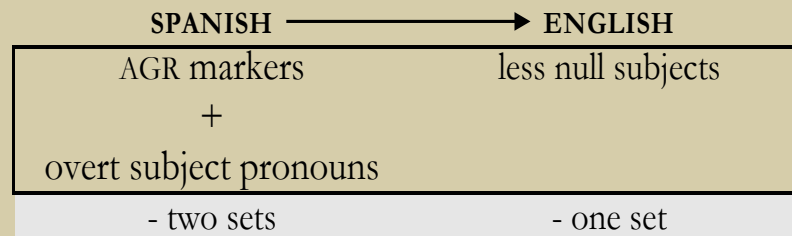
- Null/overt subjects in English and Spanish: interference or facilitation?
- Possible options for English/Spanish bilinguals:

### CHILD BILINGUAL ENGLISH

- More omission of subject pronouns [interference?]



- Less omission of subject pronouns [facilitation?]



## MINIMALIST ACCOUNTS OF THE NULL SUBJECT PARAMETER

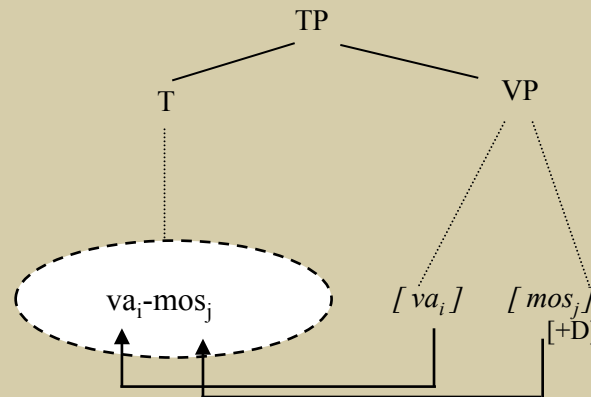
Speas 1994; Alexiadou & Anagnostopoulou 1998

- Spanish pronominal markers *versus* English pronominal subjects
- Agreement features associated with a functional category, Tense

SPANISH: EPP checking: V merges with DP morpheme

(5) Vamos

[go-2nd pp]  
'We go'



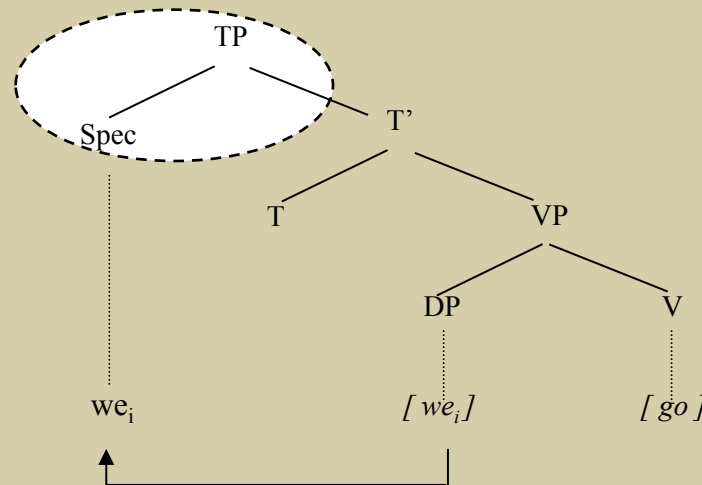
## MINIMALIST ACCOUNTS OF THE NULL SUBJECT PARAMETER

Speas 1994; Alexiadou & Anagnostopoulou 1998

- Spanish pronominal markers *versus* English pronominal subjects
- Agreement features associated with a functional category, Tense

ENGLISH: EPP checking: DP pronoun moves to Spec TP

(6) We go





## MINIMALIST ACCOUNTS OF THE NULL SUBJECT PARAMETER

Speas 1994; Alexiadou & Anagnostopoulou 1998

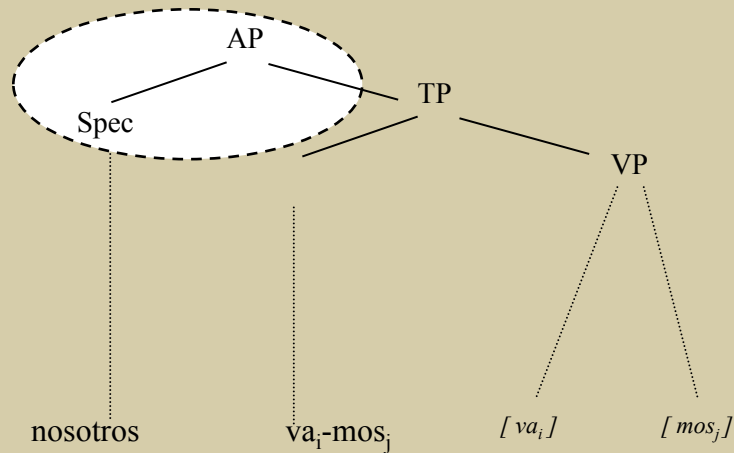
- Spanish pronominal markers *versus* English pronominal subjects
- Agreement features associated with a functional category, Tense

### SPANISH OVERT PRONOMINAL SUBJECTS: merged to a focus position

(Fernández Soriano 1989; Kato 1999; Ordoñez 1997)

(7) Nosotros vamos

[we go<sub>-2nd pp</sub>]



## MINIMALIST ACCOUNTS OF THE NULL SUBJECT PARAMETER

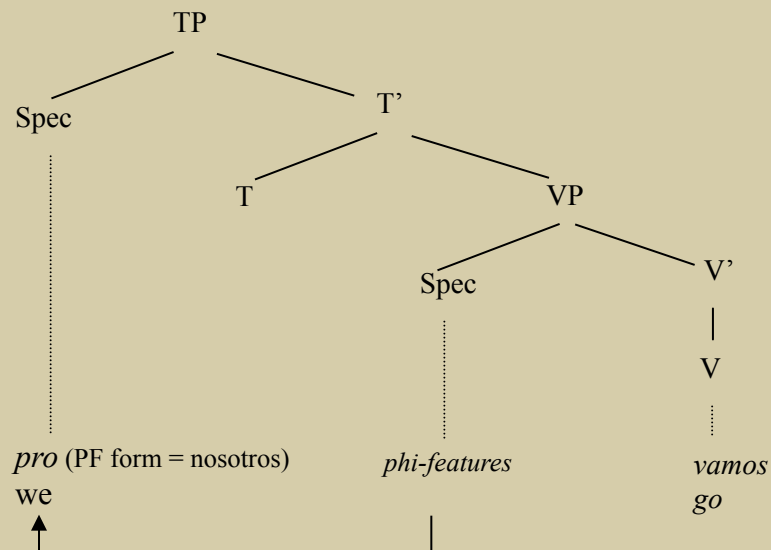
Holmberg 2005; Sheehan 2006; Martínez 2011

- EPP checking proceeds in the same way in SP and in EN: SU rises to Spec TP
- The subject of SP can be spelled out (i.e. overt) or not (i.e. null)
- The possibility of having a zero pronoun is a PF matter

(8) (Nosotros) vamos

[we go-2nd pp]

We go

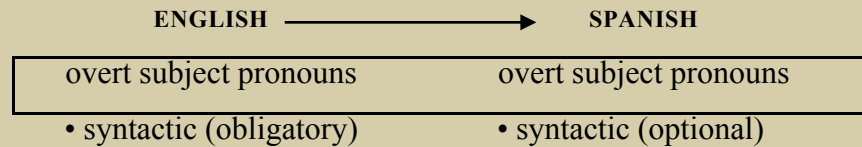


## MINIMALIST ACCOUNTS OF THE NULL SUBJECT PARAMETER

Holmberg 2005; Sheehan 2006; Martínez 2011

It is a more refined version of EPP checking because:

- *We* and *-mos* do not occupy different structural positions
- Spanish weak overt pronouns were not dealt with in previous proposals
- Spanish overt pronouns were considered to always have pragmatic value
- English (one option, only with PF realization) is clearly depicted as a subset of Spanish (two options, with or without PF realization)

ENGLISH/SPANISH BILINGUAL DATA: **FROM ENGLISH INTO SPANISH****HYPOTHESIS #1****INTERFERENCE: OVERPRODUCTION OF SUBJECT PRONOUNS IN CHILD BILINGUAL SP**

- The Spanish of bilingual children would contain more overt subjects than the Spanish of monolingual children because of influence from their other L1

## HOWEVER ...

- PF realization in English as the only option (obligatory presence of subject pronouns)
- Spanish non-PF realization option is preferred under minimalist economy premises

ENGLISH/SPANISH BILINGUAL DATA: **FROM ENGLISH INTO SPANISH****HYPOTHESIS #2****NO INTERFERENCE: NO OVERPRODUCTION OF SUBJECT PRONOUNS IN CHILD BILINGUAL SP**

ENGLISH	.....▶	SPANISH
overt subject pronouns		weak overt subject pronouns
• syntactic (obligatory)		• syntactic (non-pragmatic) (optional)

- The Spanish of bilingual children would not contain more overt subjects than the Spanish of monolingual children (no influence from their other L1)

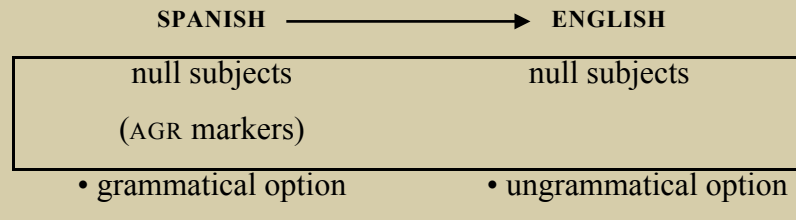
SO ...

- Cross-linguistic influence should not favour weak overt pronouns in SP

**ENGLISH/SPANISH BILINGUAL DATA: FROM SPANISH INTO ENGLISH**

**HYPOTHESIS #3**

**INTERFERENCE: MORE OMISSION OF SUBJECT PRONOUNS IN CHILD BILINGUAL EN**



- The English of bilingual children would contain more null subjects than the English of monolingual children because of influence from their other L1
- The more economic option (i.e. pronouns with no PF realization) is transferred

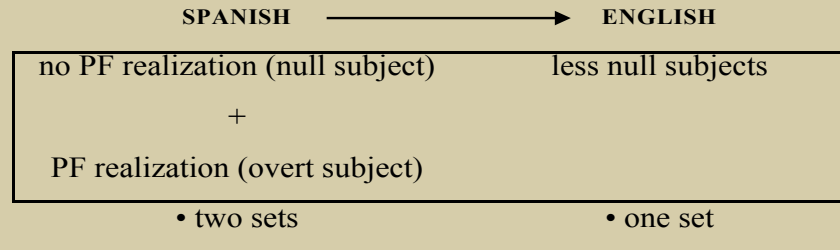
HOWEVER ...

- This would be the option if Spanish only had this non-PF realized pronoun
- But Spanish does have the PF realized option as well

**ENGLISH/SPANISH BILINGUAL DATA: FROM SPANISH INTO ENGLISH**

**HYPOTHESIS #4**

**FACILITATION: LESS OMISSION OF SUBJECT PRONOUNS IN CHILD BILINGUAL EN**



- The English of bilingual children would contain less null subjects than the English of monolingual children because of influence from their other L1

**THIS IS SO IF ..**

- The other L1, Spanish, plays a facilitating role (as the superset language)
- One of the options (the overt/PF one) is transferred
- This overt option reinforces the overt value of English subjects

**THEREFORE ...**

- The null subject stage would be shorter
- The so-called RI <sub>[non-adult non-inflected verbs]</sub> stage would be shorter

## PARTICIPANTS &amp; DATA SELECTION

<b>Table 1. Data selection</b>				
<i>Child</i>	<i>Age range</i>	<i>MLUw range [SP]</i>	<i>MLUw range [EN]</i>	<i>Corpus [CHILDES]</i>
Simon [EN/SP]	1;10 – 2;11	1.070 – 3.705	1.000 – 2.765	FerFuLice
Leo [EN/SP]	1;10 – 2;11	1.143 – 3.438	1.000 – 3.018	FerFuLice
María [SP]	1;07 – 2;06	1.481 – 4.647	---	López-Ornat
Naomi[EN]	1;06 – 2;07	---	1.058 – 3.689	Sachs

<b>Table 2. Number of verbal utterances</b>		
<i>Child</i>	<i># verbal utterances [SP]</i>	<i># verbal utterances [EN]</i>
Simon [EN/SP]	304	302
Leo [EN/SP]	379	419
María [SP]	761	---
Naomi[EN]	---	1,248



PATTERNS OF OMISSION / PRODUCTION OF **SPANISH** SUBJECTS

## Null and overt subjects

## OVERVIEW

- MORE null subjects THAN overt pronominal subjects ( $p=0$ )

Table 3. Bilingual and monolingual Spanish subject production				
	<i>null</i>	<i>pronoun</i>	<i>other overt</i>	<i>total</i>
Simon [EN/SP]	74.6%	11.4%	14%	100% (304)
Leo [EN/SP]	72%	12%	16%	100% (379)
María [SP]	70%	6%	24%	100% (761)

PATTERNS OF OMISSION / PRODUCTION OF **SPANISH** SUBJECTS

## Null pronominal subjects

**BILINGUALS**

- Similar pattern in children and adults: 1<sup>st</sup> and 3<sup>rd</sup> PS are favoured ( $p=0$ )
- Only adults produce more 2<sup>nd</sup> PS and 3<sup>rd</sup> PP forms ( $p=0$ )

**MONOLINGUAL**

- More null subjects than bilinguals but a similar pattern

Table 4. Null subjects in bilingual and monolingual Spanish									
	<i>1PS</i>	<i>2PS a</i>	<i>2PS b</i>	<i>3PS</i>	<i>1PP</i>	<i>2PP a</i>	<i>2PP b</i>	<i>3PP</i>	<i>Total</i>
Simon	27%	0.4%	0	65.6%	5.3%	0	0.4%	1.3%	100% (227)
Leo	36%	2.2%	0.3%	56.8%	1.1%	0.3%	0	3.3%	100% (273)
Adults	14.2%	18.5%	0	32%	22%	5%	0.1%	8.2%	100% (1981)
María	52.8%	4.2%	0.2%	33.4%	4.4%	0	1.2%	3.8%	100% (500)
Adults	28.2%	27.2%	0	32.2%	12%	0.4%	0	0	100% (911)

PATTERNS OF OMISSION / PRODUCTION OF **SPANISH** SUBJECTS

## Overt pronominal subjects

## BILINGUALS

- Lower production of all persons but 1<sup>st</sup> PS in children and adults
- Very low number of subject pronouns in children (learning process)

## MONOLINGUAL

- Similar number of overt subject pronouns as bilinguals

	<i>IPS</i>	<i>2PS a</i>	<i>2PS b</i>	<i>3PS</i>	<i>1PP</i>	<i>2PP a</i>	<i>2PP b</i>	<i>3PP</i>	<i>Total</i>
Simon	88.6%	8.6%	0	2.8%	0	0	0	0	100% <sub>(35)</sub>
Leo	69%	13.3%	0	17.7%	0	0	0	0	100% <sub>(45)</sub>
Adults	63%	23%	0	7.8%	2.5%	0.7%	0	3%	100% <sub>(396)</sub>
María	64%	26%	0	6%	0	0	0	4%	100% <sub>(50)</sub>
Adults	47.5%	43.5%	2%	6%	1%	0	0	0	100% <sub>(101)</sub>

## PATTERNS OF OMISSION / PRODUCTION OF SPANISH SUBJECTS

## RIs with null and overt subjects

- (9) a. yo corriendo [I running] [Leo 2;05]  
 b. Mamá tapar [Mummy to cover] [María 1;07]

- Scarce production of RIs with null and overt subjects
- More RIs with null subjects in monolingual child ( $p=0$ )

Table 6. RIs with null and overt subjects in bilingual and monolingual Spanish

	<i>Infinitives</i>	<i>Gerunds</i>	<i>Participles</i>	<i>Total</i>	
	<i>Null / overt</i>	<i>Null / overt</i>	<i>Null / overt</i>	<i>Null</i>	<i>/ overt</i>
Simon	3 / 1	0 / 0	2 / 2	2.2% (5/227)	3.8% (3/77)
Leo	0 / 1	0 / 1	7 / 3	2.5% (7/273)	4.7% (5/106)
María	35 / 3	3 / 0	2 / 0	7.5% (40/527)	1.2% (3/235)

PATTERNS OF OMISSION / PRODUCTION OF **SPANISH** SUBJECTS

## Overall production of null vs. overt pronominal subjects

## NULL SUBJECTS

- More null subjects in the monolingual child but similar tendency in adults
- A reflection of the implementation of the null subject parameter in child SP

## OVERT SUBJECTS

- More overt subject pronouns in bilinguals ( $p=0.03$  in Leo;  $p=0.01$  in Simon)
- Bilingual adults produce more subject pronouns than monolingual adults ( $p=0$ )

Table 7. Null vs. overt pronominal subjects in bilingual and monolingual Spanish		
	<i>Null</i>	<i>Pronominal</i>
Simon	86.6% (227/262)	13.4% (35/262)
Leo	85.8% (273/318)	14.2% (45/318)
Adults	83.3% (1981/2377)	16.7% (396/2377)
María	90.9% (500/550)	9.1% (50/550)
Adults	90% (911/1012)	10% (101/1012)

## PATTERNS OF OMISSION / PRODUCTION OF **SPANISH** SUBJECTS

monolingual *versus* bilingual data

- Distribution of null/overt subjects
  - Same distribution of null/overt subjects in Spanish
  - The 3 children's output patterns their respective adult input

THEREFORE ... in the case of Simon & Leo

- There is no overproduction of subject pronouns  
**(hypothesis #2 is confirmed: there is no transfer from English)**
- There is no overproduction of null subjects  
**(hypothesis #1 is not confirmed)**

PATTERNS OF OMISSION / PRODUCTION OF **ENGLISH** SUBJECTS

## Null and overt subjects

- English pronominal subjects are favoured over null & other overt subjects ( $p=0$ )

**Table 8. Bilingual and monolingual English subject production**

	<i>null</i>	<i>pronoun</i>	<i>other overt</i>	<i>total</i>
Simon [EN/SP]	22.5%	63.3%	14.2%	100% (302)
Leo [EN/SP]	25%	63%	12%	100% (419)
Naomi[EN]	35.4%	44.4%	20.2%	100% (1248)

PATTERNS OF OMISSION / PRODUCTION OF **ENGLISH** SUBJECTS

## Null pronominal subjects

**BILINGUALS**

- Null subjects tend to refer mainly to 1<sup>st</sup> and 3<sup>rd</sup> persons ( $p=0.01$ )
- Same pattern in adults (informal dialogue)

**MONOLINGUAL**

- Same pattern as bilinguals but more null 1<sup>st</sup> person ( $p=0$ )

	<i>1<sup>st</sup></i>	<i>2<sup>nd</sup></i>	<i>3<sup>rd</sup></i>	<i>1<sup>st</sup></i>	<i>2<sup>nd</sup></i>	<i>3<sup>rd</sup></i>	<i>Total</i>
Simon	27.3%	2.3%	59%	4.5%	0	6.9%	100% <sub>(44)</sub>
Leo	17.6%	11%	40.6%	15.4%	1.1%	14.3%	100% <sub>(91)</sub>
Adults	26.7%	6.6%	66.7%	0	0	0	100% <sub>(30)</sub>
Naomi	86.4%	1%	11.1%	0.3%	0	1.2%	100% <sub>(324)</sub>
Adults	15%	35%	45%	5%	0	0	100% <sub>(20)</sub>



## PATTERNS OF OMISSION / PRODUCTION OF ENGLISH SUBJECTS

### Overt pronominal subjects

#### BILINGUALS

- Much higher than in Spanish
- Very few instances of plural pronouns

#### MONOLINGUAL

- Same pattern as bilinguals

	<i>Personal pronouns</i>						<i>Non-nominative</i>	<i>Total</i>
	<i>1PS</i>	<i>2PS</i>	<i>3PS</i>	<i>1PP</i>	<i>2PP</i>	<i>3PP</i>		
Simon	75.3%	6.8%	15.8%	0.5%	0	1.6%	0	100% <sub>(191)</sub>
Leo	80.2%	1.4%	13.5%	1.6%	0	3%	0.3%	100% <sub>(363)</sub>
Adults	25.6%	30.4%	21%	18.5%	1.2%	3.3%	0	100% <sub>(3452)</sub>
Naomi	63.2%	15.5%	12%	0.2%	0	5%	4.1%	100% <sub>(554)</sub>
Adults	25.1%	39%	26.5%	5.6%	0.1%	3.7%	0	100% <sub>(729)</sub>

## PATTERNS OF OMISSION / PRODUCTION OF ENGLISH SUBJECTS

## RIs with null and overt subjects

- (10) a. a wolf eat Fergie [instead of *a wolf eats Fergie*] [Leo 2;11]  
 b. all gone [instead of *all is/has gone*] [Naomi 1;08]

- Same pattern: a higher use of RIs with null subjects ( $p=0$ )

**Table 11. RIs with null and overt subjects in bilingual and monolingual English**

	<i>Infinitives</i>	<i>Gerunds</i>	<i>Participles</i>	<i>Total</i>	
	<i>Null / Overt</i>	<i>Null / Overt</i>	<i>Null / Overt</i>	<i>Null</i>	<i>Overt</i>
Simon	25 / 5	20 / 2	23 / 2	85% (58/68)	3.8% (9/234)
Leo	37 / 11	22 / 10	19 / 2	74% (78/105)	5.5% (23/414)
Naomi	72 / 44	68 / 58	4 / 5	32% (143/442)	12.7% (107/838)

PATTERNS OF OMISSION / PRODUCTION OF **ENGLISH** SUBJECTS

## Overall production of null vs. overt pronominal subjects

- Lower number of null subjects in bilinguals ( $p=0$ )
- Bilinguals do not omit more subject pronouns than monolingual

	<i>Null</i>	<i>Pronominal</i>
Simon	18.7% (44/235)	81.3% (191/235)
Leo	20.1% (91/453)	79.9% (362/453)
Adults	0.9% (30/3482)	99.1% (3452/3482)
Naomi	37.9% (324/855)	62.1% (531/855)
Adults	2.7% (20/749)	97.3% (729/749)

## PATTERNS OF OMISSION / PRODUCTION OF **ENGLISH** SUBJECTS

monolingual *versus* bilingual data

- Distribution of null/overt subjects:
  - Bilinguals produce less null subjects than the monolingual child
- Uninflected forms:
  - Bilinguals behave like the monolingual child

THEREFORE... in the case of Simon & Leo

- There is no overproduction of null subjects  
(**hypothesis #3 is not confirmed: no NEGATIVE transfer from Spanish**)
- They realize earlier that the non-PF form is not an option for English  
(**hypothesis #4 is confirmed: POSITIVE transfer from Spanish**)

## PATTERNS OF OMISSION / PRODUCTION OF SUBJECTS

### SPANISH

- bilinguals = monolingual
- no overproduction of subject pronouns  
**hypothesis #2 confirmed: no transfer from EN**
- no overproduction of null subjects  
**hypothesis #1 not confirmed**

### ENGLISH

- bilinguals produce less null subjects  
**hypothesis #3 not confirmed: no transfer from SP**  
**hypothesis #4 confirmed: transfer from SP**

**Spanish saliency**, as reflected in the two types of subjects, 'transfers' into English by making children project the requirements of the adult grammar sooner than monolinguals

## **PATTERNS OF OMISSION / PRODUCTION OF SUBJECTS**

SO... IN THE ENGLISH OF THESE BILINGUALS...

- Spanish plays a facilitating role (as the superset language)
  - one of the options (the overt/PF one) is transferred
- this overt option reinforces the overt value of English subjects

## POSITIVE CROSS-LINGUISTIC INFLUENCE: THE VIEW FROM LINGUISTIC THEORY

In a bilingual situation, as compared to a monolingual one, lexical specialization (saliency) in one of the languages of the bilinguals would facilitate the acquisition of the other language.

‘Lexical specialization’ HERE consists of implementing a null or an overt realization of the subject for EPP checking: the non-PF realization for Spanish and the PF realization for both English (this being the only option) and Spanish.

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**THANK YOU**

**Raquel Fernández-Fuertes**, University of Valladolid, Spain  
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