

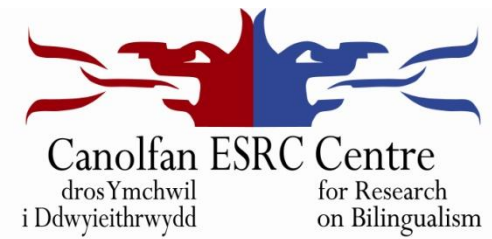
# Analysis of Spanish-English switched nominal constructions from naturalistic and experimental settings

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# Acknowledgments



30 Participants, Miami University

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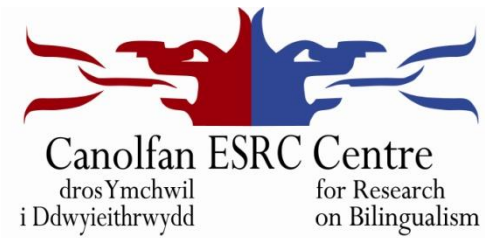
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Center of Human Development Learning

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# Research Questions



1. What determines the **gender** that gets assigned to an **English noun** when it gets inserted into an otherwise **Spanish sentence**?
2. What happens when there is a **word order conflict** in code-switched nominal constructions?

# Conflict sites



## Spanish DPs:

Det	N	ADJ	(+Gender)
<i>La</i>	<i>niña</i>	<i>hermosa</i>	

## English DPs:

Det	ADJ	N	(-Gender)
<i>The</i>	<i>beautiful</i>	<i>house</i>	

# Predictions



## GENDER

Masculine is the default gender for Spanish-English bilinguals (**e**l table 'mesa.f'). Feminine will only occur when the Spanish translation is feminine (**l**a table).

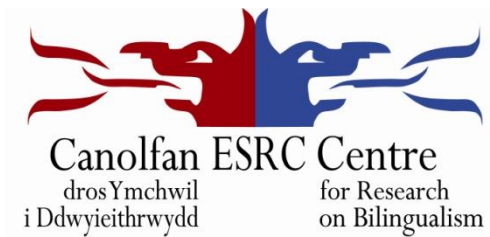
(cf. Dussias et al. 2009, Valenzuela et al. in press)

## WORD ORDER

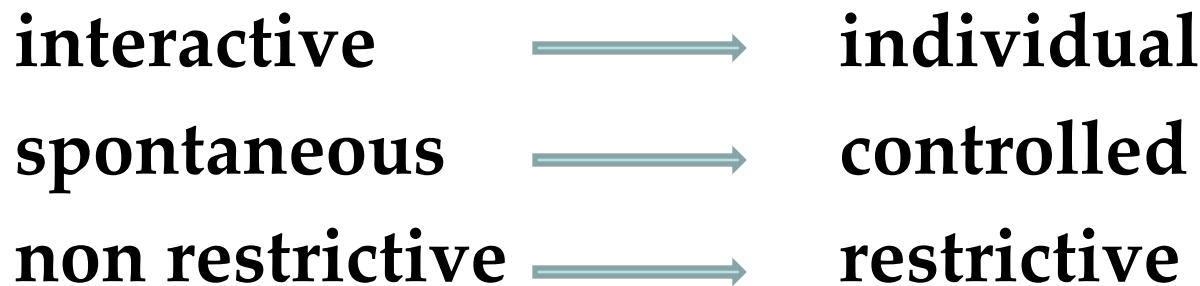
Adjective/noun order will match the language of the finite verb.

(Myers-Scotton 2002)

# Study design

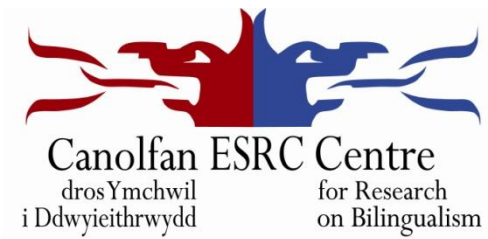


- Bilingual researcher
- Bilingual participants
- Multi-task approach:



Data: **Naturalistic**    **Semi-Exp**    **Experimental**

# Naturalistic



Bangor Miami corpus ([www.siarad.org.uk](http://www.siarad.org.uk))

- 9 recordings
- 99 switched nominal constructions

Miami (Florida), Feb.-Apr. 2008

Participants know each other  
(friends, family, etc.)

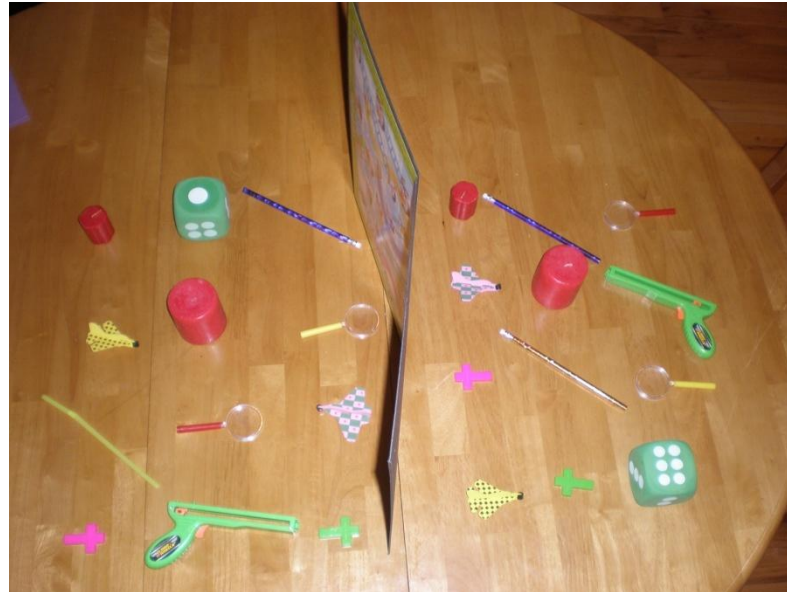
Researcher not present

Recordings last around 35-40 minutes

# Semi-experimental data



## Director-Matcher task (guided elicitation)





# Experimental data



## Acceptability judgments (reaction times and acceptability ratings using *SuperLab Pro 4.0*)

0= Unacceptable

1= Somehow Acceptable

2= Perfectly Acceptable

?= I cannot decide

# Predictions about gender (cf. Dussias et al. 2009)



**Masculine determiners will normally be used with nouns from a language without gender.**

**Feminine determiners may be used when the translation equivalent of the noun is feminine.**

# Predictions about gender



**el (m) book** BUT NOT **\*la (f) book**  
= '*el (m) libro (m)*'

**el (m) table** AND **la (f) table**  
= '*la (f) mesa (f)*'

# Corpus data (I)



## Masculine Spanish equivalent:

**el** (m) summer

= '*el (m) verano (m)*'

**los** (m) brochures

= '*los (m) folletos (m)*'

**un** (m) restaurant

= '*un (m) restaurante (m)*'

# Corpus data (II)



## Feminine Spanish equivalent:

- un** (m) hammock = '*una (f) hamaca (f)*'  
**el** (m) manicure = '*la (f) manicura (f)*'  
**el** (m) post office = '*la (f) oficina (f) de correos*'

# Corpus data (III)



Feminine Spanish equivalent:

**la** (f) cheerleader **pesada** (f)

'the annoying cheerleader'

= '*la animadora pesada*'

# Corpus data (IV)



Word Order: ML

Adjective position- not enough data!

# The present study



**Collect experimental data to obtain additional evidence (cf. Gullberg et al. 2009) from a different population:**

- from Ohio (instead of Florida)**
- late English-Spanish bilinguals**
- not habitual code-switchers**



# Materials and Procedure



## Bangor Language Background Questionnaire

### Director Matcher task

(elicited production, Gullberg, Indefrey & Muysken 2009)

Judgment task (Van Dulm 2007) in *SuperLab Pro*  
4.0

# Participants

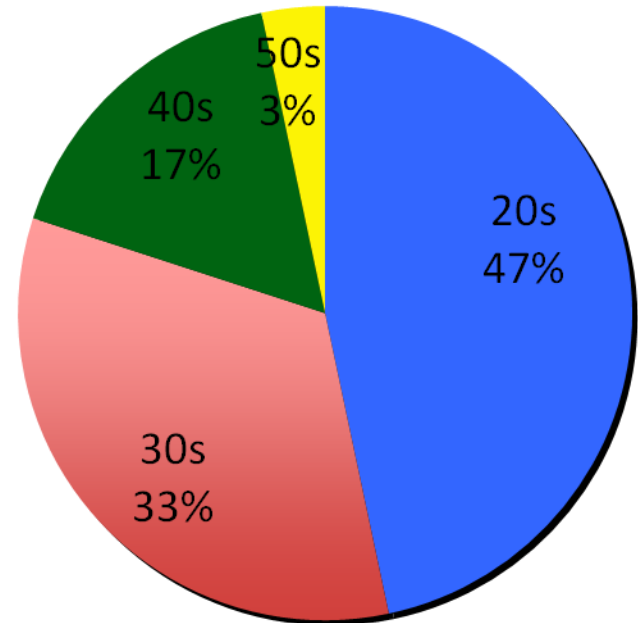
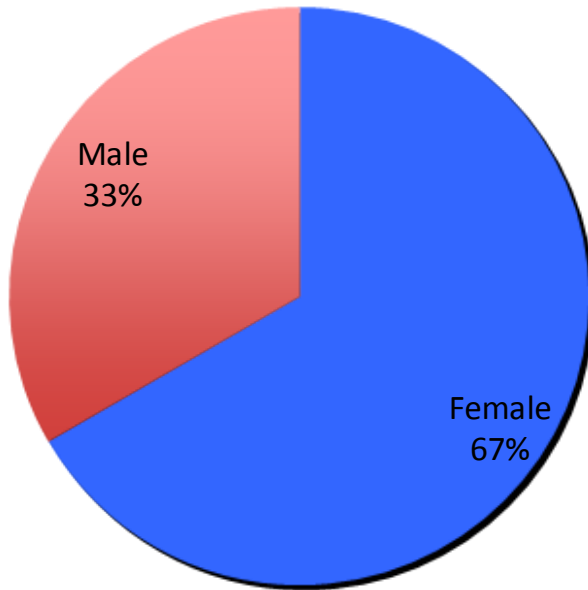


Thirty English-Spanish bilinguals in Ohio, USA

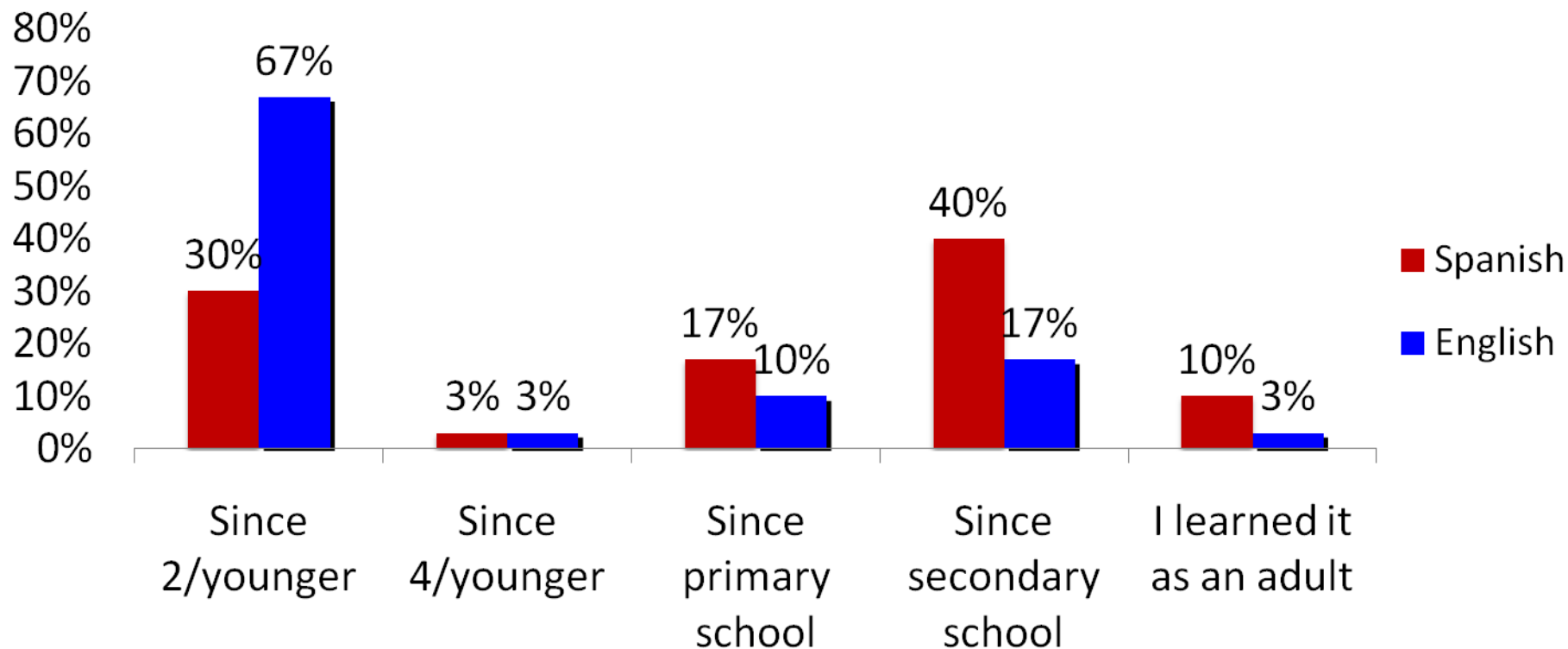
50% completed bilingual questionnaire in Spanish

All participants had completed at least high school

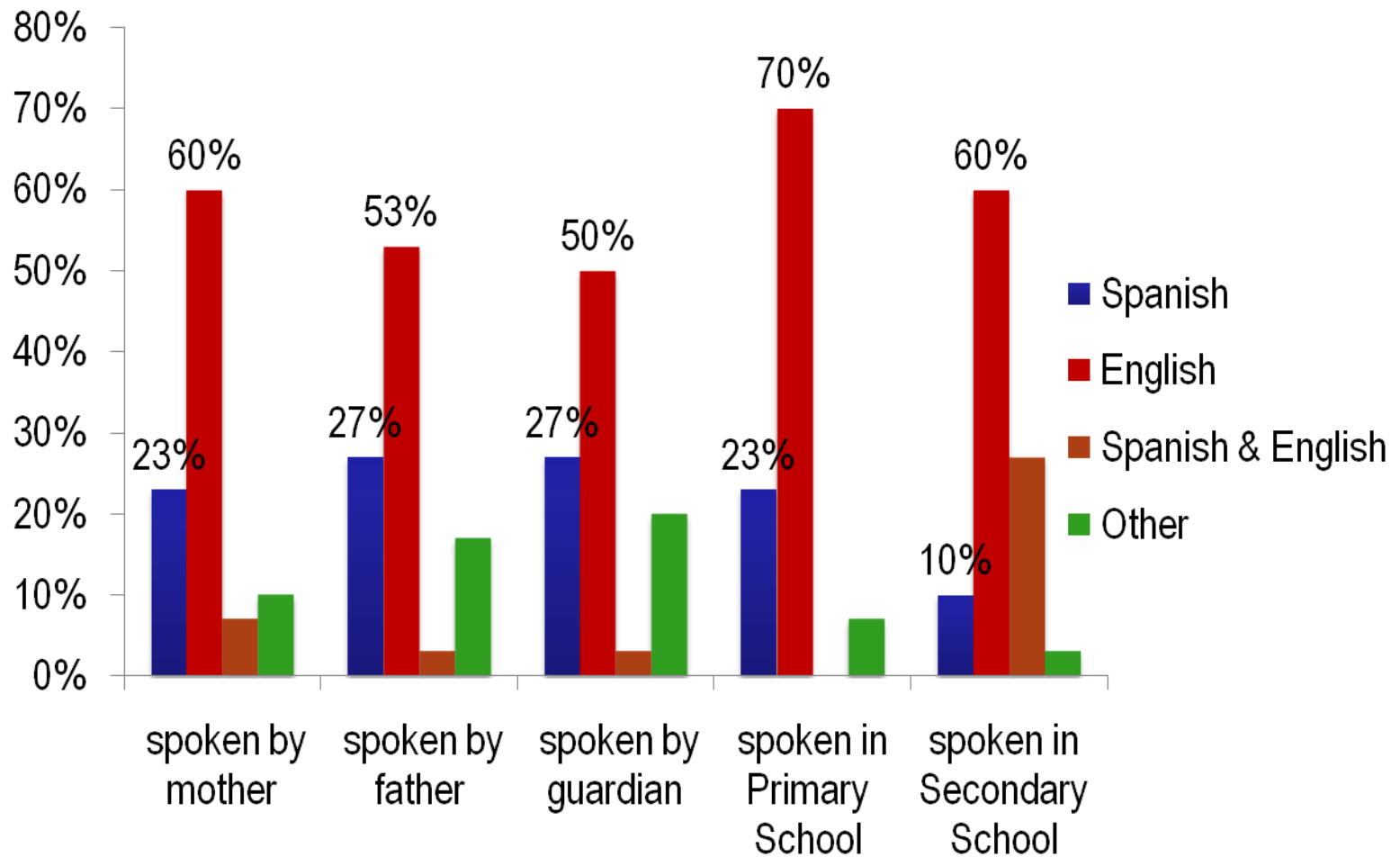
# Participants



# Age of Acquisition



# Language Input



# CS self-report



**USE:** 63% agree that they keep languages separate

**ATTITUDE:** 23% agree that languages should be kept separate

47% expressed a positive attitude to CS

30% took a neutral position

# Director-Matcher Task

Guided elicitation of complex nominal constructions

- two participants: one director, one matcher
- locate **12** objects of different colours **and sizes**

# Director-Matcher Task

## Objects

1. Red candle (big, small)
2. Magnifying glass (red, yellow)
3. Cross (pink, green)
4. Plane (pink, yellow)
5. Flag (red, white)
6. Pencil (purple, golden)



## Fillers

Green die

Green pistol



# The Director Matcher Task

## Observed Patterns



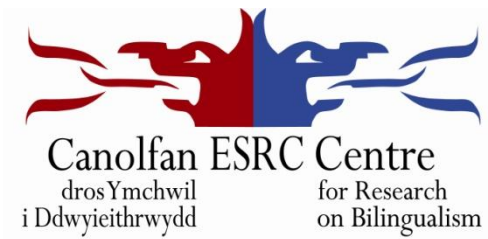
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	Det	Noun	Adjective	Percentage
ML English	ENGL	SPN	SPN, postnominal	
	<b>The</b>	<b>candela</b>	<b>roja</b>	<b>23% (3/13)</b>
	<b>The</b>	<b>lupa</b>	<b>roja</b>	<b>15% (2/13)</b>
ML Spanish	SPN	ENG	SPN, postnominal	
	<b>Los</b>	<b>dice</b>	<b>verde</b>	<b>31% (4/13)</b>
	<b>La</b>	<b>candle</b>	<b>roja</b>	<b>23% (3/13)</b>
	<b>El</b>	<b>plane</b>	<b>rosa</b>	<b>8% (1/13)</b>

# Acceptability Judgments: Stimuli



72 sentences with CS:

*The*      *table*      *roja*      *es*      *nueva*  
Det      Noun      Post Adj           (ML=Spanish)

*I love*      *the*      *fresco*      *cheese*  
      Det      PreAdj      Noun      (ML= English)

SUB/OBJ/ADJUNCT Position X

Matrix Language ENG/SPN X

Det ENG/SPN X

Noun ENG/SPN X

Adj ENG/SPN X

Adj Position: PRE/POSTNOMINAL

+

12 fillers

# Acceptability Judgments: (ML Spanish)

## Noun (Masculine in SPN)

*mean*= 1.01  
*sd*= 0.28

DET	NOUN	ADJ	ADJ POS	PHRASE	RATING (0-2)
SPN	ENGL	ENGL	POST	El trip long	0.86
SPN	ENGL	ENGL	PRE	El long trip	1.34
SPN	ENGL	SPN	POST	El dog malo	1.27
SPN	ENGL	SPN	PRE	El malo dog	0.77
SPN	ENGL	SPN	POST	El book interesante	1.17
SPN	ENGL	SPN	PRE	El interesante book	0.67

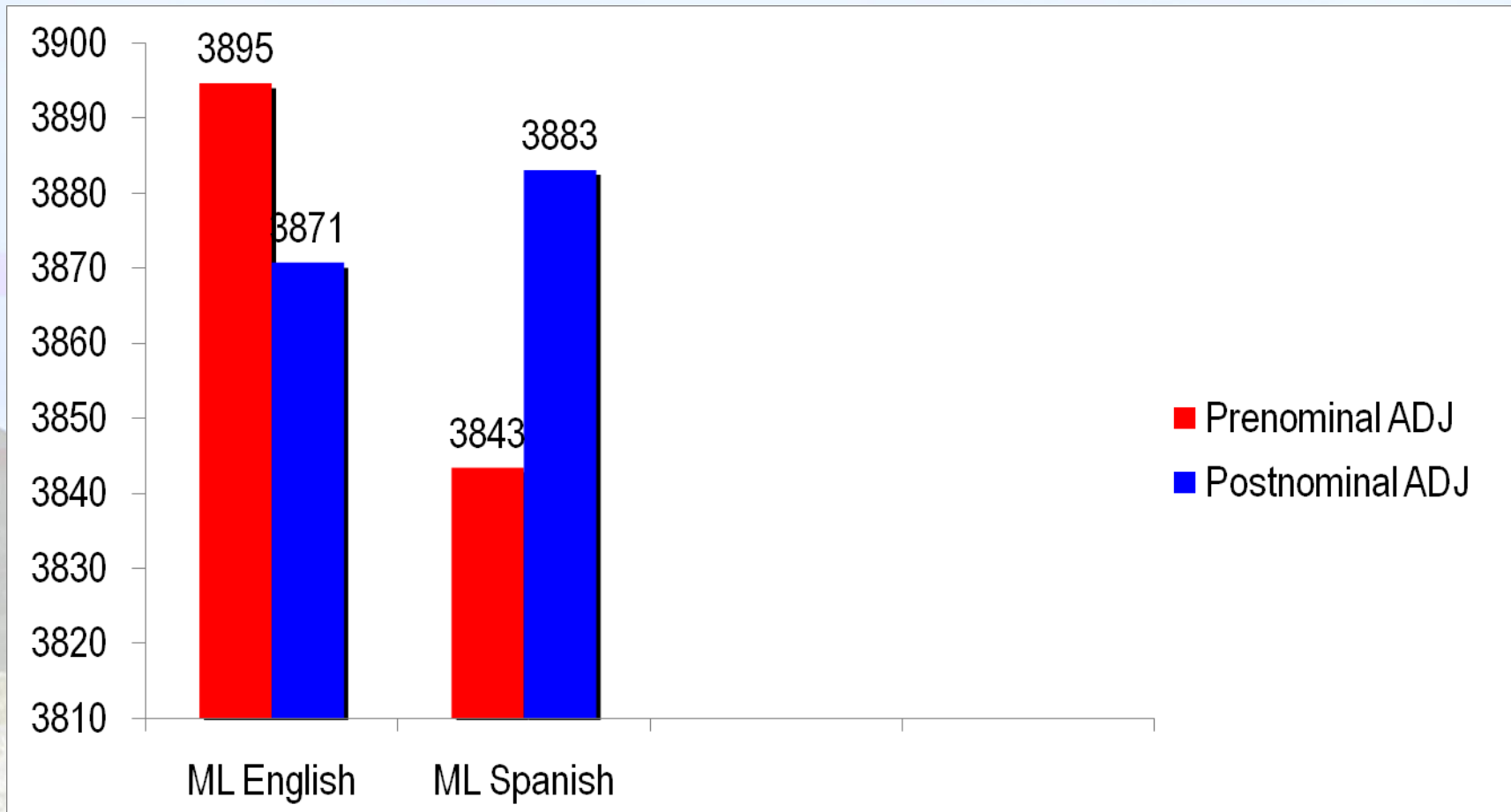
# Acceptability Judgments (ML Spanish)

## Noun (Feminine in SPN)

*mean= 1.01*  
*sd= 0.37*

DET	NOUN	ADJ	ADJ POS	PHRASE	RATING (0-2)
SPN	ENGL	ENGL	POST	El moon full	0.60
SPN	ENGL	ENGL	PRE	El full moon	1.28
SPN	ENGL	ENGL	POST	El story funny	0.63
SPN	ENGL	ENGL	PRE	El funny story	1.33
SPN	ENGL	SPN	POST	El bed antiguo	1.40
SPN	ENGL	SPN	PRE	El antiguo bed	0.83

# RTs Adjectival Position based on Matrix Language



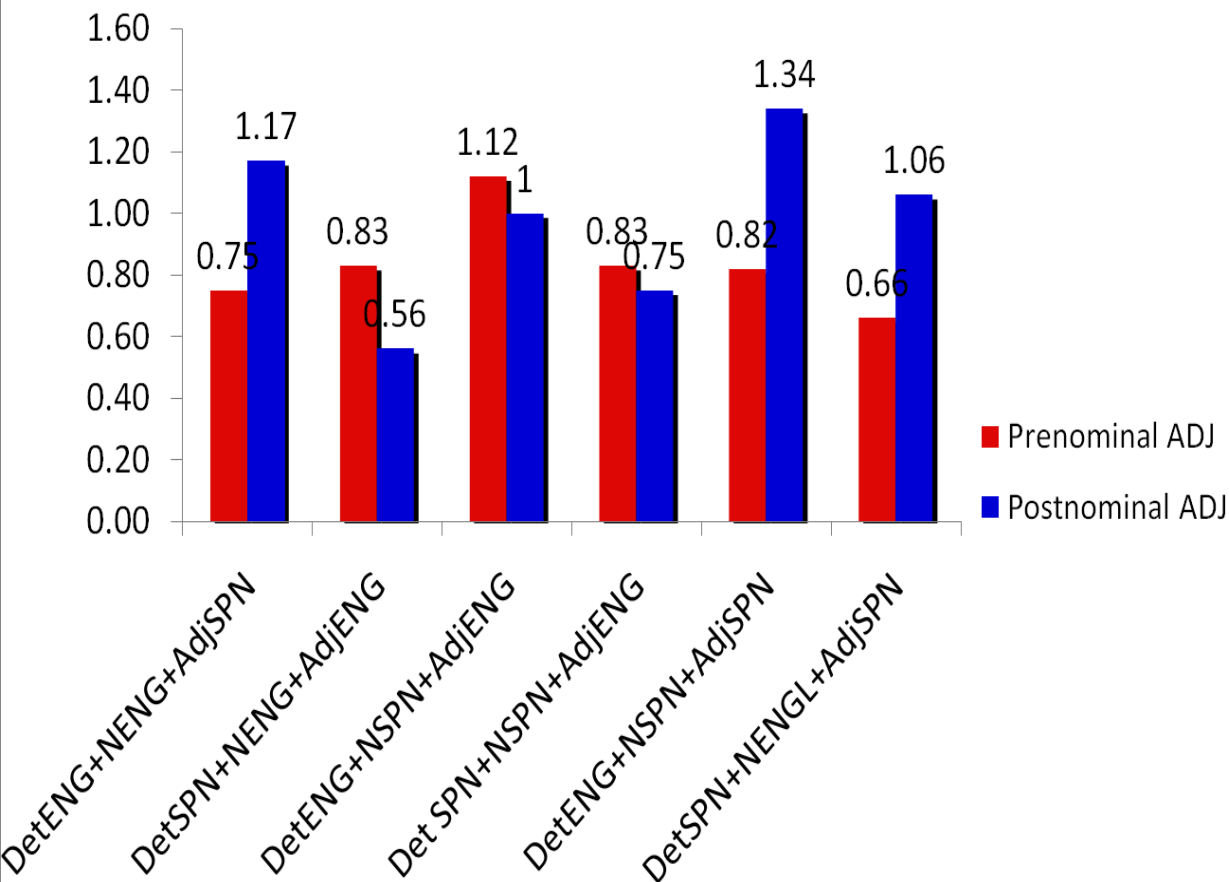
# Acceptability ratings: ADJ position + LANG sequence when ML= ENG



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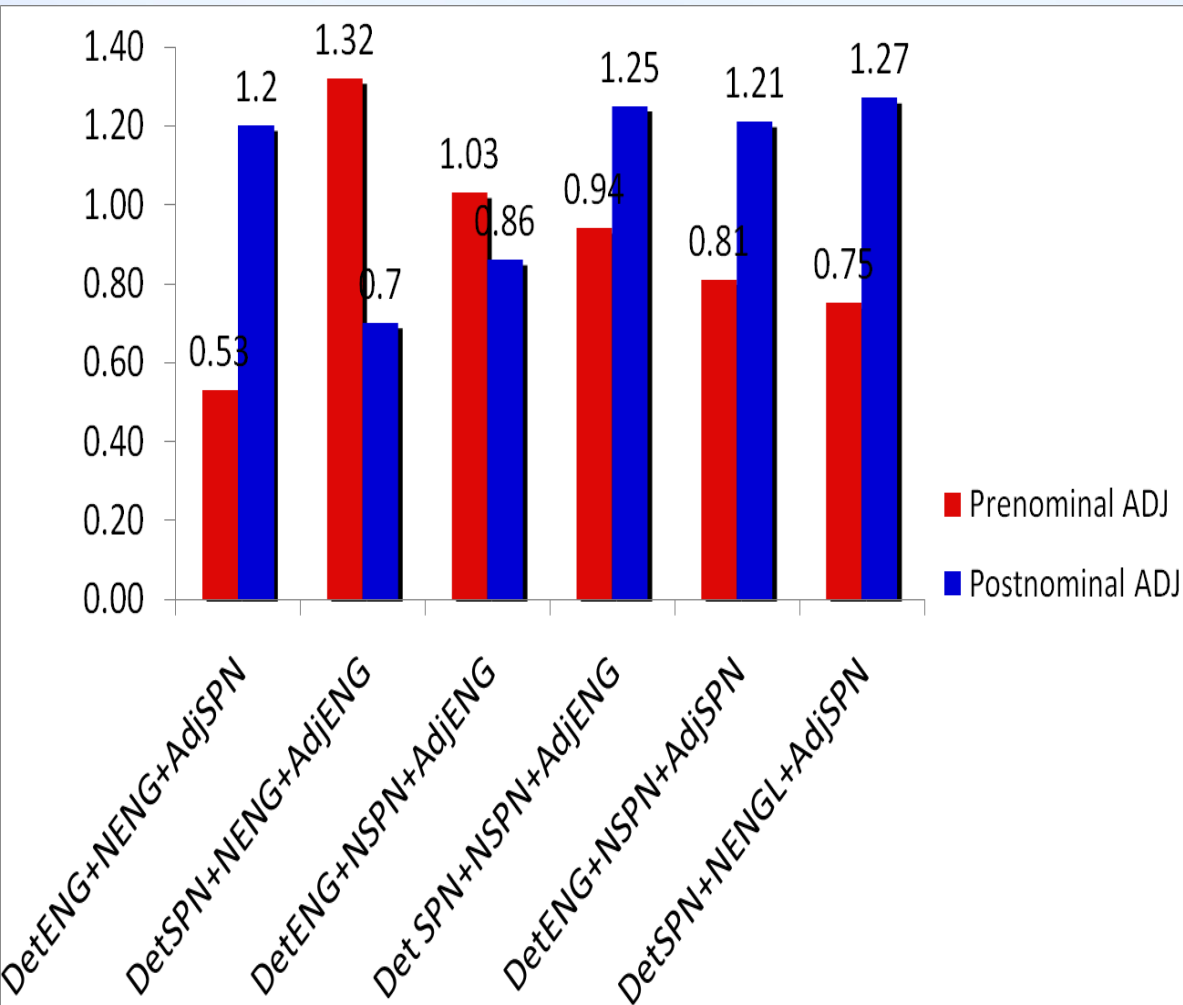


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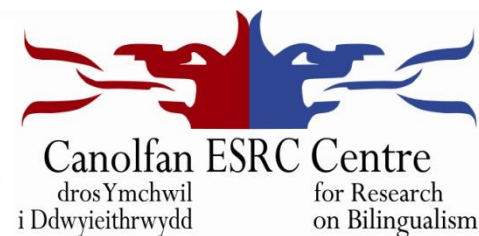
1. The (verde) toy
2. La (broken) chair
3. The (black) lapiz
4. La (cloudy) mañana
5. The (cariñoso) gato
6. El (caliente) food

# Acceptability ratings: ADJ position + LANG sequence when ML= SPN



1. The (roja) table
2. El (long) trip
3. The (big) casa
4. La (beautiful) mujer
5. The (fuerte) hombre
6. El (malo) dog

# Recap



## 1. Naturalistic corpus data

- Gender: Masculine preferred
- Adjective: Not enough data

## 2. Toy task

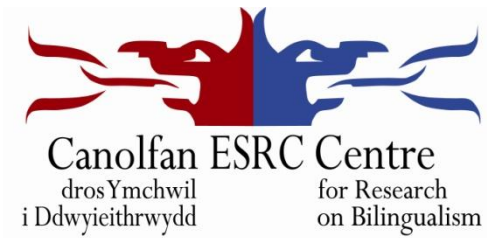
- Gender: feminine only with feminine equivalents.
- Adjective: conforming to ML (islands included)

## 3. Acceptability judgements

- Gender: No difference between masculine and feminine translation equivalent > masculine as default.
- Adjective: Quicker to respond when there is an MLF violation. No consistent pattern, but postnominal preferred.



# Theoretical consequences



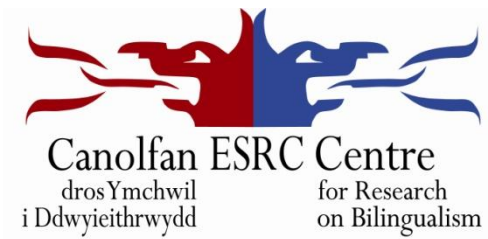
## Gender (Masculine as default)

Neither Minimalism nor the Matrix Language Framework account for default gender assignment.

## Adjective Order

Production data conforms with MLF predictions but not comprehension data (competence vs. performance?)

# Further research



- Analysis of whole corpus to extract adjective-noun switches using the autoglosser (cf. Donnelly et al. 2011)
- Comparison with other bilingual types (early bilinguals and habitual codeswitchers).
- Analysis of flagging in the toy-task data (Cf. Rosignoli 2011).



**GRACIAS**  
**THANKS**  
**TAKK**

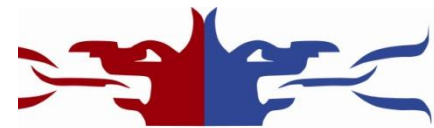
# The Director Matcher

Task:

Observed Patterns



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88% of CS utterances (11/13) were produced with a certain degree of hesitancy and/or self-correction:

The ...Umm ...The candela roja

La...Umm ...candle...roja

Los...el...los dice verdes

Adjectives always postnominal (but conforming to ML)

El plane rosa

Los dice verde