

# Unifying empirical results and theory – Focus in Spanish and Catalan

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# Introduction

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- Focus-related word order variation in Spanish and Catalan
  1. Types of foci
  2. Theoretical and empirical discrepancies
  3. Our experimental study
  4. OT analysis

# Introduction

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- Two types of focus are of interest:
  - A) Neutral or presentational focus (see Schwarzschild 1999)
    - a. *Who* slept?
    - b. **JOHN** slept.
  - B) Contrastive or correction focus (see Schwarzschild 1999)
    - a. Meghan saw Bill.
    - b. No, she saw **JOHN**.

# Theoretical and empirical discrepancies: neutral focus (I)

## 1. Theoretical studies

- Neutrally focused elements [<sub>F</sub> ...] in sentence final position in Spanish and Catalan (1a, 2a).  
(*Nuclear Stress Rule*, Chomsky & Halle 1968, Zubizarreta 1998).
- **No prominence shift** in these languages (see (1b, 2b), ≠ English, German).

(1) a. *Los alumnos se enfrentaron [<sub>F</sub> con la poliCÍA].* canonical WO  
the students REFL confront with the police  
'The students confronted the police'.

b. \**[<sub>F</sub> Los aLUMnos] se enfrentaron con la policía.* in situ-marking

- **Spanish alternative: p-movement** (Zubizarreta 1998, 1999), see (1c).

c. *Se enfrentaron con la policía [<sub>F</sub> los aLUMnos] \_* . p-movement

# Theoretical and empirical discrepancies: neutral focus (II)



## 1. Theoretical studies

Catalan:

- (2) a. pro *Ficarem el ganivet* [<sub>F</sub>*al caLAI*X]. canonical WO  
pro put.FUT.2PL the knife in.the drawer  
'We will put the knife in the drawer'.
- b. \* *Ficarem* [<sub>F</sub>*el ganiVET*] *al calaix*. in situ-marking

- **Catalan alternative:**

**dislocation** (Vallduví 1991, 1992, see (3a)) or **p-movement** (Domínguez 2002, (3b)).

- (3) a. pro *Hi ficarem* [<sub>F</sub>*el ganiVET*] \_\_\_\_, *al calaix*. CLRD  

- b. pro *Ficarem al calaix* [<sub>F</sub>*el ganiVET*] \_\_\_\_. p-movement  


# Theoretical and empirical discrepancies: contrastive focus

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## 1. Theoretical studies – Spanish and Catalan

- **Focus fronting**

(4) [<sub>CF</sub> Un MerCEdes] s'ha comprat el Jordi  
a Mercedes REFL-have.3SG bought the Jordi  
'Jordi has bought a Mercedes'.

- **Clefting**

(5) Sou [<sub>CF</sub> voSALtres] que ho sabeu.  
be.2PL you that ACC know.2PL  
'It is you who knows it'.

- **Focus marked prosodically *in situ***, see (1b, 2b)

These strategies seem to be restricted to **contrastive focus** (*Spanish*: Zubizarreta 1998, 1999, Moreno Cabrera 1999; *Catalan*: Solà 1990, 2002, Quer 2002, Vallduví 1991, 1992, 2002).

# Theoretical and empirical discrepancies: empirical studies

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## 2. Empirical studies

- Neutrally focused elements can also remain *in situ* (see Gabriel et al. (2009), Gabriel 2010, Vanrell & Fernández-Soriano (2013), among others)
- (1) b. [<sub>F</sub> Los aLUMmnos] *se enfrentaron con la policía.* in situ-marking  
the students PRON confront with the police  
'The students confronted the police'.
- (2) b. pro *Ficarem* [<sub>F</sub> el ganiVET] *al calaix.* in situ-marking  
pro put.FUT.2PL the knife in.the drawer  
'We will put the knife in the drawer'.
- These data **cast doubt** on claims made by Vallduví (1991, 1992) and Zubizarreta (1998).

# Theoretical and empirical discrepancies

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## 3. Discrepancies

	Theoretical studies		Empirical studies
Neutral Focus	P-movement Dislocation	≠	In situ

- **Standard varieties** of Spanish and Catalan.
- Use of **introspection** and **grammaticality judgments**.

- **Non-standard varieties** of Spanish and Catalan.
- **Production experiments** and **judgment tasks**.
- Studies suggest that **word order and intonation** can be used to **different degrees**.



# Goals of our study

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Present paper has two goals:

- 1. Experimental investigation of focus** in (close-to) standard varieties, namely Majorcan Catalan (Eastern Catalan) and Madrid Spanish (Castilian Spanish).
  - Data broadly support the claims made by Zubizarreta (1998, 1999 for Spanish) and Vallduví (1991, 1992) for Catalan (see Vanrell & Fernández-Soriano 2013).
- 2. Theoretical account of focus** in Spanish and Catalan (in the framework of *Stochastic Optimality Theory* (SOT, Boersma & Hayes 2001)).
  - No previous (optimality) theoretic model of focus for Catalan.
  - Circumvent some shortcomings of previous proposals for Spanish (Gutiérrez-Bravo 2002, Gabriel 2010).

# Experimental study: Methodology

- Task: production experiment, semi-spontaneous speech.
  - This presentation: **Narrow neutral focus** on **subject** and **object**.
  - Question-answer pairs from short picture stories (Gabriel et al. 2009, Gabriel 2010).



(6) *Blancanieves trajo las manzanas con fatiga.*

[Short story]

Snow.White bring.PAST.3SG the apples with tiredness  
'Snowwhite brought the apples with tiredness.'

(7) a. *¿Qué trajo Blancanieves con fatiga*

[<sub>F</sub> DO]

what bring.PAST.3SG Snow.White with tiredness  
'What did Snowwhite brought with tiredness?'

b. *Blancanieves trajo con fatiga las naranjas,*  
*¿verdad?*

[<sub>CF</sub> DO]

S.W bring.PAST.3SG with tiredness the oranges  
right

'Sw. brought the tangerines with tiredness, right?'<sup>10</sup>

# Experimental study: Methodology

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- Task: production experiment, semi-spontaneous speech.
  - **24 short stories:**
    - full sentences with a canonical syntactic structure (SVO<sub>DO</sub> O<sub>IO</sub>/Adjunct)
    - controlled for the focused constituent (S, V, O<sub>DO</sub> and O<sub>IO</sub>).
  - Participants were asked to respond to a series of questions by using all of the constituents that appeared in the short stories.
- Participants
  - 7 Majorcan Catalan speakers (aged between 25 and 40, mdn = 33).  
**1680 contours for Catalan** (24 short stories x 10 questions x 7 speakers)
  - 4 Madrid Spanish speakers (aged between 20 and 29, mdn = 20).  
**1056 contours for Spanish** (24 short stories x 11 questions x 4 speakers)

# Experimental study: Methodology

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- The data were then annotated in Praat (Boersma and Weekink 2013) according to the:
  - orthographic transcription
  - prosodic transcription
  - syntactic strategy used by the speaker
  - syntactic order
  - focus type and focused constituent
- Prosodic transcription based on **Cat\_ToBI** and **Sp\_ToBI systems** (Prieto et al. in press-2015, Hualde and Prieto in press-2015).
- Zoom H4n digital audio recorder, AKG C520 condenser microphone (44100 Hz sample rate, 16 bit amplitude resolution).

# Experimental study: Results

- Table 1:**  
 Frequency of the variable SYNTACTIC STRATEGY in **neutral focus declaratives**.

	CAT	SPA
[ <sub>F</sub> S]	<b>Neutr./Front. 42%:</b> <i>Na Maria dóna el llibre a en J.</i> <b>Clefting 34.6%:</b> <i>Es na Maria que dóna el llibre a en J.</i> <b>Left-Disloc. 16%:</b> <i>A en J., el llibre, l'hi dóna na Maria</i>	<b>Clefting 71.1%:</b> <i>Es María la que le da el libro a J.</i> <b>P-movement 14.5%:</b> <i>Le da el libro a J. María</i> ____
[ <sub>F</sub> O <sub>DO</sub> ]	<b>Left-Disl. 36.5%:</b> <i>A en J., na Maria li dóna el llibre</i> ____ <b>Fronting 34.8%:</b> <i>El llibre dóna na Maria a en J.</i> <b>Right-Disl. 15.7%:</b> <i>Na Maria li dóna el llibre</i> __, a en J.	<b>P-movement 47.9%:</b> <i>María le da a J. el libro</i> ____ <b>Clefting 23.3%:</b> <i>Es el libro que María le da a J.</i>
[ <sub>F</sub> O <sub>IO</sub> / adjunct]	<b>Fronting 42.5%:</b> <i>A en J. dóna na Maria el llibre</i> ____ <b>Neutral WO 14.4%:</b> <i>Na Maria dóna el llibre a en J.</i> <b>Right-Disl. 13.2%:</b> <i>Na Maria el dóna</i> __ a en J., el llibre	<b>Neutral 43.6 %:</b> <i>María le da el libro a J.</i> <b>Clefting 21.3%:</b> <i>Es a J. a quien le da el libro María</i>

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- Catalan: Dislocation of non-focused material or fronting
- Spanish: P-movement and clefting

# OT Analysis

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- **Traditional Optimality Theory (Prince & Smolensky 1993/2004):**
  - Grammars of individual languages are a strictly ranked set of violable constraints C ( $C1 \gg C2 \gg C3$ ).
- **Stochastic Optimality Theory (SOT, Boersma & Hayes 2001):**
  - The constraints are ranked along a continuous scale.
  - Distance between the constraints can vary.
  - SOT interprets constraints as ranges of (ranking) values and not as single points .
  - Constraint ranges overlap when the distance between two constraints is short.
  - In a certain percentage of the evaluations (depending on the amount of overlap), a lower-ranked constraint is preferred over a higher-ranked constraint, and the suboptimal candidate wins.

**For space reasons, we do not propose ranking values, i.e. we do not apply the full SOT apparatus - even though our data have frequency distributions.**

# OT Analysis

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Our account relies on **six constraints**.

a) **STRESSFOCUS (SF)** requires that the focus be realized with main stress (Truckenbrodt 1995)

\*[F Los alumnos] se enfrentaron con la poliCÍA.

b) **HEAD-IP (H-IP)**, main stress occurs in the right-most position in its intonational phrase (Truckenbrodt 1995)

\*[F Los aLUMnos] se enfrentaron con la policía.

c) **SUBJECT (SBJ)** requires that the highest A-specifier be filled by a subject (Grimshaw & Samek-Lodovici 1998); violated when Spec,TP is not filled by a subject.

\*[<sub>TP</sub> \_\_\_ [<sub>T°</sub> Se enfrentaron [<sub>VP2</sub> con la policía [<sub>VP1</sub> [F los alumnos]]]]].



# OT Analysis

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d) **FAITHSYNTAX (FAS)** requires that no syntactic material be added to the input (Destrueel 2013:208); violated when GEN introduces additional material (as in the case of clefts).

*\*Es el libro lo que María le da a Juan.*

e) **\*P-MOVEMENT (\*P-M)** militates against p-movement, (i.e. against realizing material below C, T, and v that does not belong to the verbal chain C-T-v (adapted from Gabriel's 2010 STAY- $\Phi$ )).

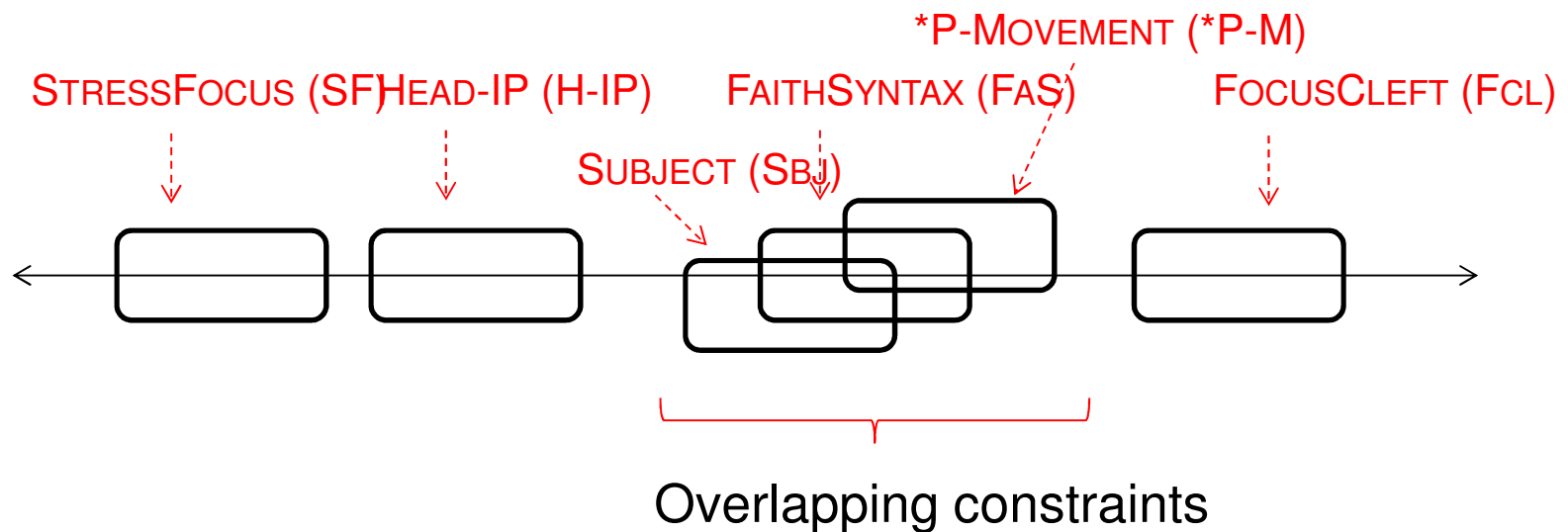
*\*María le da a Juan el libro.*

f) **FOCUSCLEFT (FCL)** requires a focus element to be clefted (Destrueel 2013:200).

(This constraint is not active in all-new / broad focus contexts, as more than one constituent is part of the focus domain).

# OT Analysis

- The underlying constraint hierarchy is given in (8).



- The interaction between the six constraints is illustrated for Spanish narrow neutral focus on both the subject in Table 3 and the direct object in Table 4.

# OT Analysis

- Neutrally focused subjects in Spanish

Overlapping constraints

Normal ranking

Subject = neutral focus	SF	H-IP	SBJ	FAS	*P-M	FCL
NORMAL WO María le da el libro a Juan.		*!				*
<b>P-MOV</b> Le da el libro a Juan María.			*!		*	*
<b>CLEFT</b> Es María la que le da el libro a J				*		
LD El libro, se lo da a Juan María.			*!	*		*
RD Se lo da a Juan María, el libro.			*!	*		*

Reverse ranking

Subject = neutral focus	SF	H-IP	FAS	SBJ	*P-M	FCL
NORMAL WO María le da el libro a Juan.		*!				*
<b>P-MOV</b> Le da el libro a Juan María.				*	*	*
<b>CLEFT</b> Es María la que le da el libro a J			*!			
LD El libro, se lo da a Juan María.			*!	*		*
RD Se lo da a Juan María, el libro.			*!	*		*

Table 3

# OT Analysis

- Neutrally focused DO in Spanish

Overlapping constraints

Normal ranking

Direct object = neutral focus	SF	H-IP	SBJ	FAS	*P-M	FCL
NORMAL WO María le da el libro a Juan.		*!				*
<b>P-MOV</b> María le da a Juan <u>el libro</u> .					*	*
<b>CLEFT</b> Es <u>el libro</u> que María le da a J.				*!		
LD A Juan, María le da <u>el libro</u> .				*!		*
RD María le da <u>el libro</u> , a Juan.				*!		*
FRONTING <u>El libro</u> le da María a Juan.		*!				*

Reverse ranking

Direct object = neutral focus	SF	H-IP	SBJ	*P-M	FAS	FCL
NORMAL WO María le da el libro a Juan.		*!				*
<b>P-MOV</b> María le da a Juan <u>el libro</u> .				*!		*
<b>CLEFT</b> Es <u>el libro</u> que María le da a J.					*	
LD A Juan, María le da <u>el libro</u> .					*	*!
RD María le da <u>el libro</u> , a Juan.					*	*!
FRONTING <u>El libro</u> le da María a Juan.		*!				*

Table 4

# OT Analysis

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## Catalan

- The results suggest that the constraint **\*P-Mov is ranked high**, due to the non-existence of this type of realization.
- **FRONTING**: A constraint that requires the fronting of the focused constituent into Spec,FocP is needed (**SPEC,FOCP/FOCUS**, cf. Gabriel 2010: 205 for a similar constraint).
- **DISLOCATION**: The fact that dislocations are much more common in Catalan than in Spanish can be accounted for by the constraint **DISLOCATEGIVEN**, which requires that given material be left- or right-dislocated (see Samek-Lodovici 2013). This constraint overlaps with SUBJECT, FAITHS, and SPEC,FOCP/FOCUS.

# Discussion & Conclusion

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- Discrepancies: Due to considering different varieties of Spanish and Catalan
  - **Dialectal variation must be taken into account as a decisive factor involved in the variation of focus realization strategies** (cf. V&FS 2013).
- Our data provide support for Zubizarreta's (1998, 1999) **p-movement** analysis and Vallduví's (1991, 1992) **dislocation** analysis.
  - Differences: Spanish makes a lot of use of clefting
  - Differences: Catalan hardly uses p-movement
- The proposed optimality theoretic approach is able to account for the variation attested in the data as well as for cleft constructions.
  - It thus offers clear advantages over the approaches proposed by Gutiérrez-Bravo (2002) and Gabriel (2010).
- The present approach also attempts to account for language-specific differences.

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**Thank you!**

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