## The syntax and information structure interface: VS order in Catalan vs Spanish

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## Outline

- The Phenomenon
- Theoretical Background
- Research Questions
- Corpus data
- Experimental data
- Concluding Remarks


## Focus Structure

- Predicate-focus:


## What happened to your car? My car [BROKE DOWN].

- Argument-focus:

I heard your motorcycle broke down?
[My CAR] broke down.

- Sentence-focus:

What happened?
[My CAR broke down].

## Focus Structure

## Sentence-focus: (adapted from Lambrecht 1994:223)

## What happened?

English: [My CAR broke down].
Spanish: [Se me ha roto el COCHE].
Catalan: [Se m'ha espatllat el COTXE].

- In English, focus is usually marked by means of prosodic stress. In the Romance languages (which are SVO) word-order is a more common mechanism.
- In Spanish and Catalan, final constituents are assigned prosodic stress. It is believed informational focus aligns with sentential stress.


## Topic

- Topic is understood as "what the sentence is about".
- All sentences need a topic, even sentence-focus structures.
- $\quad$ Topic $=$ Subject of Predication (SoP)
- Erteschik-Shir's (1997) stage topic: the spatio-temporal parameters of the sentence.
- Topic needs to be given information, not old.
- Some Romance languages are more restrictive than others when it comes to the mapping of IS onto syntax. (Leonetti 2017)


## What happened?

Spanish:
$\begin{array}{ll}\text { 1. Ha llegado María. } \\ \text { has arrived } & \text { Mary }\end{array}$
'Mary has arrived.'
2. Se ha ido María. RfL has left Mary 'Mary has left.'

## Catalan:

| 1. Ha arribat la | Maria. |
| :--- | :--- | :--- |
| has arrived the | Mary |
| 'Mary has arrived.' |  |

2. \#Se n'ha anat la Maria.
RFL CL=has left the Mary
'It is Mary who left.'

## Theoretical background

- VS is the canonical word-order for unaccusatives in the Romance languages.
=> VS order should be felicitous in sentence-focus structures.
- There's a difference in interpretation between SV/VS order:

Italian (from Pinto 1997)

1. Dante e entrato.

Dante is entered
'Dante has entered (into some place).'
2. E entrato Dante. is entered Dante 'Dante has entered (here/into this place).'

## Theoretical background

- In absence of an overt locative or temporal phrase, the Romance languages require a (somewhat deictic) null locative in subject position to licence sentence-focus in VS. (Fernández-Soriano 1999, Corr 2016, a.o.)
- Bentley \& Cruschina's (2018) BFSI proposal for Italian: covert preverbal Subject of Predication (SoP) which can be
- Thematic SoP: a goal argument is available in the thematic grid of the verb (e.g. arrive).

Sono arrivati i ragazzi
Are arrived the kids
'The kids have arrived'
[subj ( $\exists$ loc) $)$ [pred sono arrivati i ragazzi]

- Situational SoP: a non-thematic goal argument inferred from the situation or context (e.g. change-of-state verbs such as die).

Sono morti i soldati.
are died the soldiers
'The soldiers have died.'
$[$ subj $(\exists e)($ past $(e))]\left[{ }_{[p r e d}\right.$ sono morti i soldati]

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## Theoretical background: Bentley \& Cruschina (2018)

Change-of-state predicates are divided into:

- Definite change (which specify an endpoint)
- Indefinite change (which encode the attainment of a degree with respect to a given property and only imply the existence of a final state)

| Predicate type | SoP type | Example <br> Quantized change - speaker oriented <br> verbs of inherently directed motion <br> The clienti. <br> Activities with goal argument Thematic |
| :--- | :--- | :--- |
| Quantized change - telic verb with a <br> state-goal | Situational | Hanno telefonato I ragazzi. <br> 'The kids have phoned (here/us)' |
| Non-quantized change - atelic verbs with <br> goal inferred from adjectival base | Situational | Sono morti i soldati. <br> 'The soldiers have died' |
| Non-quantized change - atelic verbs with <br> goal inferred from contextual clues | Situational | Si è svuotato il serbatoio. <br> 'The tank has become empty.' |

## Research Questions:

- What verbs can appear in a sentence-focus VS construction in Spanish and Catalan? Are Spanish and Catalan different?
- Are the BFSI licensing arguments in Bentley \& Cruschina (2018) able to account for the Catalan and Spanish evidence?
> Data triangulation: corpus study, Production task, and Acceptability Judgement Task


## Corpus Study

- Corpora:
- Spanish: CORPES
- Catalan: CTILC
- Written data from $21^{\text {st }}$ century
- Diatopic varieties:
- Spanish: Peninsular Spanish
- Catalan: Central Catalan


## Corpus study

Aim for 400 hits/verb:
$\left.\begin{array}{|c|c|c|}\hline \text { English } & \text { Spanish } & \text { Catalan } \\ \hline \text { Arrive } & \text { Llegar } & \text { Arribar } \\ \hline \text { Die } & \text { Morir } & \text { Morir } \\ \hline \text { Appear } & \text { Aparecer } & \text { Aparèixer } \\ \hline \text { Grow } & \text { Crecer } & \text { Créixer } \\ \hline \text { Increase } & \text { Aumentar } & \text { Augmentar } \\ \hline \text { Improve } & \text { Mejorar } & \text { Millorar } \\ \hline \text { Belong } & \text { Pertenecer } & \text { Pertànyer } \\ \hline \text { Sleep } & \text { Dormir } & \text { Dormir } \\ \hline\end{array}\right\}$ Indefinite result state
> Total hits: 5,627 (Spanish: 3,200; Catalan: 2,427)

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## Manual correction of hits

- Overt subject
- Declarative sentences
- Indicative mood
- Root clause

Disregarded:

- Causative alternation
- Hits with negation
- Root clause preceded by subordinate clause


## Corpus study

Each corpus hit was coded for the following categorical binary variables:

- Word order [SV/VS]
- Presence of a sentence-initial temporal or locative adverbial [bare/loctemp]
- Definiteness of the subject [def/indef]
- Verb class [def result, indef result, other]

Catalan examples from CTILC:

1. [VS, loctemp, def, def result]

El dia 10 va morir Arturo Nogueira.
The day 10 aux.pst die Arturo Nogueira.
'Arturo Nogueira died on the 10th.'
2. [SV, bare, indef, def result]

Molts vegetals morien.
Many vegetals die.ImpF
'Many vegetables died.'

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## Corpus study: Results



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## Corpus study: Results



- Results from fixed-effects regression model show independent variables are statistically significant ( $p$-value $<$ $0.05)$.
- Catalan and Spanish do not show significant differences.
- Presence of adverbial and indefinite subjects favour VS order.
- There are some similarities between 'indefinite result' verbs and 'other'.

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## Fieldwork data: AJT / Production Task

- 80 native speakers: 40 Central Catalan; 40 Peninsular Spanish
- Software: Psychopy
- 1:1 filler ratio (transitive verbs in narrow/contrastive focus)
- 12 verbs (x3 verb classes) x word order (SV/VS) x definite subject (def/indef)

| English | Spanish | Catalan |
| :---: | :---: | :---: |
| Arrive | Llegar | Arribar |
| Die | Morir | Morir |
| Appear | Aparecer | Aparèixer |
| Leave | Irse | Anar-se |
| Grow | Crecer | Créixer |
| Increase | Aumentar | Augmentar |
| Improve | Mejorar | Millorar |
| Change | Cambiar | Canviar |
| Sneeze | Estornudar | Esternudar |
| Walk | Andar | Caminar |
| Sing | Cantar | Cantar |
| Talk | Hablar | Parlar |

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## Fieldwork data: AJT / Production Task

Participants presented with a context ended in "What happened?" (written + audio)

- AJT:
- 2 sentences appear in SV and VS order.
- Participant listens to them and ranks them from 1 to 5.

```
Spanish: El rey ha muerto. /Ha muerto el rey.
English: The king has died.
```

- Production Task:
- 1 infinitive appears on screen.
- Participant produces a sentence using the verb in answer to 'what happened?'.

```
Spanish: LLEGAR
Target sentence: Han llegado dos famosos.
English: ARRIVE
Target sentence: Two famous people have arrived.
```

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## Acceptability Judgement Task



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## Acceptability Judgement Task



- Catalan and Spanish show no significant differences.
- No significant differences between verb class in SV order.
- Definite subjects are preferred in SV order.

Some differences between verb class in VS order. Indefinite result and unergatives seem to be more similar than definite and indefinite result.

- Slight preference for indefinite subjects in VS order definite result verbs.

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## Production Task

Word Order by Verb Class and Subject (Catalan)


Word Order by Verb Class and Subject (Spanish)


## Production Task

Word Order by Verb Class and Subject (Catalan)


Word Order by Verb Class and Subject (Spanish)


- Catalan and Spanish show no significant differences.
- VS is more frequent with definite result verbs, especially with indefinite subjects.
- Some differences between verb class. Indefinite result and unergatives seem to be more similar than definite and indefinite result.


## Concluding remarks

- The data seems to indicate there is no significant differences between Catalan and Spanish.
- Bentley \& Cruschina's (2018) theoretical proposal seems to be on the right track with regards to verb class being crucial in the licensing of BFSI. However, at least for Catalan and Spanish, only verbs with a definite goal might license it.
- Quantitative analysis of fieldwork data will help determine if the predictors are statistically significant (as the plots seem to suggest).


## Concluding remarks - Further research

- Qualitative analysis may shed some light onto microvariation between languages.
- Need to explore the differences between categorical and thetic interpretations.

```
English: The king has died.
Spanish: El rey ha muerto. SV = categorical?
    Ha muerto el rey. VS = thetic?
```

- Need to explore exhaustive reading in VS order in Catalan vs Spanish:

Catalan: Ha marxat la Maria. (Mary left and nobody else did)
Spanish: Se ha ido Maria. (Mary left and maybe somebody else did too)

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Corpora:

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