1 Assumptions

Intransitives

(a) Unergatives

(b) Unaccusatives

T’DP

VPT

TP

Spec

V’

V

External argument
[AGENT]

No external argument

Internal argument
[THEME]

Unaccusative Hypothesis (UH) is universal, Burzio (1986) → two different types of intransitive verbs: unergatives and unaccusatives:

Unergatives: subject base-generates in subject position (SV)

Laura estornudó
‘Laura sneezed’

Unaccusatives: subject base-generates in object position (VS).

Unaccusatives normally express movement (arrive, come, go, etc).

Llegó Laura
‘(There) arrived Laura’

2 Cross-linguistic evidence for UH

Unaccusatives manifest in different ways in different languages (but out of scope of this study):

SV/VS orders (Spanish, Italian, Romanian, partially in English)

Unaccusatives select auxiliary ‘be’ (rather than ‘have’): Burzio (1986)

in German, Italian, French, or even Middle English:

<table>
<thead>
<tr>
<th>Unergative</th>
<th>Unaccusative</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have swam</td>
<td>I have arrived</td>
</tr>
<tr>
<td>*I am swam</td>
<td>I am arrived</td>
</tr>
</tbody>
</table>

3 Word order: [top]/[foc] and verb type

Neutral focus:

(1) Unaccusatives. Context: Your friend Manuel and you are at a party at his place. While Manuel is in the kitchen getting a beer, a neighbour you don’t know comes in to complain about the loud music. When Manuel comes back from the kitchen, he asks you: ‘What happened?’ You answer:

a. Spanish: Vino un vecino (VS)

b. English: A neighbour came (SV)

(2) Unergatives. Context: You are at a restaurant with your friend Maria. Maria goes to the toilet and in the meanwhile you can see a woman shouting in the street. When Sole comes back, she asks you: ‘What happened in the street?’ You answer:

a. Spanish: Una mujer gritó (SV)

b. English: A woman shouted (SV)

Focused subject:

(3) Unergatives. Context: Last night you went to the disco with your friends. It was boring because only a girl danced. Today, your mum phones you and asks: Who danced last night? You answer:

a. Spanish: Bailó una chica (VS)

b. English: A girl danced (SV)

(4) Unaccusatives. Context: You are at a party with your friend Maria. While Maria is in the toilet, a man you don’t know arrives. When Maria comes back from the toilet, she realises there’s somebody else but doesn’t know who, so she asks you: ‘Who arrived?’ You answer:

a. Spanish: Llegó un hombre (VS)

b. English: A man arrived (SV)
[±interpretable] features and word order:

- **Neutral contexts** → [-interpretable] due to universal lexical features of unaccs (VS) vs unergs (SV)
- **Focused Subject contexts** → [+interpretable] due to movement to satisfy principle [TOP] [FOC] in Spanish (Zubizarreta, 1998) → therefore VS order with both verbs.

**Unergatives:**

\[
\begin{align*}
\text{Laura} & \quad \text{T}' \quad \text{Spec} \quad \text{VP} \\
\text{estornudó} & \quad \text{tj} \\
\end{align*}
\]

(a) What happened? (SV)  
(b) Who sneezed? (VS)

**Unaccusatives:**

\[
\begin{align*}
\text{Laura} & \quad \text{T}' \quad \text{Spec} \quad \text{VP} \\
\text{illegó} & \quad \text{tj} \quad \text{Laura}, \\
\end{align*}
\]

(a) What happened? VS  
(b) Who arrived? (VS)

### 4 Aims of our study

- **Original aim:** to test whether learners of Spanish behave differently with [+interpretable] and [-interpretable] verbal (and also pronominal) features:
  - [+interpretable] more prone to L1 transfer: learners would prefer SV order with both unacc/unerg (instead of expected VS order).
  - [-interpretable] less prone to L1 transfer as they are universal: learners would prefer in neutral contexts: SV with unergatives and VS with unaccusatives.

- **These expectations originated from project on attrition (Tsimpli, Sorace & Heycock)**

- **Provisional hypothesis (for today):**
  - (H1) if learners show knowledge of [-interpretable] features, then abstract verbal features located in lexicon are accessible after puberty (Full Access).
  - (H0) if learners do not show knowledge of [-interpretable] features, then abstract verbal features located in lexicon are not accessible after puberty.

- I get a somewhat mixed result (not very good result)
5 Previous SLA studies

No studies on the nature of [±interpretable] and verb type. However:

- **Hertel (2000)** English learners of Spanish prefer/produce VS with unaccusatives more than with other types of verbs
- **De Miguel (1993)** English native learners of Spanish produce and accept VS order more with unaccusatives than with any other verb type.
- **Hertel & Pérez-Leroux (1999)** English native learners of Spanish accept VS order more with unaccusatives than with unergatives.
- **Hirakawa (1999)** English native learners of Japanese are sensitive to the different interpretation of grammatical subjects with unaccusatives vs. unergatives.
- **Balcom (1997)** Chinese native learners of English preferred passive morphology more with unaccusatives than with any other verb type.
- **Zobl (1989)** learners of English inverted SV order to VS order with unaccusatives (independent of whether this was possible in their L1).

6 Subjects in our study

- **Experimental**: L1 English learners of L2 Spanish at the Uni. of Essex
- **Advanced level** (University of Wisconsin PT)
- **n=16**
- **Control group**: Spanish natives (n=15)

7 Method

- **Paired GJT**: Example:
  
  You are at a party with your friend Laura. Laura leaves the room and at that moment the police arrive because the party is too noisy. When Laura comes back, she asks you: ¿Quién llegó? You answer:
  
  (a) La policía llegó. -2 -1 0 +1 +2
  (b) Llegó la policía. -2 -1 0 +1 +2

- **Design**: 4 conditions:
  
<table>
<thead>
<tr>
<th>[-interpretable]: neutral “what happened?”</th>
<th>[+interpretable]: Foc S “who arrived?”</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Susana estornudó</td>
<td>(a) Susana estornudó</td>
</tr>
<tr>
<td>(b) ! Estornudó Susana</td>
<td>(b) Estornudó Susana</td>
</tr>
<tr>
<td>(a) ! Susana llegó</td>
<td>(a) ! Susana llegó</td>
</tr>
<tr>
<td>(b) Llegó Susana</td>
<td>(b) Llegó Susana</td>
</tr>
</tbody>
</table>

- **6 items** for each condition (after ‘Darwin’ test):

<table>
<thead>
<tr>
<th>Unergatives</th>
<th>Unaccusatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>bailar ‘to dance’</td>
<td>entrar ‘to come in’</td>
</tr>
<tr>
<td>gritar ‘to shout’</td>
<td>llegar ‘to arrive’</td>
</tr>
<tr>
<td>dormir ‘to sleep’</td>
<td>salir ‘to leave’</td>
</tr>
<tr>
<td>reír ‘to laugh’</td>
<td>venir ‘to come’</td>
</tr>
<tr>
<td>llorar ‘to cry’</td>
<td>volver ‘to return’</td>
</tr>
<tr>
<td>estornudar ‘sneeze’</td>
<td>escapar ‘to escape’</td>
</tr>
</tbody>
</table>

  - 6 [-interpretable] and 6 [+interpretable] unaccusative conditions
  - 6 [-interpretable] and 6 [-interpretable] unergative conditions

  - All items are randomised (‘blocking’ procedure, Cowart, 1997)
  - There are 2 versions for each task, so as to minimise order-of-presentation effects.

8 Data analysis

- **Data were coded in MS Excel** (v. 97) and analysed with **SPSS** (v.9.0).
- **Tests I haven’t performed yet**: non-parametric tests to check sample’s **normality of distribution**.
- **Within-group analysis** (for both word orders in a group): paired samples t-test
- **Between-group analysis** (for each word order in a condition): GLM univariate with posthocs (in my date I’ve got 3 groups: Spanish, English and Greek, though Greeks won’t be analysed here)
9 Results

Unacs [-interpretable]

<table>
<thead>
<tr>
<th>Group</th>
<th>Spanish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.0</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>0.0</td>
<td>-0.5</td>
</tr>
<tr>
<td></td>
<td>-1.0</td>
<td>-1.5</td>
</tr>
<tr>
<td></td>
<td>-1.5</td>
<td>-2.0</td>
</tr>
</tbody>
</table>

Unac Neutral: VS
Unac Neutral: !SV

Spanish: VS different from !SV (p=0.01)
English: VS not different from !SV (p=0.34)

However, let’s focus on grammatical/ungrammatical
- VS not different between Spanish-English (p=0.84)
- !SV different between Spanish-English (p=0.03) [not excessively]

Conclusion:
- Spanish natives show knowledge of [-interp] features since they distinguish gramm./ungramm. word order
- English natives don’t show complete knowledge of [-interp], although they show preference like Spanish natives.
- Grammatical: both groups show same knowledge
- Ungrammatical: Spanish group according to hypothesis, English group indeterminate intuition
- Feature transfer? If so, we’d expect English group to prefer !SV order to VS order, which is not exactly the case.

Unerks [-interpretable]

<table>
<thead>
<tr>
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<td>0.0</td>
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<tr>
<td></td>
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</tr>
<tr>
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<td>-1.5</td>
</tr>
<tr>
<td></td>
<td>-1.5</td>
<td>-2.0</td>
</tr>
</tbody>
</table>

Unerg Neutral: !VS
Unerg Neutral: SV

Spanish: !VS different from SV (p<0.01)
English: VS not different from !SV (p=0.15)

However, let’s focus on grammatical/ungrammatical
- !VS different between Spanish-English (p=0.01)
- SV different between Spanish-English (p<0.03) but not too significant

Conclusion:
- Spanish natives show knowledge of [-interp] features since they distinguish gramm./ungramm. word order
- English natives don’t show complete knowledge of [-interp], although they show preference like Spanish natives.
- Grammatical: both groups show just about same knowledge.
- Ungrammatical: Spanish group according to hypothesis, English group indeterminate intuition
- Feature transfer? Difficult to decide in this case since SV is grammatical.
- Interesting: English natives do prefer !VS with unergatives
10 Conclusion

Learners (advance level) do not seem to be able to make full use of [-interp] features located in the verbal lexicon → support Hawkins and Chan’s (1997) FFFH → after all, functional features in their study are [-interp]

However between groups: learners behave similarly to natives in grammatical contexts; but differently in ungrammatical contexts → need to research it further

However within-groups: learners prefer grammatical constructions to ungrammatical ones → L1-feature transfer not necessarily the case.

Sorace (1993) English subjects show indeterminate intuitions (= divergent representations) with unaccusatives ‘regardless of whether they are grammatical or ungrammatical’ (p. 42)

To do:

Discard some subjects from analysis
Analyse data in more detail
Compare unacc/unerg results with OPC results

My guess for unacc/unerg and OPC (pronouns) results:

IF items are grammatical, THEN Spanish and English groups behave similarly with both [+interpretable] and [-interpretable]

IF items are ungrammatical, THEN Spanish group behaves according to theory; English group shows indeterminate intuitions (although they behave towards the native norm)

11 References

Hawkins and Chan (1997)
Hertel, T. J. and Pérez-Leroux (1999): The second language acquisition of Spanish word order for unaccusative verbs. BUCLD 23 Proceedings, 228-239.