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0. Introduction

- The primary goal here is to explore into the observable correlation that exists between demonstrative neuter pronouns and natural language tenses, and check whether this issue could eventually help us understand better the discourse anaphoric/deictic character of these elements.
- Given the referential complexity of neuter demonstratives (apparently, they can refer to a variety of objects), the results of this study could eventually lead us to propose some sort of specialized uses for Spanish neuter demonstrative pronouns.
1. The Spanish Demonstrative System
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- As compared with other demonstrative systems (e.g. English binary ‘this-that’ system), Spanish instantiates a ternary system of demonstrative determiners and pronouns: **este - ese - aquel**.
- Spanish demonstratives show both a determiner use (of the type *este+NP*) and a pronominal use.
- They show purely deictic but also discourse anaphoric uses. Compare:
  1. *(a man pointing at a brand new Toyota car)*
     
     Me gusta ese.
     
     I-like that(one).
  2. En general, a la gente le gustan las grandes ciudades.
     In general, to the people they-like the big cities.
     Para mí, eso es muy sorprendente.
     For me, that is very surprising.
     “Generally, people like big cities. **That**’s very surprising to me though.”
Table 1: *Demonstrative Determiners and Pronouns of Spanish*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number</th>
<th>Determiner</th>
<th>Pronoun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masc.</td>
<td>Sg.</td>
<td>Este/Ese/Aquel</td>
<td>(NP)</td>
</tr>
<tr>
<td>Fem.</td>
<td></td>
<td>Esta/Esa/Aquella</td>
<td>(NP)</td>
</tr>
<tr>
<td>Masc.</td>
<td>Pl.</td>
<td>Estos/Esos/Aquellos</td>
<td>(NP)</td>
</tr>
<tr>
<td>Fem.</td>
<td>Pl.</td>
<td>Estas/Esas/Aquellas</td>
<td>(NP)</td>
</tr>
<tr>
<td>Neuter</td>
<td>Ø</td>
<td>Esto/Eso/Aquello</td>
<td></td>
</tr>
</tbody>
</table>
1. The Spanish Demonstrative System

• These elements have been traditionally characterized in terms of the features \([± \text{proximal}]\) and \([+\text{speaker}]/[+\text{addressee}]\).

• A canonical definition for Spanish demonstratives would be as follows:
Table 2: *The traditional characterization of Spanish demonstratives*
1. The Spanish Demonstrative System.

• Nevertheless, recent research on the referential properties of Spanish demonstratives (Gutiérrez-Rexach (2002), Gutiérrez-Rexach & Iker Zulaica (2005, 2006, 2007), Zulaica (2006)) has shown that this tripartite system can be redefined as a binary system with [+proximal] 
  *este* and [+distal] *aquel* occupying the poles of a binary opposition.

• The remaining demonstrative *ese* would play a neutral role in between, being the unmarked element without the constraints that both 
  *este* and *aquel* show in terms of [± proximity].

• Thus, we hypothesized there a presuppositional account for demonstratives (following Roberts (2001) and Zeevat (2003)) along the following lines:
<table>
<thead>
<tr>
<th>ESTE+NP</th>
<th>[ESE+NP]</th>
<th>[AQUEL+NP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>$e, x, y, t$</td>
<td>$e, x', y, t$</td>
<td>$e, x, x', y, t$</td>
</tr>
<tr>
<td>Utterance ($e$)</td>
<td>Utterance ($e$)</td>
<td>Utterance ($e$)</td>
</tr>
<tr>
<td>Agent ($e, x$)</td>
<td>Agent ($e, x$)</td>
<td>Agent ($e, x$)</td>
</tr>
<tr>
<td>Time ($e, t$)</td>
<td>Time ($e, t$)</td>
<td>Time ($e, t$)</td>
</tr>
<tr>
<td>Point ($x, y$)</td>
<td>Point ($x, y$)</td>
<td>Point ($x, y$)</td>
</tr>
<tr>
<td>Proximal ($y, x$)</td>
<td>Addressee ($e, x'$)</td>
<td>Addressee ($e, x'$)</td>
</tr>
</tbody>
</table>

$\langle \text{anchor}(y, \alpha) \rangle$

$\langle \text{anchor}(y, \alpha) \rangle$

$\langle \text{anchor}(y, \alpha) \rangle$

*Figure 1: Setting-up presuppositional DRSs*
1. The Spanish Demonstrative System.

- But these presuppositional DRSs should be slightly modified to account for the special referential properties of neuter demonstratives. Why?:
  A. In their discourse anaphoric use, these elements can refer to a varied sort of objects: eventualities, objects of belief and/or entire chunks of text.
  B. In many cases, the spatial presupposition [±proximal] moves to the temporal domain: entirely mental?, speaker internal?.
  C. It is clear that demonstrative neuter pronouns, at least in their discourse anaphoric and discourse deictic uses, are not accompanied by an overt pointing.

Thus, I propose the following discourse representation structures for Spanish neuter demonstratives:
<table>
<thead>
<tr>
<th>ESTO</th>
<th>ESO</th>
<th>AQUELLO</th>
</tr>
</thead>
<tbody>
<tr>
<td>$e, x, \beta, t$</td>
<td>$e, x, \beta, t$</td>
<td>$e, x, \beta, t$</td>
</tr>
<tr>
<td>utterance($e$)</td>
<td>utterance($e$)</td>
<td>utterance($e$)</td>
</tr>
<tr>
<td>agent($e, x$)</td>
<td>agent($e, x$)</td>
<td>agent($e, x$)</td>
</tr>
<tr>
<td>time($e, t$)</td>
<td>time($e, t$)</td>
<td>time($e, t$)</td>
</tr>
<tr>
<td>proximal($\beta, x$)</td>
<td>time($e, t$)</td>
<td>distal($\beta, x$)</td>
</tr>
</tbody>
</table>

Figure 2: *Initial setting-up presuppositional DRSs for demonstrative neuter pronouns*
2. Demonstratives/Tense Correlation
2. Demonstratives/Tense Correlation.

Similarly to the interaction that exists between demonstratives and deictic adverbs (here/there), there is also evidence that a matching between demonstratives and temporal deictics is required.

- Spanish is not exceptional in this respect. There appears to be a clear matching between the [+proximal] demonstrative *este* and those tenses which overlap or are close to the utterance time, thus satisfying a proximity presupposition.
- Equally, the [+distal] element *aquel* is preferably used with tenses that are distant to the utterance time.

- The following examples from Silva and Gutiérrez (2001) illustrate how the deictic features may interact with tense and aspectual properties:
2. Demonstratives/Tense Correlation.

(3)

a. ¿Qué resolviste de aquel problema que te *planteo/planteé?
   "What did you resolve about that problem that I pose/posed to you?"

b. ¿Qué resolviste de este problema que te planteo/*planteé?
   "What did you resolve about this problem that I pose/posed to you?"

c. ¿Qué resolviste de ese problema que te planteo/planteé?
   "What did you resolve about that problem that I pose/posed to you?"
2. Demonstratives/Tense Correlation.

(4)

a. ¿Qué resolviste de este problema que te estoy planteando?
   what resolved-you of this problem that to-you am-I-posing/
   he planteado/ *estaba planteando/*había planteado?
   have posed / was posing / had posed

b. ¿Qué resolviste de aquel problema que te *estoy planteando/
   what resolved-you of that problem that to-you am-I-posing/
   *he planteado/estaba planteando/había planteado?
   have posed / was posing /had posed

c. ¿Qué resolviste de ese problema que te estoy planteado/
   what resolved-you of DEM problem that to-you am-I-posing/
   he planteado/estaba planteando/había planteado?
   have posed /was posing /had posed?
3. Corpus Data
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• **The Hypothesis to check**: Does the correlation demonstrative/tense also obtain in the case of neuter demonstrative pronouns?

• With respect to the nature of the referent of the demonstrative pronoun, I will focus my investigation on eventualities (second order entities) and check whether the purported matching obtains.

• In order to check this point, I queried the corpus for occurrences of the demonstrative immediately followed by a conjugated predicate of event. A sample query would be like this:

  *esto sucede/ocurrió… (this occurs/happened…)*
  *eso sucede/ocurrió… (DEM occurs/happened…)*
  *aquello sucede/ocurrió … (that occurshappened…)*
3. Corpus Data

**Problems with this type of corpus study**

- Unfortunately, the lack of an annotated corpus for the so-called “abstract entities” forces the researcher to rely on his/her own intuitions to a greater extent. He needs to go back in the text and look for the referent of the pronoun (which is, by the way, a hard task specially when the referent goes beyond the sentential limits).
Frequency of Demonstratives (general)

<table>
<thead>
<tr>
<th>TOTAL (PER TYPE)</th>
<th>ESTO</th>
<th>ESO</th>
<th>AQUELLO</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL (GENERAL)</td>
<td>33.190</td>
<td>57.460</td>
<td>7.007</td>
</tr>
<tr>
<td>WEIGHT (%)</td>
<td>33.98%</td>
<td>58.83%</td>
<td>7.17%</td>
</tr>
</tbody>
</table>

97.657
Frequency of Demonstrative and Past Tenses (1)

<table>
<thead>
<tr>
<th></th>
<th>ESTO</th>
<th>ESO</th>
<th>AQUELLO</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM. + ERA ... (PAST/IMPERFECT)</td>
<td>288</td>
<td>784</td>
<td>445</td>
</tr>
<tr>
<td>DEM. + FUE ... (PAST/PRETERITE)</td>
<td>126</td>
<td>368</td>
<td>97</td>
</tr>
</tbody>
</table>
Frequency of Demonstrative and Past Tenses (2)

<table>
<thead>
<tr>
<th></th>
<th>ESTO</th>
<th>ESO</th>
<th>AQUELLO</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM. + HABÍA SIDO... (PAST/PLUPERFECT)</td>
<td>7</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>DEM. + ESTABA W. GERUND... (PAST PROGRESSIVE)</td>
<td>1</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>
Frequency of Demonstratives and Present Tense (1)

<table>
<thead>
<tr>
<th></th>
<th>DEM. + PRESENT SIMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESTO</td>
<td>326</td>
</tr>
<tr>
<td>ESO</td>
<td>159</td>
</tr>
<tr>
<td>AQUELLO</td>
<td>1</td>
</tr>
</tbody>
</table>
Frequency of Demonstratives and Present Tenses (2)

<table>
<thead>
<tr>
<th></th>
<th>ESTO</th>
<th>ESO</th>
<th>AQUELLO</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM. + ESTÁ W. GERUND... (PRESENT PROGRESSIVE)</td>
<td>27</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>DEM. + HA SIDO ... (PAST/PRESENT PERFECT)</td>
<td>102</td>
<td>76</td>
<td>2</td>
</tr>
</tbody>
</table>
Frequency of Demonstrative and Tense (Overall)

<table>
<thead>
<tr>
<th></th>
<th>ESTO</th>
<th>ESO</th>
<th>AQUELLO</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM. + PAST TENSE</td>
<td>422</td>
<td>1.163</td>
<td>557</td>
</tr>
<tr>
<td>DEM. + PRESENT TENSE</td>
<td>455</td>
<td>255</td>
<td>3</td>
</tr>
</tbody>
</table>
3. Corpus Data

Overall, the data presented so far appears to confirm to our expectations:

• On the one hand, the [+distal] *aquello* shows a higher relative frequency when accompanied with past tenses than with tenses that overlap or are close to the utterance time.

• Conversely, when compared with *aquello* the [+proximal] neuter demonstrative *esto* matches better with present tenses or even past tenses which are perceived as close to the utterance time, i.e, the present perfect.

• Finally, *eso* behaves according to our expectations with respect to tense: it shows a high frequency of occurrence irrespective of category.
Figure 3: Spatio-temporal perspective point for [+proximal] neuter demonstrative ESTO
Figure 4: *Spatio-temporal perspective point for [+distal] neuter demonstrative AQUELLO*
The Problem(s)

• But the picture is NOT completely clear yet. We are still left with the task of providing a suitable explanation for the high frequency of occurrence of [+proximal] *esto* with past tenses.

• The following picture shows one of the frequent occurrences of [+proximal] *esto* in an apparently [-proximal] use:
Q: ¿Hay muchos mitos en esta historia?
A: Sí, los hay; como que Watson y Crick trabajaban en una barraca o en un cobertizo para bicicletas. ¡No es verdad! Es cierto que este grupo, o cierta parte de este grupo ocupó la barraca que se convirtió en laboratorio, pero esto ocurrió cuatro años más tarde, en el 57. Es como la historia de Newton y la manzana: hace falta la barraca y hace falta la manzana.

(Entrevista a una historiadora de la ciencia, en prensa)

Q: Are there many myths in this story?
A: Yes, there are; like Watson and Crick working in a wooden hut, sort of a tiny garage for bycicles. That`s not true! it is true that this group, or some part of this group, occupied the hut that eventually became a laboratory. But this happened four years later, in 1957. It`s like Newton`s story and the apple: we need the hut as we need the apple.

(An interview with an historian of science, in press)
The Problem(s)

- Compare the previous example with the following, where the [+distal] *aquello*, refers to an event in its typical use:
4. Conclusions
4. Conclusions

• Although the correlation demonstrative/tense seems to be correct. There still appears to be evidence that goes against a full explanation for Spanish neuter demonstratives in terms of a \([± \text{proximity}]\) presupposition (either spatial or temporal).

Future points of study may include, but are not limited to:
• Is the neuter demonstrative pronoun \(\text{esto}\) an unmarked element with respect to a proximity presupposition (on a par with \(\text{eso}\)) in its discoursive function?
• If so, how can we explain its preference for eventive referents that are perceived as overlapping the speech time? Is it a change in progress whereby \(\text{esto}\) is becoming a “polifunctional” element?
• Can we explain this phenomenon only in terms of the cognitive status of the referent (in Gundel et al’s terminology?)
References