3. Null categories in grammar and referential processing

3.1. Referential processing in EP

The availability and accessibility of reference assignment predict that processing strategies are laid up by the phonetic, morphological and syntactic forms of the anaphoric expression that works as a cue to search the antecedent.

The head of the referential chain may have different levels of activation due to the structural position, its thematic role, the linear position in the sentence, or its pragmatic status as topic.

When the antecedent is Topic, Agent, Subject, and in first position, it displays a set of conditions that makes it the best referent for an anaphoric expression that occurs in a lower position in the sentence or in the text (Costa, Matos & Faria 1998; Costa, Faria & Kail 2004; Costa 2005).

Studies on EP show that, when co-reference is at stake, an antecedent with an overt or discursive prominence favors the choice of a subject pro, instead of an overt pronoun, in accordance with an economy strategy recalling the Avoid Pronoun principle (1)-(2). This is also in agreement with the postulate for minimal formal and conceptual antecedents (The accessibility marking scale, Ariel 1996; Centering Theory, Grosz, Jacob & Kleinerman 1988).

1. O João não cumpriu o pedido porque ele estava com a sua ex-namorada.
2. O João não cumpriu o pedido porque ele estava com a sua ex-namorada.

In this study, we contract how this is assigned to different minimal formal categories, the null ones, taking into account their syntactic bind a WH-variable or a NP-gap. Analysing the reading times of contexts with these three types of empty categories, we found a slight advantage in the reading time of the WH-variable and NP-gaps over the reading time of pro. We attributed this fact to the higher costs in processing pro, which has a higher referential value.

3.2. European Portuguese – some grammatical properties

EP exhibits interesting contrasts as the processing of anaphoric relations cross-lingual and inter-lingual agreement licenses and identifies the content of the pro in subject position (Mataus et al. 2003). This opens the range of null categories that may occur in the subject position of a finite clause: pro, bound variables, and NP-gaps.

Null categories occurring in Subject position in EP

- Base generated null pronoun, merged in the argument position to which it is related.
- In cases where the Subject position is root and subordinate clause in Null Subject Languages and in inflected (infinitive clauses in EP).
- It presents intrinsic referential content or exists as an empty.
- In a co-referential relation, it involves two independent referential elements (the antecedent NP and pro) in a compositional/complex referential chain.
- It presents intrinsic referential content or occurs as an expletive.
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3.4. Materials

We selected contexts for analysis in the text, and, within them, we delimited some regions (sign-posted in the data by vertical bars) that incorporate the target anaphoric expression. This anaphoric expression is both Subject and (non-marked) Object.

The differences between the values presented in the Table above may not have any statistical significance, but there are certain trends that are worth noting:

- o NP-gap vs. WH-gap: 45ms vs. 51ms
- o pro WH-gap (parenthetical) vs. co-referential WH-gap: 353ms vs. 51ms
- o pro WH-gap (parenthetical) vs. pro NP-gap: 45ms vs. 61ms

In conditions containing WH-gap with interpreted pronominal material the between WH-deployed phrase and its gap, there is an increase in the reading time when compared with contiguous conditions: 45ms vs. 51ms.

4. Results

The next Table presents the Mean of Total Reading Time per Character in all regions with WH-gap, parenthetical WH-gap, NP-gap, pro, and pro: the TRT/Char.

5. Discussion

The differences between the values presented in the Table above may not have any statistical significance, but there are certain trends that are worth noting:

The TRT/Char in regions with WH- and NP-gaps is lower than in contexts with pro: o WH- and NP-gaps vs. pro: 45ms vs. 61ms
- o Regions with NP-gaps have a lower TRT/Char than WH-gap.
- o NP-gaps vs. WH-gap: 45ms vs. 51ms
- o NP-gaps vs. pro: 50ms vs. 61ms

In conditions containing WH-gap with interpreted pronominal material the between WH-deployed phrase and its gap, there is an increase in the reading time when compared with contiguous conditions: 45ms vs. 51ms.

6. Conclusion

This preliminary study produced results which deserve to be explored in future research:

1. Anaphoric relations involving Subject gaps are not uniform with respect to their cognitive costs:
- o Anaphoric relations with co-referential pro are more costly than with gap.
- o Anaphoric relations with pro are more costly than with gap.
- o pro WH-gap activate search strategies for gap, and therefore the link is more automatic and efficient than when there is a pro: the gap strategy (Frazer 1987) seems to be useful in processing this type of anaphoric relationship.

2. We believe that there is a certain hierarchy of cognitive costs among the anaphoric elements aiming to explain the anaphoric processing should include other null elements besides pro, and should consider that they do not have all the same processing costs.

References


