Testing two information taxonomies in Spanish

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Abstract: Two information taxonomies, i.e., in the first experiment, New/Given distinction and, in the second experiment, three cognitive categories of the mental representation of referents: activation, semi-activation, inactivation differences have been explored in Argentinian Spanish. In the first experiment, semi-spontaneous materials were recorded from communicative interactions between three male speakers, one female speaker and the listener. Brand-New plus New (Inferrable) versus Given (Textually Evoked) items were selected for acoustic analysis. In the second experiment, activation, semi-activation, inactivation states encoded in semi-spontaneous discourses were taken from interactions between three male speakers and the listener. In both experiments, tonal prominences were studied through intonational contours on pairs of contrasted items. Natural values were transformed through logarithmic z-score normalization. Results in the first experiment indicated a relevant tonal encoding in new items. Findings in the second experiment have shown higher prominences correlated with inactive states, lower prominences with active and semi-active states.

EXPERIMENT 1

Goal: The analysis of the tonal encoding in the information contrast New/Given (1) actualized on three categories: Brand-New, New Inferable and Given (Textually Evoked), that is, the degree of iconicity of prosodic prominence, a correlation between the phonetic encoding and the mental status of information weight were studied through an acoustic calculation. Corpus: The subjects' task consisted of the information of a card-game, a set of French cards, to the listener. The order of the set showed cards in New-Inferable positions, Given positions and in a Brand-New position, a blank card. The subjects were three male speakers and a female speaker, informants of Argentinian Spanish. Analysis: Recorded discourses were segmented in pairs of contrasted items: New items (Brand-New and New-Inferable categories) vs. Given (Textually Evoked) items. These materials were acoustically studied through a pitch analysis. Tonal prominences were measured from the contours, the highest value in each item: the H* tone in monotonal accents and in bitonal accents. Normalization: Natural data (Hz) were transformed through a logarithmic z-score calculation. The aim was the inter-speaker comparison of different tonal registers (2,3).

<table>
<thead>
<tr>
<th>Item</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>.41</td>
<td>.42</td>
<td>.82</td>
<td>.27</td>
<td>.48</td>
</tr>
<tr>
<td>Given</td>
<td>- .41</td>
<td>-.45</td>
<td>-.74</td>
<td>-.45</td>
<td>-.51</td>
</tr>
</tbody>
</table>

Results: Table 1 shows mean tonal prominences in Brand-New, New-Inferable and Given (Textually Evoked) items. Findings indicated higher values (positive data above the geometric mean, in standard deviations) in new items, and lower values (negative data below the geometric mean, in standard deviations) in given items.
EXPERIMENT 2

Goal: This research explored the information contract on cognitive categories of the mental representation of referents correlated with prosodic marking. In discourse processes, speakers actualize a limited amount of information inactivating the portion of information immediately backwards, i.e. those cognitive categories appear in three different states of the referents: activation, semi-activation and inactivation. They would have linguistic interrelations, mostly in prosody: degrees of phonological prominence. In active states, a concept (the mental representation of the world) would be focalized in actual stream of consciousness, both for the speaker and for the hearer, according to their discourse register. In semi-active states, the amount of information is situated in a peripheral zone of consciousness. First reason, the concept was already activated in the discourse interchange. Second reason, the concept belongs to a cognitive scheme shared throughout the interchange: the card-game, the set of French cards. In inactive states, the concept already accumulated in speaker’s long-term memory would be activated in the hearer’s conscience, actualized for the first time in the interchange (4,5). The prosodic iconicism shown by phonetic encodings was studied through an acoustic analysis. Corpus: The experimental design was similar to that of the preceding experiment. The materials were emitted by three Argentinian Spanish male speakers (S1, S2, S3). Analysis: Discourses were segmented taking into account the three different states of referents in pair of contrasted items: activated and semi-activated vs. inactivated items. F0 measurements were taken from the contours: the \( H^* \) tone in monotonal accents and bitonal accents. Normalization: Logarithmic z-score values were calculated from F0 data (2,3).

<table>
<thead>
<tr>
<th>Item</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>.52</td>
<td>.86</td>
<td>.75</td>
<td>.71</td>
</tr>
<tr>
<td>a + sa</td>
<td>-.96</td>
<td>-.57</td>
<td>-.45</td>
<td>-.67</td>
</tr>
</tbody>
</table>

Results: Data have confirmed the following tendency (in Table 2): low prominences correlated with active and semi-active items (negative values), and high prominences correlated with inactive items (positive values). Conclusion: The findings of these two experiments have confirmed a degree of iconicity in tonal patterns: new or inactive information were actualized with higher tonal encoding and vice-versa.

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REFERENCES


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