PHONETIC CORRELATES OF THE 'NEW/GIVEN' PARAMETER

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ABSTRACT

Production data from American and British English speakers are examined to see whether the discourse parameter 'new/given' has phonetic correlates as regards accentual patterning in initial subject constituents. The results show no significant difference for the American speakers. For the British English speakers, however, it was observed that differences in Fo register width in the H* tone as well as the use of categorically different intonational contours correlate with the discourse parameter 'new/given'.

1. BACKGROUND

In a previous study [3], we made a preliminary investigation to ascertain whether British and American speakers use intonation to distinguish between usage-initial subjects which are contextually 'new' (brand new) versus those which are contextually 'given' (i.e., mentioned previously). In a related study, Eady et al. [2] measured Fo peak height and found no significant difference in this parameter for a group of American English speakers. In our study, we decided to measure in addition Fo register width on the subject, since it is known that differences in Fo in the H* tone as well as the use of categorically different intonational contours correlate with the discourse parameter 'new/given'.

2. DATA AND SUBJECTS

The data in (1) were used in the investigation. Four speakers participated in the experiment (2 American English, one male (Kansas) and one female (Louisiana), and 2 British English, both female (one from N.E. England and one from N.W. England). All but the speaker from N.W. England had participated in the previous experiment and all but this subject have some degree of linguistic and/or phonetic background. The sentence pairs were typed on cards and presented in random order along with 10 other filler sentences used in other experiments. The heads of the subject constituent in the final sentence of each sentence pair constituted the material to be investigated in detail, i.e., miller, milliner, millionaire, Milan and Milwaukee. The test words were also recorded in sentences where they functioned as subjects of embedded clauses, but, at the present time, these cases have not been analysed.

(1) (a) According to the farmers, there is a shortage of workers. A new miller will be very welcome.

(b) According to rumours, there will soon be a new miller. The new miller will be very welcome.

(2)(a) According to the merchants, there is a shortage of shops. A new milliner will be very welcome.

(b) According to the merchants, there is a shortage of shops. A new milliner will be very welcome.

(3)(a) According to the bankers, there is a shortage of investors. A new millionaire will be very welcome.

(b) According to rumours, there will soon be a new millionaire. The new millionaire will be very welcome.

(4)(a) According to reports, there is a shortage of a new tourist attraction. A new milliner will be very welcome.

(b) According to the reports, there is a shortage of investors. A new milliner will be very welcome.

(5)(a) According to the dope dealers, there is a shortage of marijuana in the East. The marijuana in Milwaukee will be very welcome.

(b) According to the dope dealers, there is a shortage of marijuana in the East. The marijuana in Milwaukee will be very welcome.
Table 2 presents the average ratios (New/Given) for each speaker:

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Am. Male</th>
<th>Br. Male</th>
<th>Am. Female</th>
<th>Br. Female</th>
<th>Am. N.W.</th>
<th>Br. N.W.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fo Peak</td>
<td>1.00</td>
<td>1.03</td>
<td>1.02</td>
<td>1.06</td>
<td>1.15</td>
<td>1.42</td>
</tr>
<tr>
<td>Fo Register</td>
<td>1.00</td>
<td>1.03</td>
<td>1.02</td>
<td>1.06</td>
<td>1.15</td>
<td>1.42</td>
</tr>
</tbody>
</table>

These results show that, as in the previous study, the American speakers do not differentiate between the categories given and new as far as peak height and register width are concerned. The biggest difference in register width, 1.18, corresponds to 1.1 semitones which is not perceptually distinctive (excursion size differences of 1.5 semitones have been found to cause a difference in the perception of prominence [4]). Even the British (NE) speaker does not in this study show any convincing variation of register width as was the case in the previous study, where a ratio of 1.54 (corresponding to about 6 ST) was obtained. The present mean ratio, 1.26, corresponds to an actual difference of about 18 Hz or 0.8 ST which is not sufficient to create any perceptual difference between new and given cases. Moreover, in 30% of the given cases, categorically different tonal patterns with respect to those produced in the 'new' cases were produced by the Br. English speakers.

5. CONCLUSION
The data presented here indicate that the discourse parameter 'new/given' can, but does not necessarily have prosodic correlates. The American speakers studied showed no difference on this parameter. With respect to the difference in register width of the H* tone, it was seen, however, that one of the two British English speakers used perceptually significant differences between 'new' and 'given' as regards this correlate. Moreover, in 30% of the given cases, categorically different tonal patterns with respect to those produced in the 'new' cases were produced by the Br. English speakers.

6. REFERENCES

![Fig. 1a. Fo contour produced by Br. Eng. (NW) speaker for 'new'](image)

![Fig. 1b. Fo contour produced by Br. Eng. (NW) speaker for 'given'](image)

![Fig. 2a. Fo contour produced by Br. (NE) speaker for 'new'](image)

![Fig. 2b. Fo contour produced by Br. (NE) speaker for 'given'](image)