Lying about where the treasure lies: Pragmatic cues to deception in production and comprehension

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Guesser’s perspective

Experiment

Current study

Investigate the production and perception of verbal and nonverbal cues to deception in an interactive, two-person dialogue game.

Motivations for design

▶ Speakers given free choice to lie or tell the truth
▶ Listeners judge speakers’ utterances in real time

Interactive element of task adds ecological validity to findings

Analysis

Verbal cues

<table>
<thead>
<tr>
<th>Speaker's productions</th>
<th>Guesser's perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silent pauses behind the (closed) banana</td>
<td>More likely to perceive utterances characterised by disfluency as lies</td>
</tr>
<tr>
<td>False start behind the (open) cake</td>
<td>a) Silent pauses, p &lt; .01</td>
</tr>
<tr>
<td>Repetitions behind the one...</td>
<td>b) Filled pauses, p = .07</td>
</tr>
<tr>
<td>Proklusions behind the broken fence</td>
<td>c) Silent pause duration, p &lt; .05</td>
</tr>
<tr>
<td>Substitutions behind the shorter...</td>
<td>d) Onset latency, p = .08</td>
</tr>
</tbody>
</table>

Nonverbal cues

<table>
<thead>
<tr>
<th>Speaker's productions</th>
<th>Guesser's perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand movements</td>
<td>More likely to be disfluent when telling the truth</td>
</tr>
<tr>
<td>Hand movements (adapter/other)</td>
<td>a) Filled pauses, p &lt; .01</td>
</tr>
<tr>
<td>Eyebrow movements</td>
<td>b) False starts, p &lt; .05</td>
</tr>
<tr>
<td>Lip/mouth movements</td>
<td>No effect of motivation on any verbal cues</td>
</tr>
<tr>
<td>Smile/laugh</td>
<td></td>
</tr>
<tr>
<td>Body/trunk movements</td>
<td></td>
</tr>
<tr>
<td>Shoulder movements</td>
<td></td>
</tr>
<tr>
<td>Gaze</td>
<td></td>
</tr>
</tbody>
</table>

Analysis: Linear and logit mixed models with maximal converging by-subject random intercepts and slopes & by-item random intercepts

Results: Verbal cues

Guessers

▶ More likely to perceive utterances characterised by disfluency as lies

a) Silent pauses, p < .01
b) Filled pauses, p = .07
c) Silent pause duration, p < .05
d) Onset latency, p = .08

Speakers

▶ More likely to be disfluent when telling the truth

a) Filled pauses, p < .01
b) False starts, p < .05

Results: Nonverbal cues

Guessers

▶ More likely to perceive utterances characterised by smiling/laughter as truthful, p < .05

Speakers

▶ More likely to produce body movements when lying, p < .01

.lower motivation associated with an increase in

a) Adaptors, p < .05
b) Eyebrow movements, p = .05

Conclusions

1. There appears to be a disconnect between Guessers’ perception and Speakers’ production of behavioural cues to deception
2. Gs behaviour suggests expectations based on the cognitive hypothesis; Ss behaviour supports the attempted control hypothesis
3. Verbal behaviours appear easier to control than nonverbal (cf. Ekman & Friesen’s ‘leaky channels’)
4. Motivation results do not support the Motivational Impairment Effect

May be due to different operationalisations of motivation across studies

More work would be needed to explore the motivation effect within speakers

References