Multimodality and humour: The interplay between co-speech gestures and prosody in humour

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Why humour?

- Humour as the *killer-app* of language (Veale, Brône, & Feyaerts, 2015)
- An inherently human quality (Morreal, 1983)
- Cognitive tool to see things differently (Forabosco, 2008; Dynel, 2018)
- Intuitively simple to understand but difficult to account for scientifically.
- Conceptualisation / expression
Why multimodality?

• Communication inherently multimodal.
• Modes: semiotic channels (Kress and van Leeuwen, 2001, p. 21)
• Interplay (Kress, & van Leeuwen, 2001; Norris, 2004; Forceville, 2014; Adami & Kress, 2014; Adami, 2016)
Why cognitive linguistics?

- Linguistic units: abstraction of usage events (Langacker, 2001)
- Current Discourse Space (Langacker, 2001 p. 145)
• Language, gestures, and prosody coordination

(Langacker, 2001 p. 146)
Previous studies

• Humour markers (Pickering et al., 2009; Attardo, Pickering, & Baker, 2011; Urios-Aparisi & Wagner, 2011; Attardo, Pickering, Lomotey, & Menjo, 2013; etc.)

• Markers of irony and sarcasm (Rockwell, 2000; Attardo, Eisterhold, Hay, & Poggi, 2003; Bryant, 2010; Attardo, Pickering, & Baker, 2011; Attardo, Wagner, and Urios-Aparisi, 2011; Tabacaru, 2014, etc.)

• Non-ironical **spontaneous** humour (Archakis & Tsakona, 2005; Attardo, Pickering & Baker, 2011; Flamson, Bryant, & Barret 2011; Feyaerts, 2013, etc.)
Research questions

SPONTANEOUS HUMOUR

• Are there multimodal cues that contribute to signal the humorous nature of an utterance?
• If so, can they be considered as markers; that is, are they consistently associated with humour and do they help to predict it?
• What are the cognitive mechanisms involved in the production of humour?
Sample

14 interviews: 103.83 minutes

Only interviewees studied

109 humorous instances (laughter in audience)

254 utterances selected in total:

- 109 humorous utterances
- 149 non-humorous: 66 pre-base + 79 baseline (Bryant, 2010)
### Most frequent face gestures and head movements

<table>
<thead>
<tr>
<th>Gesture</th>
<th>Number of occurrences in sample</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>nod</td>
<td>91</td>
<td>20.44%</td>
</tr>
<tr>
<td>tilt</td>
<td>79</td>
<td>27.75%</td>
</tr>
<tr>
<td>raised eyebrows</td>
<td>65</td>
<td>14.6%</td>
</tr>
<tr>
<td>smile</td>
<td>41</td>
<td>9.21%</td>
</tr>
</tbody>
</table>
Face gestures

- Communicative functions (Poggi & Pelachaud, 1998):
  - Affective display
  - Syntactic function
  - Dialogic function
  - Referring function
  - Attitude display
Raised eyebrows

• Express emotions / conversational tools (Ekman, 1979)
• Surprise, astonishment, increased attention (Guaiatella et al., 2009; Kim et al., 2014)
• Information structure, coherence of discourse (Flecha-García, 2010)
• Gestural triggers, sarcasm (Tabacaru, 2014)
Raised eyebrows
Raised eyebrows
Smile and laughter

• Laughter / smile and humour co-occur frequently, but not markers (Morreal, 1983; Provine, 2000; Hay, 2001; Attardo et al., 2013; Holt & Glenn, 2013; Gironzetti, 2017)
• Smile can signal appreciation (Ikeda & Bysouth, 2013)
• Signal humorous intent in speaker (Attardo, 1994; Eisterhold, Attardo, and Boxer, 2006)
• 37.61% of the humorous instances identified in sample
Smile and laughter
Smile and laughter
Head movements

- Turn taking (Hadar et al., 1984); backchanneling (Maynard, 1987; McClave, 2000; Altofer et al., 2000)
- Deictic function (McNeill, 1992)
- Switches in narrator (McClave, 2000)
- Underline humorous nature (Lee & Marsella, 2010; Tabacaru, 2014)
- Lexical repairs (McClave, 2000)
Head tilts

• Disbelief, lack of understanding (Heylen et al., 2008)
• Denial, word searching (Lee & Marsella, 2006)
• Weak boundaries (El Kaliouby & Robinson, 2004; Ishi et al., 2014)
• Gestural triggers (Tabacaru, 2014)
Head tilts
Head tilts
Nods

- Agreement or acceptance (Poggi et al., 2010)
- Confirmation, approval, appreciation, emphasis (Wagner et al., 2014)
- Turn-taking (Ishi et al., 2014)
- Backchannel request (McClave, 2000)
- Strong correlation with prosody (Swerts & Krahmer, 2010)
Head nods
Head nods
Answering the research questions

Are there multimodal cues that contribute to signal the humorous nature of an utterance?

- Multimodal cues signal a marked form of communication, but not exclusive to humour

Can they be considered markers, i.e., are they consistently associated with humour and do they help to predict it?

- No recurrent co-occurring face movements or head movements

What are the cognitive mechanisms involved in the production of humour?

- Langacker’s CDS (2001) as main framework of any communicative event
- Mental spaces, blending, construal mechanisms: same for humorous and non-humorous communication
Conclusions

• No multimodal behaviour specific to humour
• Gestures carry the same pragmatic and semantic functions in humorous and non-humorous communication
• Intentionality of signs (gestures and prosody)
• Gestures as “multimodal construction in which the different modalities of expression available are deployed by the speaker in the course of building a unit of expression according to the rhetorical needs of the interactive moment” (Kendon, 2002)
• Influence of the Current Discourse Space (Langacker, 2001)