Why Do Potential Communication Partners Look at the Hands of People with Aphasia



Introduction

- Researchers have described how people with aphasia (PWA) typically use gesture (Rose, Raymer, Lanyon & Attard, 2013; Sekine & Rose, 2013).
- Researchers have demonstrated that gesture by PWA can be a useful communication tool for potential interlocutors (Hogrefe, et al., 2013).
- For gestures to be useful in communication, they must be salient enough to draw visual attention.
- We have some idea of what interlocutors look at when typical communicators use gesture (Gulberg & Kita, 2009).
- We do not yet understand what communicative or gestural features most successfully draw attention to gestures by PWA.
- A better understanding of how speech and gestures of people with aphasia interact to draw visual attention to the hands would help guide treatments that use gesture to improve communication for people with aphasia.

Research Questions

- Do typical interlocutors look more at gestures than faces of people with aphasia?
- How do typical interlocutors rate the communication effectiveness of speakers with aphasia and typical communicators?
- What do typical interlocutors describe as "memorable" after looking at videos of people with aphasia and typical communicators?

Methods

Stimuli: Videos of six individuals with non-fluent aphasia and six age-matched, typical adults responding to the prompt: "Tell me how you would make a peanut butter and jelly sandwich." Videos were downloaded from AphasiaBank (MacWhinney, et al., 2011).

Participants: 22 typical communicators between 22 and 57 years of age (mean age = 35.5) with typical or corrected hearing and vision participated in this study. Eight of the participants viewed both people with aphasia and typical communicators.

Procedure: Participants provided consent and watched videos. Viewers were told that the speakers might have trouble communicating and that we were interested in their impressions of the speakers. Eye tracking was calibrated by the participants watching a moving dot on the monitor, although they were not told that we were collecting eye-tracking data until after the experiment.

Questionnaire: After each video, participants indicated their agreement with six statements about the speakers on a 7-point scale. Statements relating to the communicator included:

S/he was easy to follow.

Talking was easy for him/her.

S/he was a competent communicator.

Statements relating to the participant included:

- I would be comfortable talking with her.
- I understood him/her.

I would be willing to have a conversation with him/her. **Open-ended Question**: Participants also answered the question, "In a few words, what was the most memorable part of the story you just saw?"

References

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Analyses



Segment Transcript	"um um"	"oh"	"jam no bread bread"	"jelly jelly"	"um
Time (sec)	9.	5 14.6	6 2	9	35.7
Gesture Description	open palms on table	open cabinet door	bread hands	spreading	c-h pos
"Bee Swarm" Screenshot			<u>i</u>		
Proportion of Gaze to Hands (%)	9%	19%	10%	27%	26

- directed towards the hands of slow than fast speakers. • There was a strong negative correlation between communicative effectiveness and gaze to hands, insofar as participants looked at the hands of poor communicators more
- than the hands of better communicators.
- When asked what was "memorable" about the videos, participants reported more suggesting that gaze to the hands of PWA reflects deeper processing of the gestures produced by PWAs.

gesture-related comments for the people with aphasia than for typical communicators,