Speaker gaze effects on language comprehension

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In language comprehension, a large body of research has shown that listeners can rapidly integrate the unfolding speech content with information in visual context (e.g., Altmann, 2004; Chambers, Tanenhaus, Filip, & Carlson, 2002; Knoeferle, Crocker, Scheepers, & Pickering, 2005; Spivey, Tanenhaus, Eberhard, & Sedivy, 2002; Tanenhaus, Spivey-Knowlton, Eberhard, & Sedivy, 1995). In this context, the shifting focus of another person's gaze could provide an extremely helpful cue, because speakers robustly gaze at objects before mentioning them (Griffin & Bock, 2000). Our studies serve to identify the specific factors influencing how speaker gaze is used to anticipate what the speaker will speak about next, and to determine the extent to which this generalizes across different settings.

For instance, we have examined whether the usefulness of speaker gaze is independent of sentence difficulty and comprehension tasks. In the three experimental studies I will discuss, we used eyetracking to compare the effects of speaker gaze on the processing of German sentences that were either easy (subject-initial) or difficult to understand (object-initial). This strand of research focusses on whether referent expectation based on speaker gaze occurs across-the-board – i.e., independent of the linguistic input – or whether it is specific to particular comprehension processes such as reference assignment, syntactic structuring, and/ or thematic role assignment. Our findings show that (a) speaker gaze facilitates listener comprehension even when the speaker doesn't frontally face the listener; (b) gaze doesn't just modulate referential processing, but also rapidly interacts with ongoing syntactic structuring and thematic role assignment.