Emotional facial priming of language comprehension across the lifespan

When considering 'context' in language processing research, it may be tempting to view context as a homogeneous entity. However, when considering the contextual cues in our environment (such as actions, another speaker's gaze or smile), then we may want to ask whether treating these as just 'context' is the right approach. In addition to differences in the types of cues, language users of different ages may recruit these cues differently. In a series of visual-world eye-tracking studies, we investigated the effects of facial emotions and of action depictions on spoken language comprehension in 5-year olds, young, and older adults. The action depictions modulated comprehension in all three age groups in a qualitatively similar manner, albeit with different time courses. Emotional facial priming affected the young and older adults' comprehension (in a qualitatively different manner depending on valence). Moreover, the type of prime face (e.g., schematic faces such as smileys vs. natural faces) mattered, with somewhat more pronounced effects of natural faces than for smileys. These findings show for the first time that different non-linguistic cues, i.e., direct referential cues such as depicted actions and more indirect social cues such as emotional facial expressions are integrated into situated language processing to different degrees. Crucially, the time course and strength of the integration of these cues varies as a function of age.