How we marginalised onomatopoeia:
Evidence from a multimodal study on Chinese child language

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An embodied view of language assumes that meaning construction is grounded in human bodies. In this sense, meanings are not represented via completely arbitrary symbols, but rather constructed, represented, and mediated through sensory experience, including auditory, visual, and motoric imageries (Kita 1997; Lakoff & Johnsen 1980). Previous research has supported this claim with evidence from both language perception and production. In language perception studies, for instance, it has been shown that when interlocutors comprehend utterances, corresponding neural simulations are active as well (Glenberg & Kaschak 2002; Stanfield & Zwaan 2001; Zwaan et al. 2002). In language production research, language-based communication has been argued to be variably multimodal, with gesture as a major co-expressive vehicle with speech (Cienki 2016; McNeill 1992; Müller 2009). Thus, research on both input and output jointly posit a close relationship between language and sensory information.

However, despite great efforts at revising ideology within linguistics, studies on aural representations like onomatopoiea remain marginal (though see Dingemanse 2018; Kita 1997). To fill the gap, this study adopts a multimodal perspective and uses everyday causal events to investigate the usage of onomatopoeia by children. It aims to answer the following questions:
(1) How frequently is onomatopoeia used in children's verbal interactions?
(2) How is onomatopoeia integrated with co-speech gestures in children's descriptions of causal events?
(3) What are the linguistic functions of onomatopoeia?

Seventy eight monolingual children speaking Mandarin Chinese were taken as participants in an elicitation task. Their ages ranged from 4 to 7 and they were divided into 4 groups according to their age ranges. The stimuli were composed of second-long videos which show common causal events with noticeable causal chain elements (e.g. agent, patient, state change, etc.).

The results show: (1) 35 out of 78 children use onomatopoeia to describe causal events, and the total number of onomatopoeic words of the four age groups are 36, 30, 17, and 22 respectively, occupying a small share of total utterances. (2) Across the four age groups, onomatopoeic words are predominantly accompanied by the gesture stroke phase, the most effortful phase in a gesture unit, accounting for 83%, 87%, 94%, and 91% of gestures, respectively, for each age group. (3) Children's onomatopoeic expressions express three functions in causal event descriptions: (a) to represent the the core force transmission in co-occurrence with gestures; (b) to modify the force transmission when used without gesture; and (c) to act as independent expressives. The results also show that onomatopoeia gradually loses the third function as children reach the age of 7.

These results reveal that onomatopoeia, though used in a comparatively small number of instances, acts as an effective source for children to provide "a faithful enough representation" of their experiences (Sasamoto & Jackson 2016: 45). The predominant integration of onomatopoeia with gesture strokes provides further evidence of the significant status of onomatopoeia in meaning construction as well as embodiment.

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