Linguistic encoding of flexible event construal in adults and children

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Language provides tools for describing events from multiple perspectives. The active sentence the duck is pushing the bunny and the passive sentence the bunny was pushed by the duck, for example, involve the same participant roles but differ in whether the agent or the patient is the topic. We use the label "flexible event construal" to describe viewing the same event from multiple perspectives. In our study, we asked how visual perceptual factors guide language for flexible event construal in English-speaking adults and children. Participants described events where an animate causative agent is more or less perceptually salient relative to a patient. Only adults linguistically encoded this difference, suggesting that children's sensitivity to perceptual influences on flexible event construal is delayed relative to their causal language.

Animacy and agency both play dominant roles in shaping language for event construal: animates are more likely to appear as the sentence Subject than inanimates [1-2], and agents are more likely to appear as Subject than patients when animacy is controlled [3]. Nonetheless, visual perceptual factors also play a role: visually foregrounded animates appear as Subject more often than backgrounded animates [3-4]. We asked whether such perceptual influences could override the strong bias for animate agents to appear as Subject. 28 English-speaking adults described three types of scenes: Body-Agent, where a person acts on an inanimate object (e.g., tipping over a book), and face, torso and hands are visible, Hand-Agent, where only the hand is visible acting on the object, and No-Agent scenes, in which the object changes on its own (e.g., a book falling over). Figure 1 shows that adults use more passive descriptions (e.g., the book was tipped over) in Hand-Agent than Body-Agent scenes (β=-9.79, SE=3.48, p<.01). Thus in the competition for Subject, a perceptually foregrounded inanimate patient sometimes beats out a perceptually backgrounded animate agent.

We then asked whether children show the same influence of perceptual cues on event construal. Children show robust knowledge of causative concepts and language [5-6]. English-speaking 3-year-olds also have productive knowledge of passive [7-8], indicating ability to linguistically encode flexible event construal. This ability may be restricted, however, as children have more difficulty producing passives with inanimate rather than animate patients (e.g., the grocery cart was pushed by the duck) [9-10]. To test whether perceptual cues lead to increased use of passive among children, we asked 16 English-speaking 3-4-year-olds (mean = 4;0) to describe the same Body-Agent, Hand-Agent and No-Agent scenes as adults. Figure 2 shows that children produced active descriptions at the same rate for these two types of events (β=.11, SE=.48, p=.81), and never produced passives. Although children sometimes produced intransitives (e.g., the book fell over) for both Body-Agent and Hand-Agent scenes, they did so at the same rate (β=.53, SE=.52, p=.31), indicating they do not use intransitives to convey a patient-oriented construal. These results indicate that children do not have the same perceptual sensitivity as adults, and that children's ability to flexibly construe events may be more limited than that of adults.
References


Figure 1. Proportion of adult responses coded as active, passive or intransitive in the Body-Agent, Hand-Agent and No-Agent conditions. Error bars show 95% confidence intervals.

Figure 2. Proportion of child responses coded as active, passive or intransitive in the Body-Agent, Hand-Agent and No-Agent conditions. Error bars show 95% confidence intervals.