

Children’s Beliefs about the Controllability of Thoughts, Actions, and Feelings

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Introduction

Between ages 4-6, children form beliefs about agency and action control (Kushnir et al., 2015; Nichols, 2004). For example, 6-year-olds (but not 4-year-olds) believe that a person can desire one thing (to eat cake) but do something different (eat broccoli).

The current study examines children’s beliefs about how much control a person can have over another’s actions and mental states. Moreover, we ask whether children treat control of their own mental states and actions differently from those of others.

Method

Participants

Four- to 6-year-olds (N=100, 49 girls) heard stories in which one character (the agent) attempted to compel another (the patient).

Materials

Characters were constructed spontaneously during each testing session from a head, shirt, and pants. Shirts and pants varied in color. Heads varied in hair length, hair color, and skin color. The “self” character was constructed by the child at the beginning of the session with the instructions to “make you”. Each thought, action, and feeling was depicted with an image placed near the agent (Figure 1).

Trial Types

Children completed 3 trials in each of 4 conditions for a total of 12 trials. The 4 conditions were derived from a 2 (Agent: Other versus Self) x 2 (Patient: Other versus Self) design resulting in Other-Other, Self-Other, Other-Self, and Self-Self conditions.

Within each condition children completed trials featuring 3 domains of control (thinking, feeling, and doing). For example, the 3 trials in the “Other-Other” condition consisted of one stranger trying to control another stranger’s *thinking*, one stranger trying to control another stranger’s *feeling*, one stranger trying to control another stranger’s *doing*. Trials in the other conditions unfolded similarly.

Procedure

Following each trial, participants were asked whether the agent could compel the patient within the featured condition/domain [e.g., Can X make Y think (or feel, or do)? See examples in Table 1]. Condition and domain were counterbalanced across participants.

Table 1: Scripts for “Think” Trials

Other-Other
This is Maria and this is Camilla.
Maria really likes thinking about ice cream. Maria is going to talk about ice cream so she can try to get Camilla to think about ice cream with her.
But, Camilla is not interested in thinking about ice cream.
Can Maria make Camilla think about ice cream?
Self-Other
This is You and this is Lucy.
YOU really like thinking about balloons. YOU are going to talk about balloons so YOU can try to get Lucy to think about balloons with YOU.
But, Lucy is not interested in thinking about balloons.
Can YOU make Lucy think about balloons?
Other-Self
This is Susan and this is YOU.
Susan really likes thinking about bicycles. Susan is going to talk about bicycles so she can try to get YOU to think about bicycles with her.
But, YOU are not interested in thinking about bicycles.
Can Susan make YOU think about bicycles?
Self-Self
This is YOU.
YOU want to think about penguins.
But, YOU are thinking about fish instead.
Can YOU make yourself think about penguins?

Figure 1: Sample Scene for Other-Other “Think” Trial



“Can Maria make Camilla think about ice cream?”

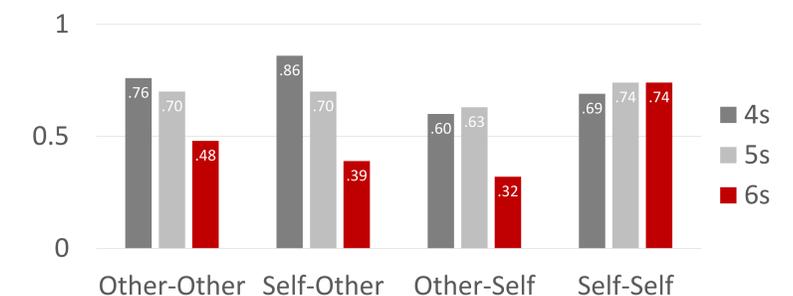
Results

Responses to the make question were analyzed via a General Estimating Equation. The model found an effect of condition, Wald $\chi^2(3)=12.53, p=.006$, an effect of age, Wald $\chi^2(1)=11.43, p=.001$, and a condition by age interaction, Wald $\chi^2(3)=15.06, p=.002$.

For the condition effect, children were most likely to say “yes” they can “make” in the Self-Self condition (that they could make themselves do something). They were least likely to say “yes” they can “make” in the Other-Self condition (that someone else could make them do something).

In response to the “think” questions, as children got older, they were more likely to say no on all questions, except the self-self question, all $p(98)$ -values < -0.21 , all p -values $< .01$. There was no relation between responses on the self-self question and age. Similar patterns held for the questions in the other two domains. See Figure 2.

Figure 2: Responses to the Think Questions



Discussion

Four- to 6-year-olds seem to understand that they have control over their own epistemic states and actions – they recognize their own self-agency. At the same time, they seem to be developing an understanding that they alone have this control and that others cannot compel the self against its will. Finally, 4- to 6-year-olds seem to develop a similar understanding that others too have agency and cannot be compelled against their will. Overall, young children appear to initially believe that aspects of psychological and physical functioning are potentially controllable by the self and others, although this belief tends to weaken over time.