乳児期の行為者への目標帰属は幼児期の空想の友達を予測する

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目的

It has been shown that there is a significant relationship between children’s mentalizing skills and creation of an imaginary companion (IC). For example, Giménez-Dasí et al. (2014) reported that children with IC performed better on false belief and emotion understanding tasks than those without IC. Theorists have proposed that interaction with an IC may improve mentalizing skills. Harris (2000) argued that role play may improve children’s simulation skills, and such skills may facilitate mentalizing. The simulation view is supported by recent longitudinal evidence that children’s IC status at 3 years of age predicts better performance on false belief tasks (Lillard & Kavanaugh, 2014).

However, an alternative view is that early mentalizing skills may affect the IC status during preschool years. The view is inspired by evidence that the frequency of parental mental-state language during infancy predicts children’s IC status in their preschool years (Motoshima, et al., 2014). According to this view, children who are better at mentalizing may create ICs (Moriguchi & Shinohara, 2012). The present study examined whether infants’ goal attributions about other people and non-human objects predicted their IC status at preschool age.

方法

Nineteen children participated in this longitudinal study. The age at the first test (Time 1) varied across participants, and the mean age was 8.5 ± 2.3 months (mean ± standard deviation [SD]; age range = 4.0–10.5 months; 12 girls). All children were 48.0 months at the second test (Time 2).

Children and their parents participated in the study at Time 1 and Time 2. At Time 1, the action prediction experiment took place in an experiment room at Kyoto University. A Tobii T60 Eye Tracker (Tobii Technology) was used to record participants’ eye movements (Kanakogi & Itakura, 2011). There were three types of videos: a grasping hand (GH) condition, the back of the hand (BH) condition, and a mechanical claw (MC) condition (Figure 1). We measured the timing of gaze shifts to the goal regions before the arrival of the agent’s action. At Time 2, parents completed the questionnaire about their children’s ICs.

結果

We performed three path analyses (one for each condition) to control for age effects (Figure 2). Because sample size was small (N = 19), we analyzed data using Bayesian estimation, using the Markov Chain Monte Carlo (MCMC) method (Schoot et al., 2014). After confirming convergence and model fits, we calculated posterior means and 95% credibility intervals. The results are shown in Table 1. The result showed that GH and BH do not strongly predict IC status after controlling for age effects. In contrast, in the MC condition, we found a path coefficient (β_(TO.MC)) of 0.572 and the 95% credibility interval did not include zero. Thus, we confirmed that MC strongly predicted TO even when age effects were controlled.

Table 1. Results

| Condition | GH | BH | MC |
|-----------|----|----|----|
| Mean      |    |    |    |
|標準偏差  |    |    |    |
| GH path analyses | | | |
| BH path analyses | | | |
| MC path analyses | | | |

Figure 2. Path analyses.

考察

The results revealed that goal attributions in the MC condition, but not GH and BH conditions, predicted children’s IC status. Thus, infants who tended to attribute psychological properties (i.e., goal directedness) to non-human objects were more likely to create an IC than those who did not. The results supported the view that early mentalizing skills may affect the IC status during preschool years. Perhaps, infants who are sensitive to goal-directedness are more likely to attribute other psychological properties to non-human agents, which may lead to the creation of an IC.

引用文献

Moriguchi, Y., & Shinohara, I. (2012). My neighbor: Children’s perception of agency in interaction with an imaginary agent. PLoS One, 7(9), e44463. doi: 10.1371/journal.pone.0044463

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