9-Month-Old Infants Learn Action-effect Contingencies by Observation and Use this Knowledge for Their Own Action Control
Twelve- to eighteen-month-old infants are able to learn action-effect contingencies by observation and rely on these relations in their own action control as recent studies have shown (Elsner & Aschersleben, 2003; Hauf, Elsner, & Aschersleben, 2004). However, younger infants seem to have difficulties to use observed action-effect contingencies for their own action control (Elsner & Aschersleben, 2003).

In the following studies, we addressed the issue of whether infants as young as 9 months relate certain actions to specific effects when they watch another person acting upon objects (Exps. 1 and 2), and whether they use this knowledge to control their own behavior (Exps. 4 and 5).

Results

Experiments 1 and 2
Results revealed longer looking time in non-contingent than in contingent test trials in both experiments ($p < .05$).

Experiments 3 and 4
In Exp. 3, most infants reached for the object that had made a sound while being shaken before (19 vs. 5, $p < .01$).

In Exp. 4, most infants first produced the target action with effect (17 vs. 7, $p < .05$). Moreover, infants performed the target actions more often when they were combined with an interesting acoustical effect ($p = .053$).

Discussion

The reported findings indicate that 9-month-old infants are able to relate specific actions to specific effects and also detect changed action-effect contingencies when they observe another person acting upon objects. Furthermore, they use the observed contingencies for their own action control. The present findings differ from previous ones, probably because the presented actions were more appropriate for this age group.

References
