Learning through observation:
The effect of childrens socio-emotional development and their parents ability to recognize emotions on their imitation performance

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/ INTRODUCTION
Infants at the age of 18-months do not blindly imitate everything they see. Sometimes they selectively imitate, by reproducing a subset of actions, and sometimes they faithfully imitate all the modelled actions, regardless of the goal and the means of those actions (Hilbrink et al., 2013).

Starting around this age, the social context of the task becomes more important. Thus, infants’ imitate more exactly in more social contexts. Traditionally, the social context of the task has been varied through, for example, the model’s behaviour or the model’s availability.

However, more recent research also indicates that the child’s imitation and interaction with the model have an effect on their imitations (Hilbrink et al., 2013; Nielsen et al., 2008).

Taken together, this led us to hypothesize that infants who score higher on socio-emotional development would imitate more exactly at the age of 18 months. In addition, a few earlier studies have found a relation between nurturing parents and exact imitation (Janse & Heken, 1971; Mussen & Parker, 1965). But whether parents’ ability to recognize emotions, a fundamental factor in nurturing parent behaviour moderate the effect of socio-emotional development on exact imitation remains as an open question.

/ PROCEDURE

Photo: Colourbox

/ IMITATION TASKS

Novel means (NM) task

Exact imitation: imitation of the novel means in both the hands free and the hands occupied condition.

Conditions:
- Hands free
- Hands occupied

Necessary vs Unnecessary task

Exact imitation: imitation of the first action in both the necessary and unnecessary condition.

Conditions:
- Necessary condition
- Unnecessary condition

Functional vs Arbitrary task

Exact imitation: imitation of both functional and arbitrary target actions.

Target actions: A functional and an arbitrary action per item. 6 items, 2 versions

/ SOCIO-EMOTIONAL DEVELOPMENT

Bayley Scales of Infant and Toddler Development (Bayley, 2006)

/ EMOTION RECOGNITION TASK

36 different photos of infants (age 4-12 months) were collected from TIF (Maack et al., 2017). Parents’ task was to select the label they thought matched the photo the best (scared, sad, disgust, angry, neutral, surprised and happy).

/ THE PRESENT STUDY

A total of 19, healthy 18-month old infants and their parents participated in the present study (n= 9 boys, and 10 girls). The purpose of the study was to investigate the relationship between infant’s socio-emotional development, their imitation performance and their parent’s ability to recognize emotions.

In the current research we aim to further investigate how different factors can influence infants tendency to imitate exactly at the age of 18 months.

/ HYPOTHESES

1) Higher scores on the emotion-recognition task performed by their parents are positively related to infants socio-emotional development
2) Higher scores on the social-emotional scale of Bayley Scales of Infant and Toddler Development (Bayley, 2006) will be positively related to more exact imitation
3) Parents ability to recognize emotions will moderate the effect of socio-emotional development on exact imitation at the age of 18-months.

/ DISCUSSION

Overall, the infants imitated the novel action in the NM task and performed the first action step in the NUN task regardless of the condition. 40-41% of the infants’ performed step 1 before 2 even in the unnecessary condition. This indicates a tendency to imitate exact. However, almost all of the infants imitated more functional target actions than arbitrary target actions, which indicate selective imitation.

In addition, we did not find any relation between the infant’s socio-emotional development and exact imitation as we expected.

/ PRELIMINARY FINDINGS

Figure 1. The infants imitated the novel action more often in the hands free condition but the difference was not significant (p = 0.29). The infants also imitated the familiar action less frequently in the hands occupied condition, but this was neither significant (p = 0.18).

Figure 2. Performance of step 1 and step 1 before 2 in both conditions.

Figure 3. The infants performed more functional target actions (M = 5.9, SD = 1.5, M = 5.5, SD = 1.7) than arbitrary target actions (M = 1.22, SD = 0.55) in both versions.

To test our second hypothesis, Pearson correlation was used to determine the relation, if any, between exact imitation and infants’ socio-emotional development.

What we found: there was a non-significant negative correlation (r = -.13, p = .39) between exact imitation and the infants’ socio-emotional development.

/ THE TOTAL AMOUNT OF FUNCTIONAL VS ARBITRARY ACTIONS


