



Ostensive signals contribute to the segmentation of actions in toddlers

Christian Kliesch^{1,2}, Stefanie Hoehl^{2,3}, Vincent Reid¹, Eugenio Parise¹

¹ Lancaster University, ² Max Planck Institute for Human Cognitive and Brain Sciences, ³ University of Vienna,

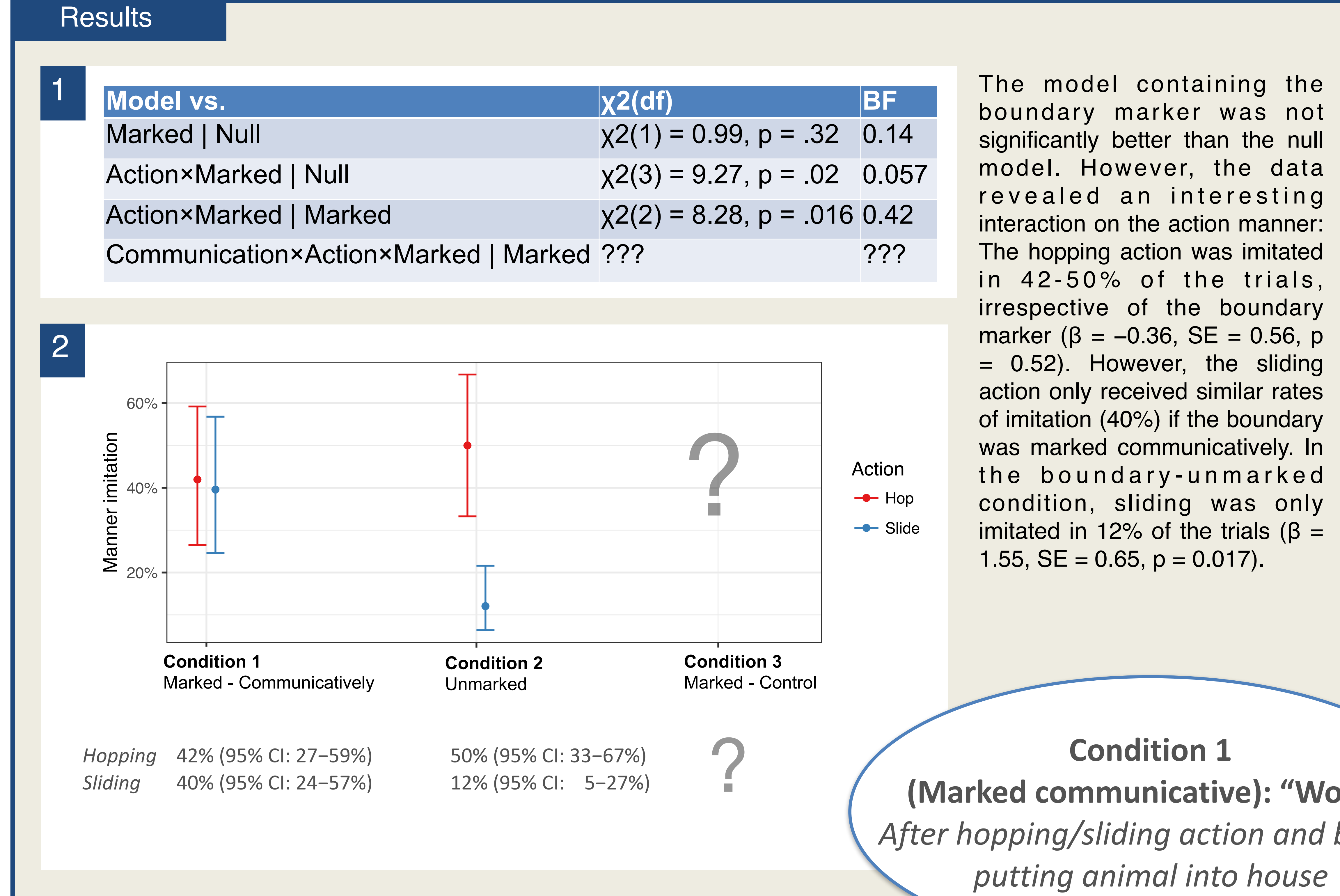


Introduction

Communicative signals, such as direct gaze and child-directed-speech are important sources for children's learning. In the current study we investigated whether communicative signals can help 18-month-old children to segment actions and whether the position of a communicative signal predicts which part of an action children imitate.

Methods

We adapted the methodology by Carpenter et al. (2005) and Southgate et al. (2009) in which an experimenter shows an animal hopping or sliding into a house. In our study, children were addressed either after the hopping/sliding action (**Condition 1**) or after the animal was put into the house (**Condition 2**). We hypothesised that 18mo would be more likely to imitate the manner if they are addressed between the movement and putting the animal into the house. The study was preregistered on aspredicted.org, #5771. We tested two groups of 20 18m-olds in a between-subjects design. In a follow-up investigation (**Condition 3**), we are investigating whether a non-communicative segmentation marker can have a similar effect.



Discussion

Our hypothesis was only confirmed for the sliding action, but not the hopping action. It is likely that hopping is a salient action on its own, and receives high imitation either because it provides segmentation information on its own, is more repetitive, easier to be identified as intentional or is simply more fun. However, sliding is less salient on its own. Children may perceive sliding as purely instrumental in putting the animal into the house, unless it is marked as a separate action by the model.

Open Questions

- How do the results generalise to other non-salient actions?
- What about longer action sequences?
- Are social signals better for segmenting actions than non-social cues or a plain pause?

