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Introduction

Word learning: new **object** + verbal **label**;
 often accompanied by **actions** (e.g., Matatyaho-Bullaro et al., 2014)

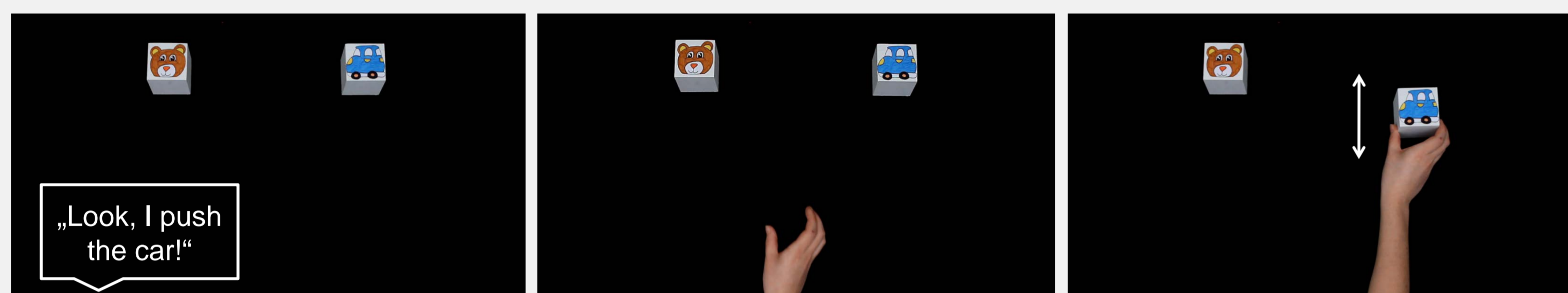
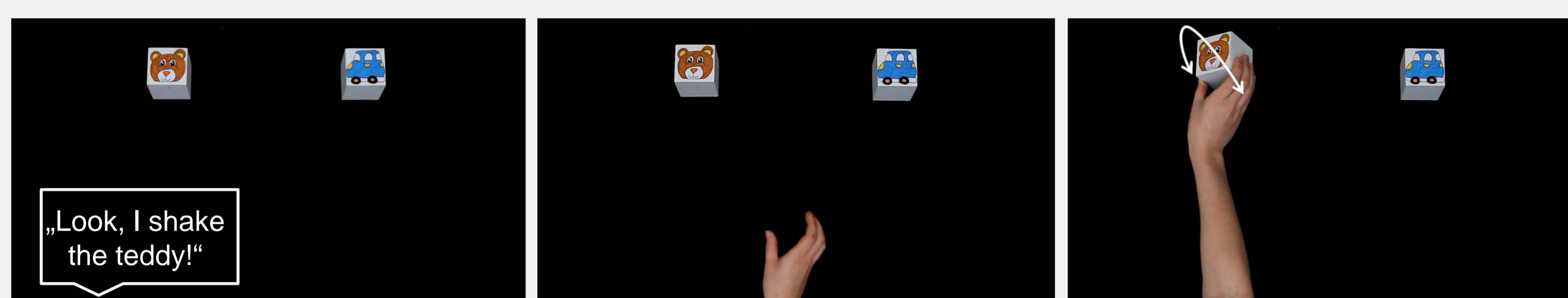
Action learning (e.g., tool use): new **object** + **action**;
 often accompanied by **words** (e.g., Elsner & Pfeifer, 2012);
Verbal cues can meddle with (Sciutti et al., 2016) or facilitate
 (Gampe & Daum, 2014) visual **goal prediction**

How does information from one domain (speech/action) influence processing of information in the other domain?

1. How does different verbal information before action demonstration influence the goal prediction of 14- and 24-month-olds in an eye tracking task?
2. Do infants prefer to associate objects with words or actions? And how does it relate to later language development?

Method

Stimuli & Design Study 1



Two objects: Teddy, Car
Two actions: Shaking, Pushing
Four object-action- pairings: Teddy-shake / Teddy-push, Car-shake / Car-push

DV: Goal anticipation

Noun-Condition

“Look, a Teddy/Car“

Noun & Verb-Condition

“Look, shake/push the Teddy/Car!“

Verb-Condition

“Look, shake/push!“

Control-Condition

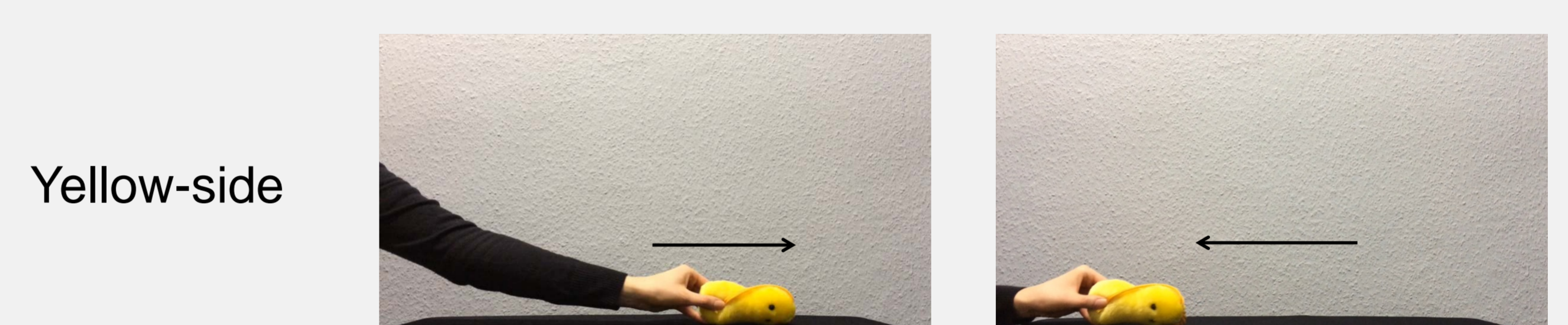
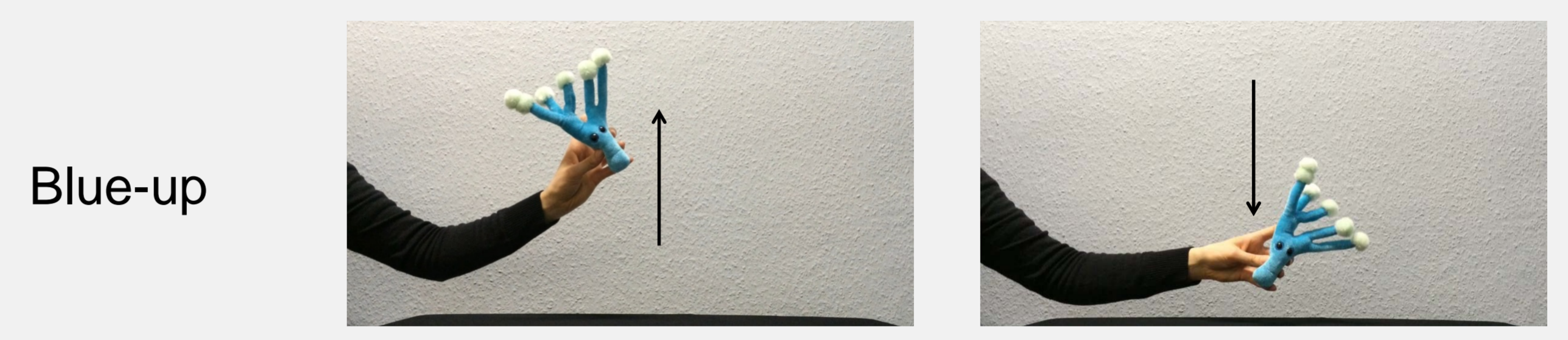
“Look, what I am doing!“

14-month-olds and 24-month-olds

Planned: N = 20 per condition and age group

Prediction speed: Noun/Verb/Noun&Verb > Control
 Noun&Verb > Noun > Verb

Stimuli & Design Study 2



Two objects: Blue, Yellow
Two actions: Upwards, Sideways
Four object-action- pairings: Blue-up / Blue-side, Yellow-up / Yellow-side

DV: Gaze Behavior

Training: 8 trials of word-action-object triads

Test: Word-object vs action-object associations

Vocabulary Assessment: Elfra-1

Cognitive / Motor Development: Bayley Scale

Retention after one week

12-month-olds

N = 11

Word-object > action-object

18-month-olds > 12-month-olds

Correlation between vocab/action knowledge and performance?

Results & Discussion

Study 1:

- Different Verbal cues do not seem to influence imitative behaviour in pilot studies
- A new paradigm with goal anticipation as dependent measure is used to further investigate the possible influence of verbal cues

Study 2:

- 12-month-olds show recognition only for word-object associations
- 18-month-olds? Retention? Correlation? Still to be analysed...

Discussion:

- Action-object association might not be strong in either of the studies
- Words as arbitrary sounds = arbitrary actions?
- Words + reference = goal-oriented actions?

Next steps:

- Adding a bell to the toys to elicit a sound effect during demonstration
- Using multi-step actions with a clear action-goal + action-effect
- Using highly familiar words instead of pseudo words
- Influence of action demonstration on word-object association

References

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