

INTRODUCTION

HUMOR
Production and understanding develops during the two first years of life (Mireault & Reddy, 2016)

Improvement of
COGNITIVE ABILITIES
ATTENTION
MOTIVATION
PERCEPTION
MEMORY

Improvement of
LEARNING
Adults,
School-age children
(Banas et al, 2011, literature review)
PRESCHOOL-AGE children

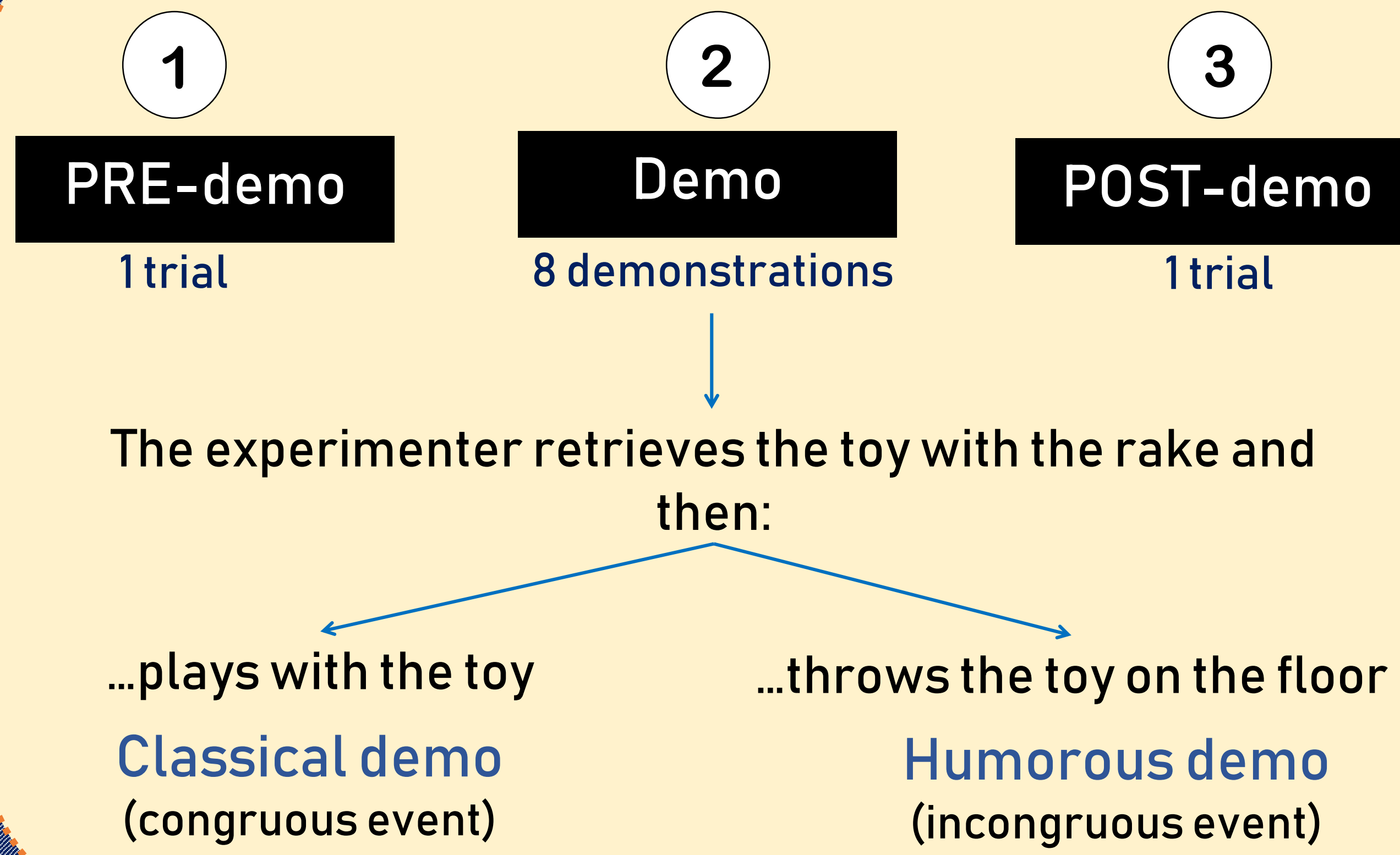
BEHAVIOURAL and PHYSIOLOGICAL measures

METHOD

SAMPLE
12-to-20-month-old children
TASK
Rake use to bring an out-of-reach toy within reach



PROCEDURE

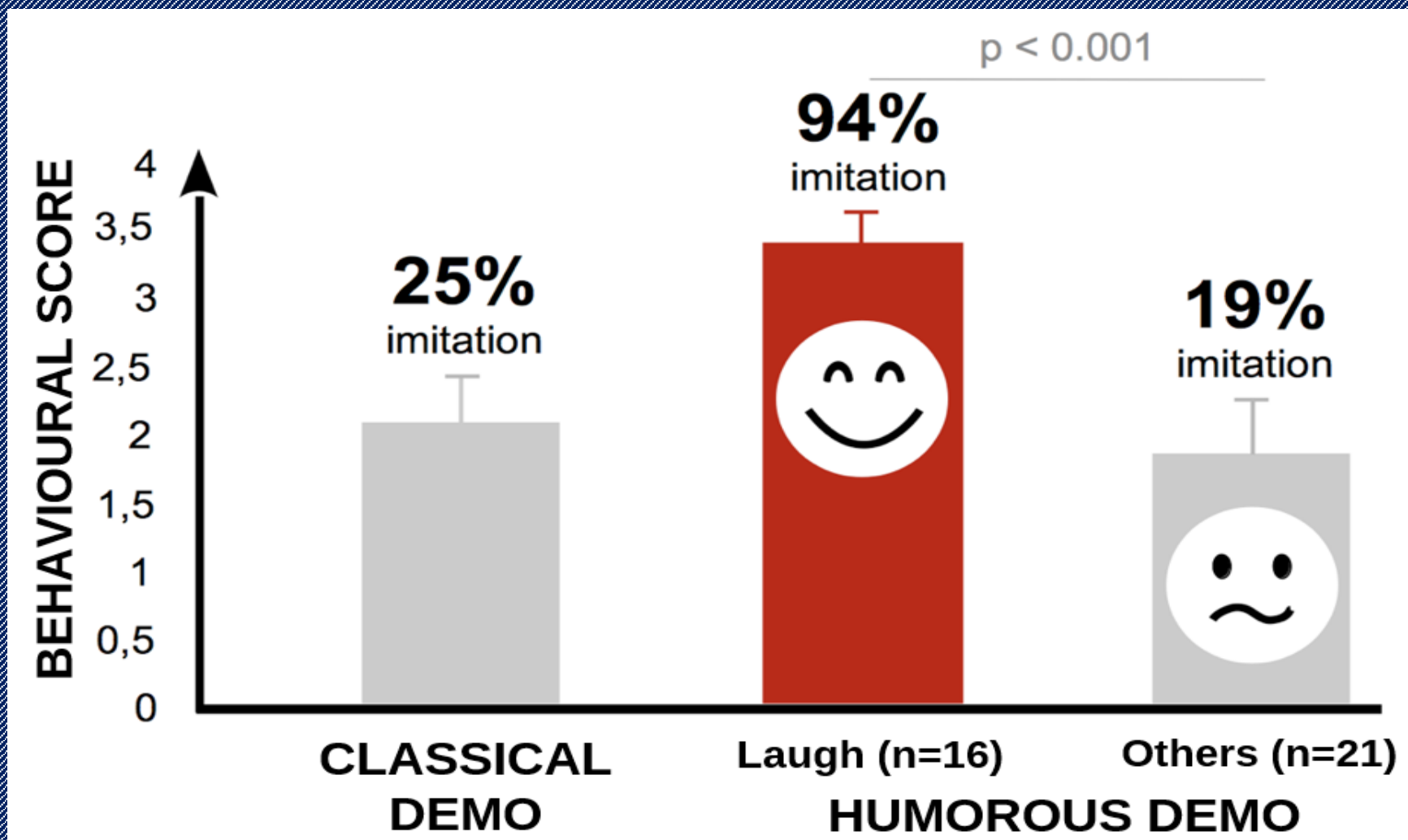


MEASUREMENT

- Imitation
Post-demo success/failure
- Behavioural Score
 - 1) Failure
 - 2) Tool-toy connection (failure)
 - 3) Trial-error success
 - 4) Direct success
- Personality (survey)
- Physiological Data : **E4 EMPATICA**
 - 1) Electrodermal activity (EDA)
 - 2) Heart-rate (HR)
 - 3) Temperature

RESULTS

ORIGINAL STUDY
BEHAVIOURAL DATA
(Esseily et al, 2015)



Picture : Behavioral score according to the demonstration group and the laughing reaction

INTRA-GROUP COMPARISON

Score imitation and rate difference between children who laugh at the demonstration and those who do not laugh.

COMPLEMENTARY (on-going) STUDY
BEHAVIOURAL and PHYSIOLOGICAL DATA



Expected results:

- Physiological patterns differences due to:
- Child personality,
 - Experimental phase
 - Experimenter
 - Age...

CONCLUSION DISCUSSION

LAUGHTER/HUMOR

POSITIVE EFFECT
Identifying Factors ?

SOCIAL LEARNING

PRESCHOOL-AGE children

Inter-individual differences

Different cognitive mechanisms involved in the learning process

REFERENCES

Banas JA, Dunbar N, Rodriguez D, Liu SJ A review of humor in educational settings: Four decades of research. *Commun Educ.* 2011; 60: 115-144.
Esseily R, Rat-Fischer L, Somogyi E, O'Regan K, Fagard J. Humour production may enhance observational learning of a new tool use action in 18-month-old infants. *Cogn Emot.* 2015; 30(4): 817-825
Mireault GC, Reddy V. The Development of Humor. In: *Humor in Infants. Humor in Infants: Developmental and Psychological Perspectives.* Springer Briefs in Psychology. Springer, Cham; 2016.
Rat-Fischer, L. Developmental learning of tool use in human and animal babies: inherited, social and environmental influences, *Annals of the Fyssen Foundation* 2017; 30:98-105.