

## Introduction

- Language embodiment: processing language is based upon actions, objects and events (Barsalou, 1999; Gallese, 2008)
- Representation of bodily verbs (e.g., grab, kick) is related to bodily actions (e.g., grabbing, kicking) (Hauk et al., 2004; Vukovic et al., 2019)
- Representation of bodily nouns (e.g., pen, bag) is related to bodily interactions (Marino et al., 2013; Buccino et al., 2018)
- However, embodiment experiments generally test verbs and nouns only
- Our experiment: Will previously presented *adjectives* (e.g., hot) modify RTs to hand-related nouns (e.g., iron)?

## Method

- Approx. 200 participants will complete a LDT online via link from Qualtrics to Pavlovia Software
- Trial  $N = 180$ . Negative/non-negative/pseudo adjectives will be presented followed by hand-related/non-hand related/pseudo nouns
- Hand response each time 2<sup>nd</sup> letter string (i.e., hand-related/non-hand related/pseudo noun) is a real word

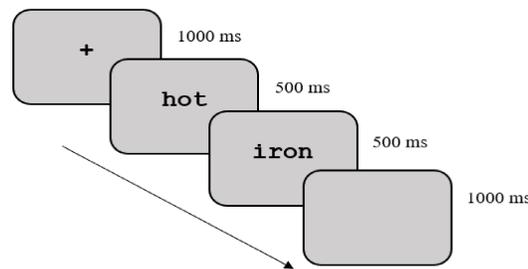
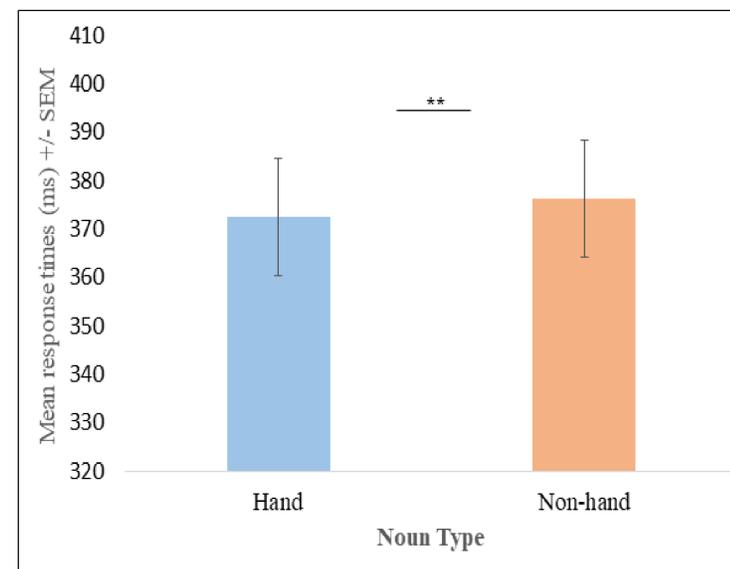


Figure 1. Example of a trial from the experiment. Fixation cross appears for 1000ms before each adjective (e.g., hot) and noun (e.g., iron) appears for 500 ms each. Participants can respond as soon as the second letter string is presented. The blank screen then appears for 1000 ms before the experiment moves on to the next trial.

## Previous in-person results

Figure 1

Effect of noun type on RTs

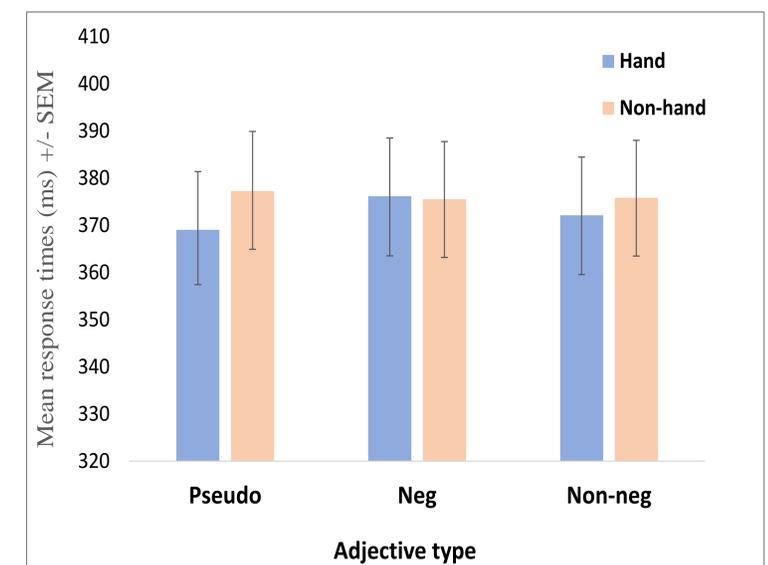


Note

\*\*denote that  $p < 0.01$

Figure 2

Noun/Adjective interaction



## Discussion

- Testing the embodiment of *adjectives* will add to current knowledge of embodiment
- LDT is quite adaptable for online audiences
- Online research allows one to test a greater, more diverse sample
- Lack of experimental control is a potential issue

## References

- Barsalou, L. W. (1999). Perceptual symbol systems.
- Buccino et al (2018). Processing graspable object images and their nouns is impaired in Parkinson's disease.
- Gallese, V. (2008). Mirror neurons and the social nature of language:
- Hauk, O., Johnsrude, I., & Pulvermüller, F. (2004). Somatotopic representation of action words in human motor and premotor cortex
- Marino, B., Gough, P., Gallese, V., Riggio, L., & Buccino, G. (2011). How the motor system handles nouns: a behavioural study.