

# “It is possible” makes you “happy”

## The explicit and implicit associations between verbal probabilities and emotional valence

Yuanqi Gu, Hidehito Honda, and Kazuhiro Ueda



### Introduction

Verbal probability expressions with their directionality

(Teigen & Brun, 1995; 1999)

#### Positive (Group A)

There is a good chance that  
It is possible that  
It is likely that  
There is a small possibility that  
There is some possibility that  
There is a tiny hope that

Good (Positive)



Are positive/negative expressions more associated to good/bad emotion?

#### Negative (Group B)

There are minor concerns that  
It is quite doubtful that  
It is not certain that  
It is uncertain that  
It is quite unlikely that  
There is little hope that

Bad (Negative)



### Methods

#### \* Questions (Explicit)

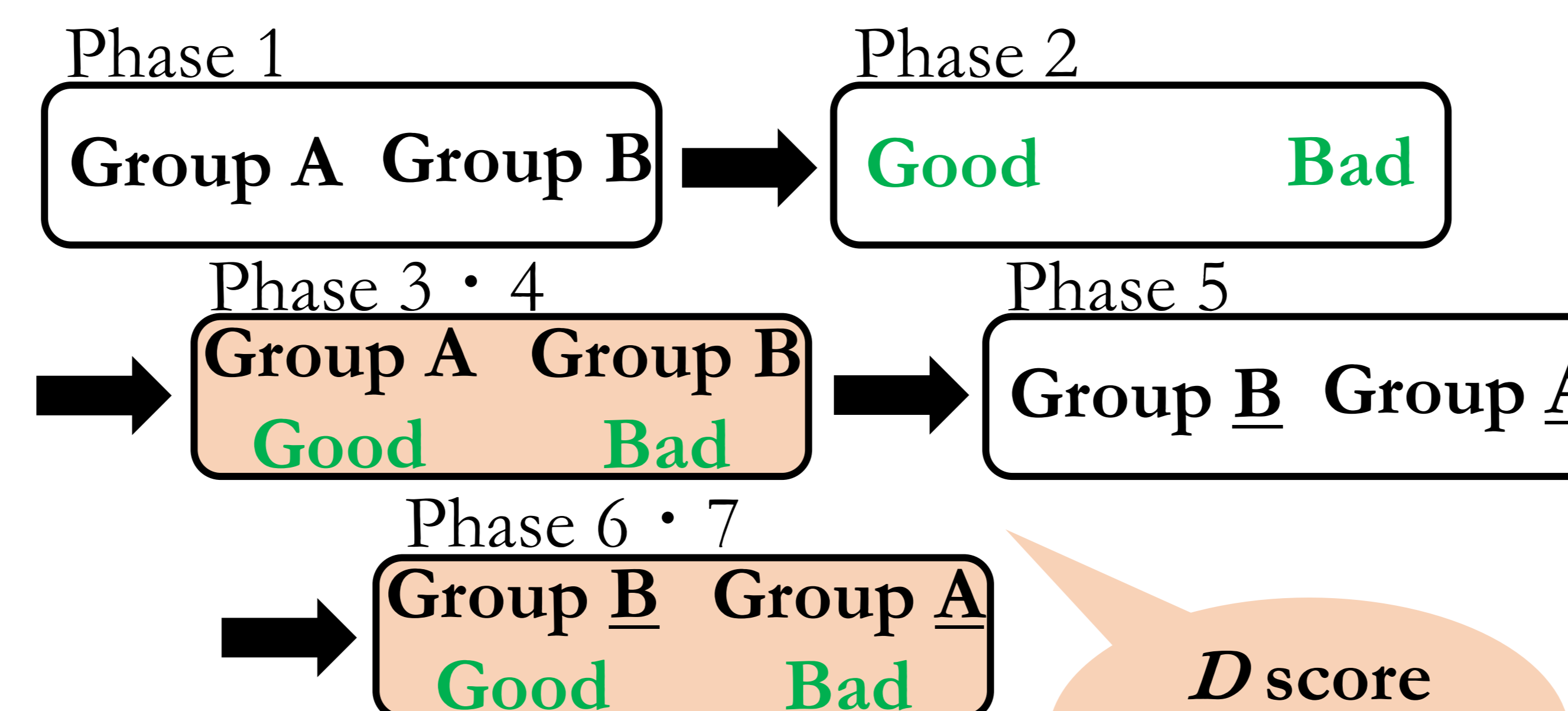
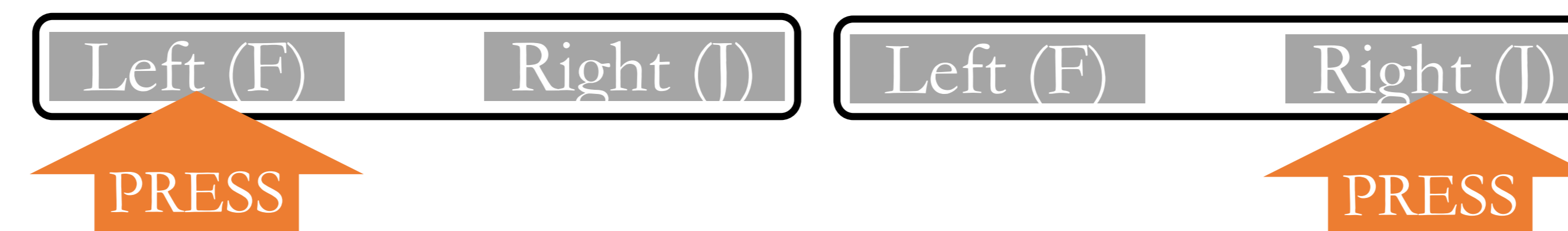
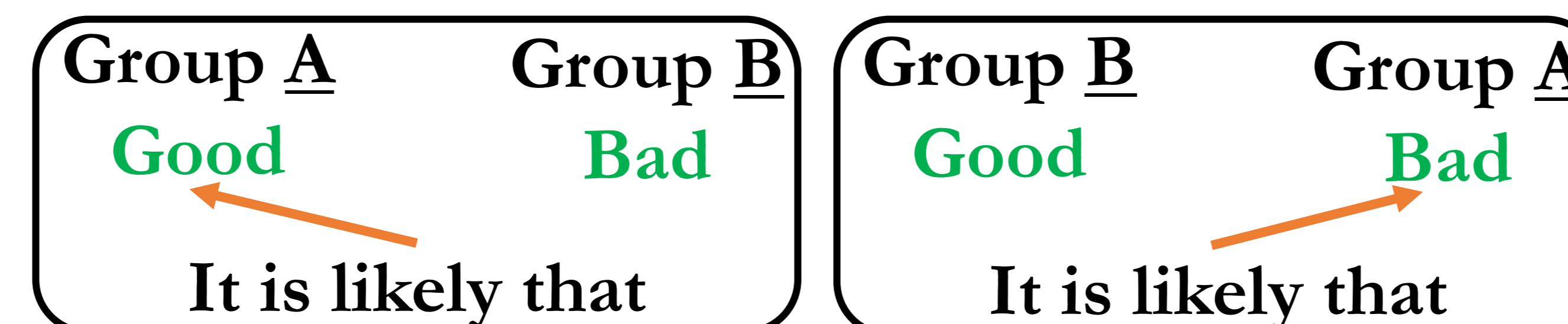
PANAS (Sato & Yasuda, 2001)

e.g. How much do you associate  
“It is likely that” with “Excited”?

Good Adj: Active, Proud, Strong, Determined,  
Inspired, Excited, Alert, Enthusiastic

Bad Adj: Jittery, Scared, Upset, Afraid, Distressed,  
Nervous, Ashamed, Irritable

#### \* IAT (Implicit) (Greenwald & Schwartz, 1998)

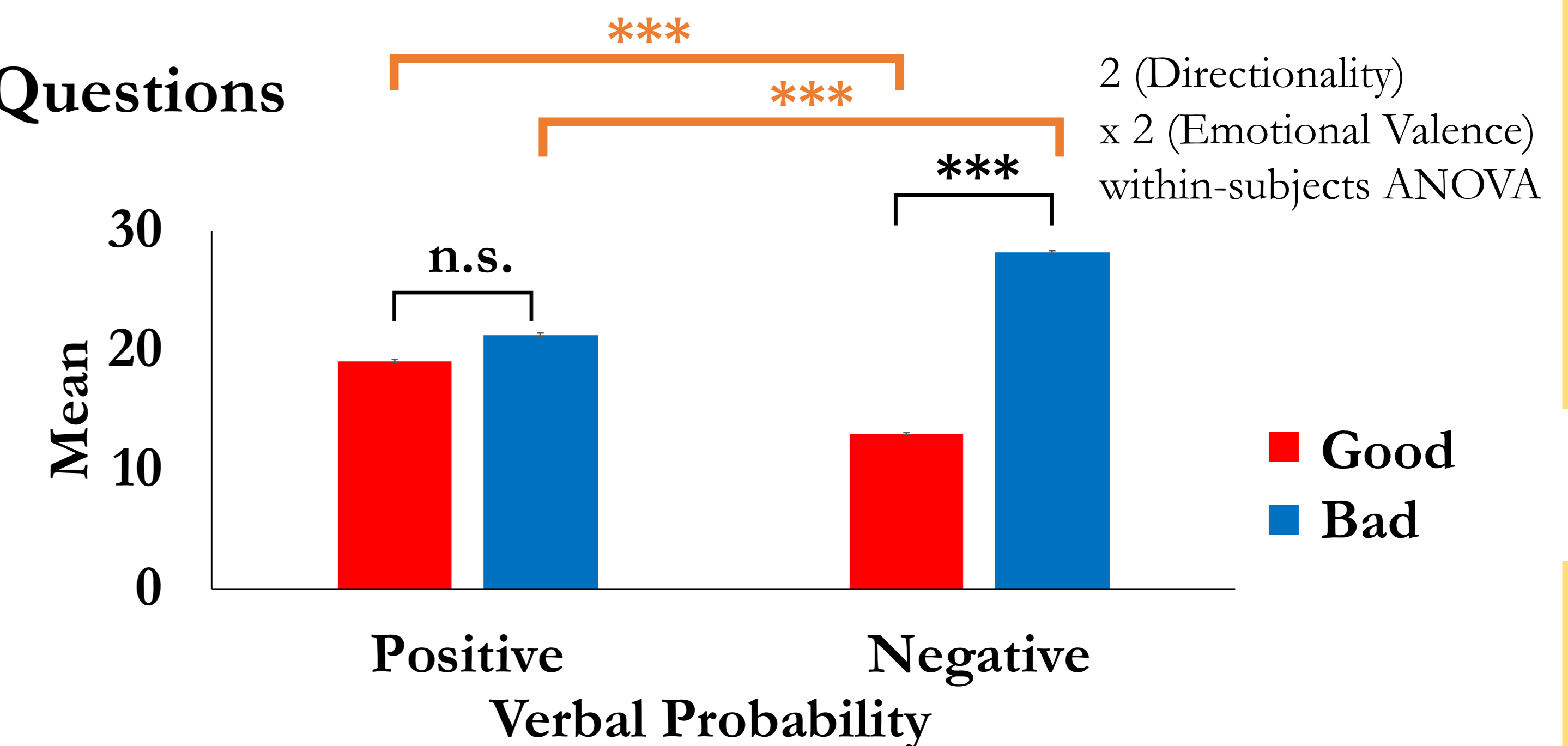


D score

(Greenwald et al. 2003)

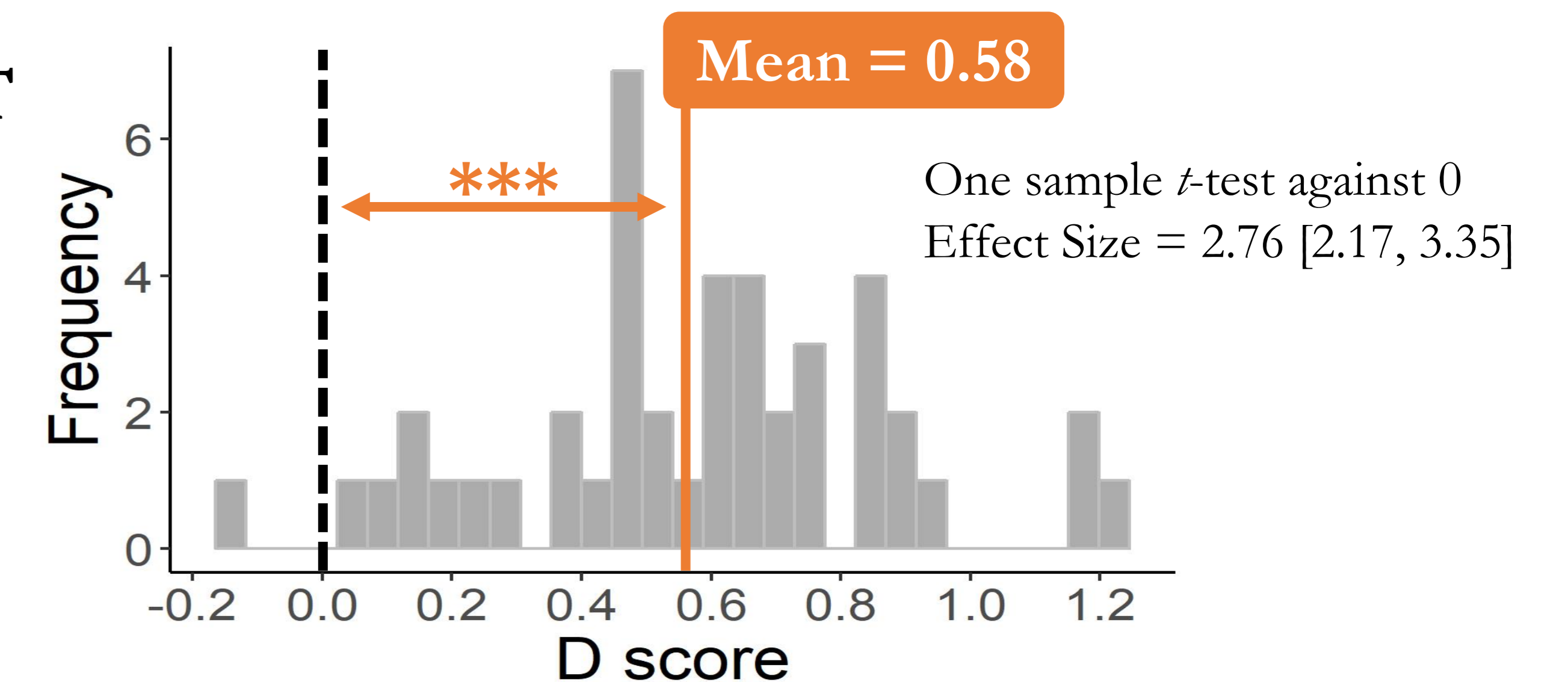
### Results & Discussion

#### \* Questions



➤ Positive expressions were significantly more associated to good than negative expressions were.

#### \* IAT



➤ Reaction time was shorter when positive/negative expressions were paired with good/bad respectively.

### Conclusion

- Positive expressions were more associated to **good** than negative expressions both explicitly and implicitly.
- Positive expressions were explicitly associated to **good** and **bad** equally, while negative expressions were explicitly more associated to **bad**.