

# Influence of Expectation Metric on Desirability Bias

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## Introduction

- Desirability bias refers to a situation in which the expectation for an outcome is inflated by the desire for that outcome, and deflated when the outcome is undesired Marks, 1951
- Past studies report mixed findings; studies using dichotomous predictions as a response metric reports consistent desirability bias, whereas those using likelihood judgments (LJs) do not. Windschitl, Smith, Rose & Krizan, 2009
- Therefore, we aimed to directly test whether prediction vs. LJ differentially affects the degree to which people exhibit desirability bias.

## Study 1 Basketball Game

**Participants** 167 students from introductory psychology courses at the University of Iowa

**Design** 2 (Response Metric) x 2 (Desired Outcome) between-participants design

- Response Metric; Dichotomous prediction vs. Dichotomous LJ
- Desired Outcome; White team winning vs. Red team winning

### Task

- Participants watched a video clip of a real-life basketball game between White vs. Red teams.
- Before viewing the clip, participants were led to prefer one team over another—namely, incentives were promised if the team assigned to them would win.
- After viewing most of the event, they made either a dichotomous prediction or a dichotomous LJ about the outcome of the game as follows:

**Prediction:** "What is your prediction about the outcome of the game?"

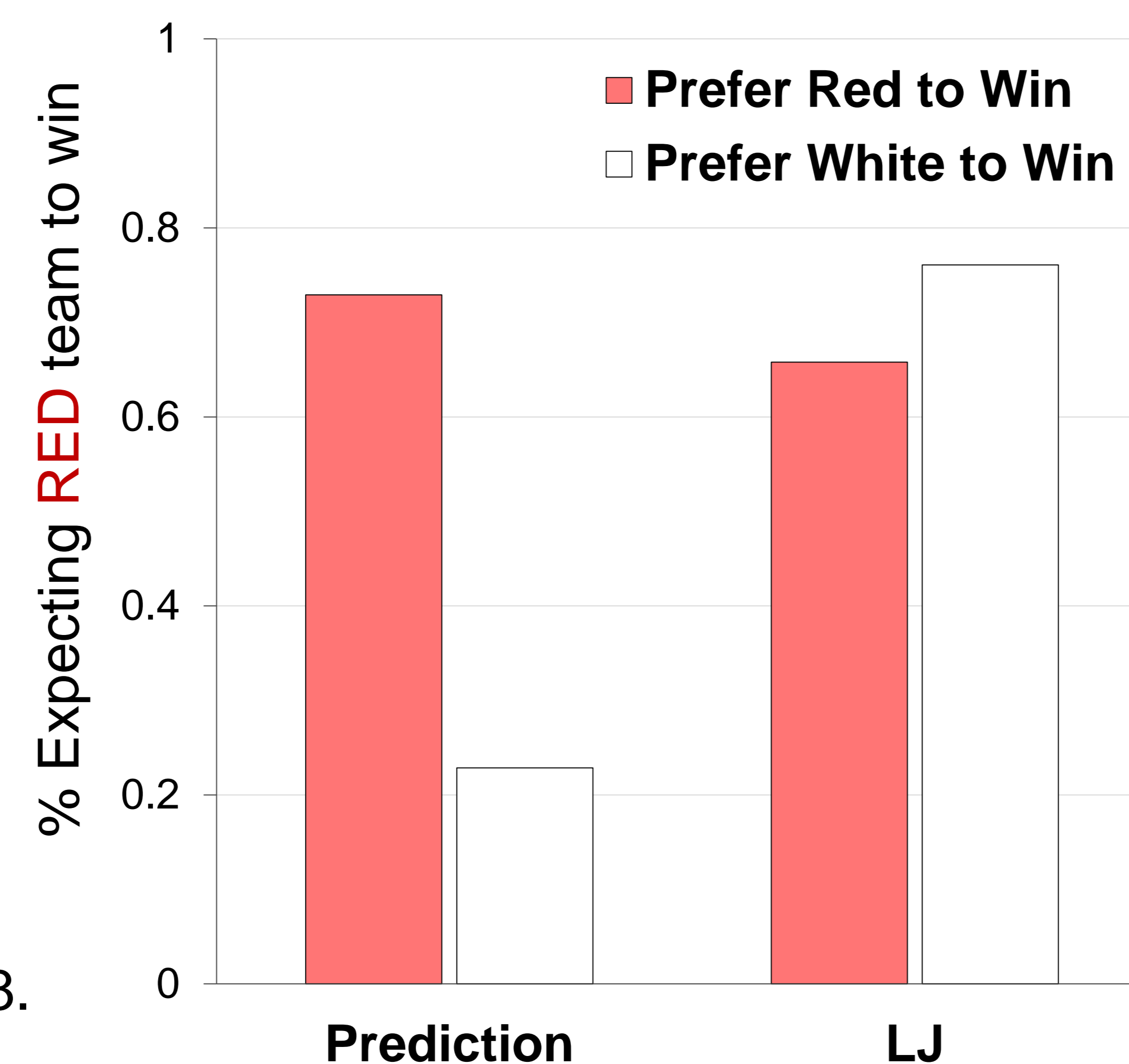
Red Team     White Team

**LJ:** "Is it more likely that the red or white team will win?"

More likely that Red team will win  
 More likely that White team will win

### Results

- Overall, 58.6% of participants predicted that their desired team would win the game, significantly greater than 50%, exhibiting the desirability bias (binomial test,  $p = .030$ )
- This tendency was significantly qualified by the whether they were asked to make prediction vs. LJ,  $X^2(1) = 17.46, p < .001$ .
- In other words, those who were asked to make dichotomous prediction exhibited greater degree of the desirability bias than those in dichotomous LJ condition.
- Furthermore, this metric effect was also present in behavior,  $X^2(1) = 7.53, p = .008$ .



## Study 2 Spartan Race

**Goal** Replication and generalization of findings from Study 1

**Participants** 331 students from introductory psychology courses at the University of Iowa

**Design** 3 (Response Metric) x 2 (Desired Outcome) between-participants design

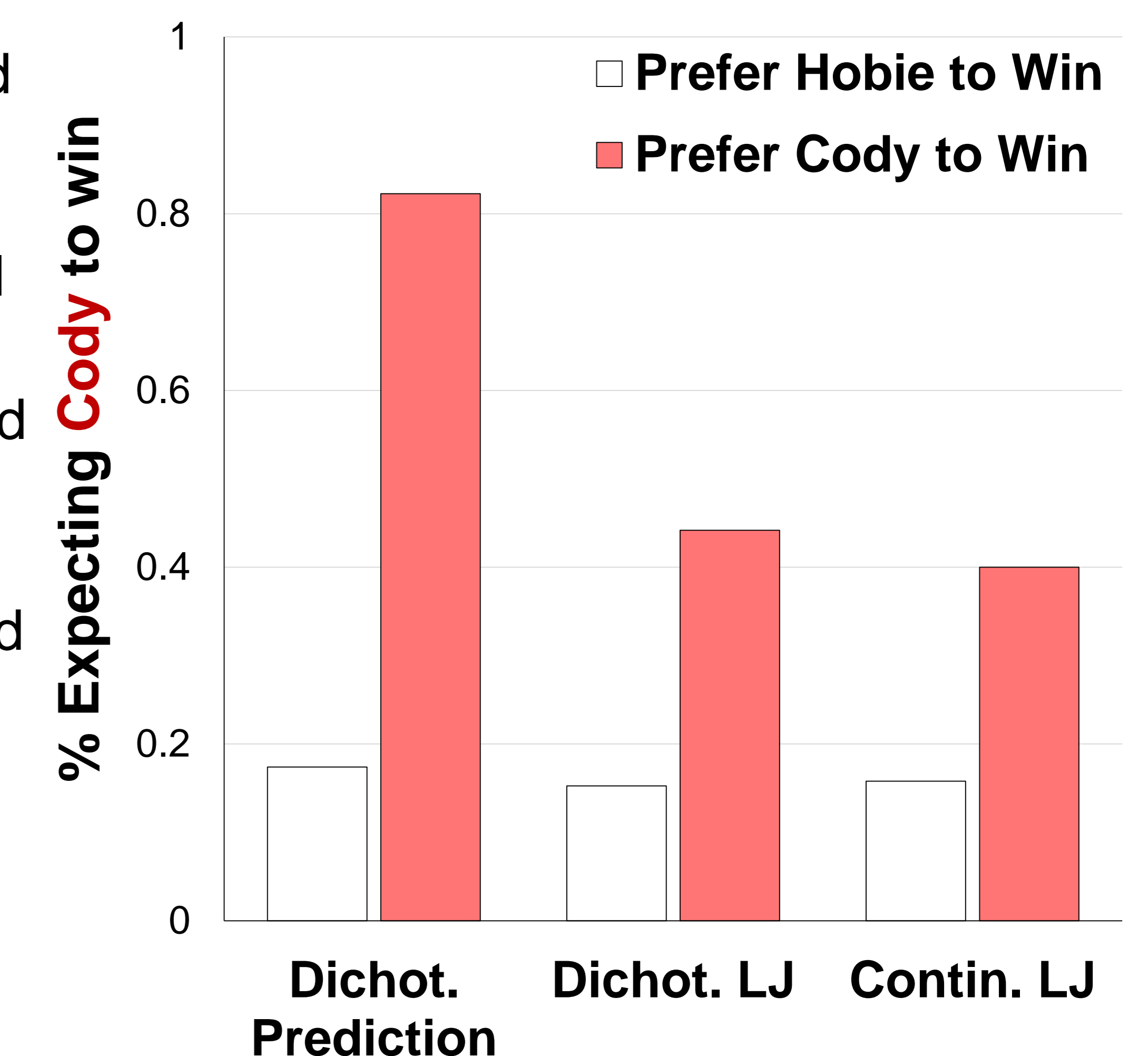
- Response Metric; Dichotomous prediction vs. Dichotomous LJ vs. Continuous LJ
- Desired Outcome; Hobie winning vs. Cody winning

### Task

- Participants were shown a series of pictures depicting an obstacle race between two athletes, Hobie and Cody.
- Similar to the Study 1, participants were led to prefer either one athlete over another to win the race.
- After viewing most of the event, participants made either a dichotomous prediction, dichotomous LJ or continuous LJ about the outcome of the race.

### Results

- Overall, 69.6% of participants predicted that their desired athlete would win the game, significantly greater than 50%, exhibiting the desirability bias (binomial test,  $p < .001$ )
- This tendency was significantly qualified by response metric,  $X^2(1) = 8.39, p = .015$ , suggesting the metric effect.
- When asked later, participants indicated that Hobie was leading and Cody was trailing in the race overall.
- The metric effect seem to be driven by responses from participants preferring Cody, the trailing athlete, to win,  $X^2(1) = 22.70, p < .001$ .



## Conclusion

- Both studies revealed a significant desirability bias overall. Critically, this bias was significantly stronger among people giving predictions rather than LJs.
- One possibility explanation for our findings is that people may activate different processing goals depending on the way in which expectations were measured. Kunda, 1990
- Namely, prediction may elicit stance-oriented goals, whereas LJs elicit assessment-oriented goals, making prediction more vulnerable for desirability bias.

## References

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