

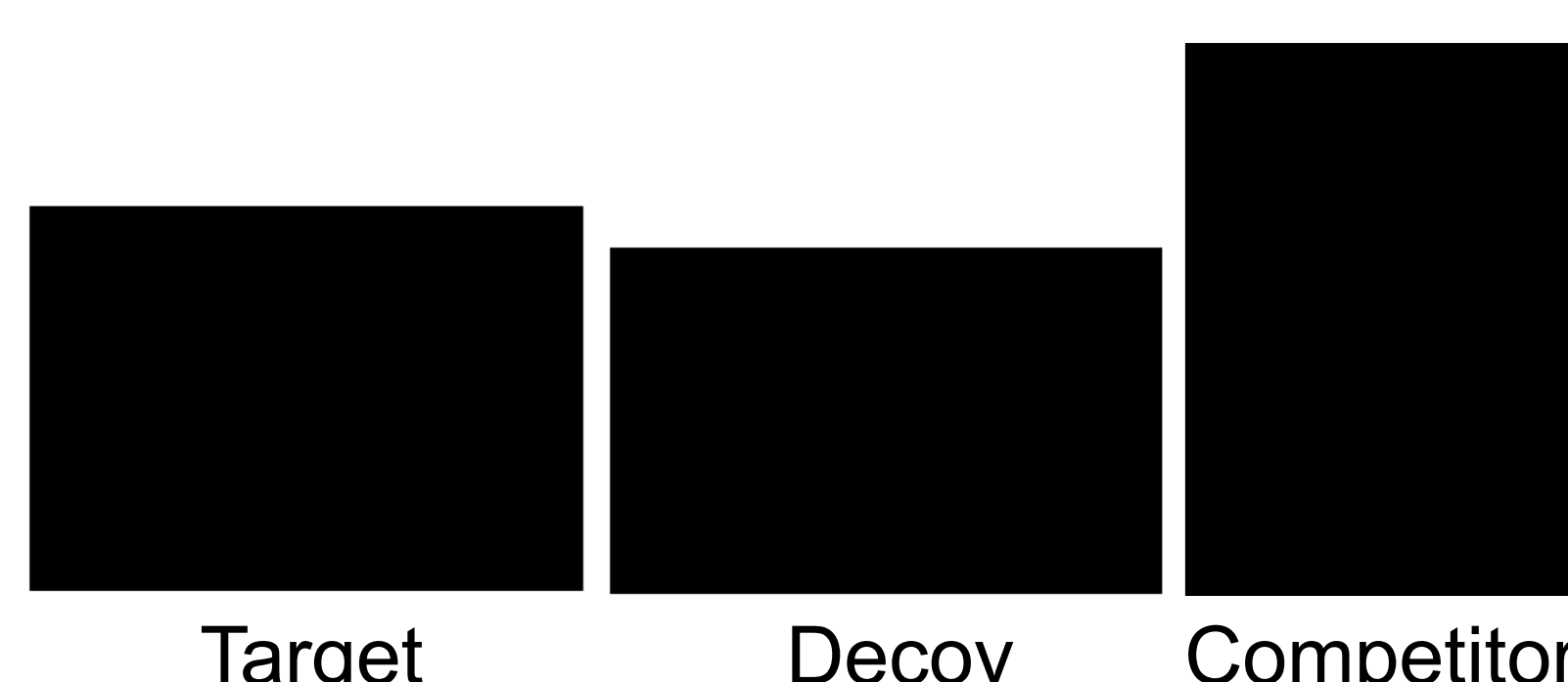


The Attraction Effect in Package Size Judgments

Background

What is the attraction effect?

Given a set of choices, the attraction effect occurs when one option becomes preferred by introducing a new option that is similar but inferior to it. For example:



Here, the addition of the decoy option which is similar in orientation but inferior in size to the target option increases the likelihood of the target option being selected as appearing larger (Trueblood et al., 2013)

The attraction effect has been primarily observed using stylized stimuli, like making judgments or choices between products based on prices or numeric marks of quality. However, studies using perceptual stimuli, like pictorial indicators of quality or size, has often failed to elicit a replicable attraction effect (Frederick et al., 2014).

This study examined the practical significance of the attraction effect in consumer using stimuli modeled after real food product boxes.

Materials

Mock product packages were created for 8 brands: Ritz crackers, Barilla penne pasta, Cheerios cereal, Cheezits crackers, Domino sugar, Tootsie pops, Jell-O ready mix and Chips Ahoy cookies.

For each brand, a vertical and horizontal version of the package was created, both with the same surface area and, in the case of all but Chips Ahoy, the same dimensions flipped on their side. A decoy option were created in both orientations, where the shortest side of the rectangles were shrunk by 10%.

Method

377 participants (223 male; $M = 36.28$ years) recruited from Mturk selected which out of a set of options appeared the largest in a total of 16 trials.

Design

Part 1:

- Eight trials, one for each brand
- Three ternary trials (decoy present), three binary trials (decoy not present), two fillers (one option was clearly the largest)
- Orientation of decoy/target, order of trials, color, whether a brand was presented in a ternary, binary or filler trial and with the target option to the left or the right of the decoy were all randomized

Part 2:

- Same format as Part 1
- Randomized characteristics were flipped for each brand

Ex. if the following ternary Ritz trial appeared in block 1, they would see the corresponding binary trial.



The attraction effect is observed if more participants select the target option in the ternary trials, when a corresponding decoy option is added, than in the binary trials.

Results

Factors predictive of selecting the target option as revealed by logistic regression analysis across all brands excluding Chips Ahoy:

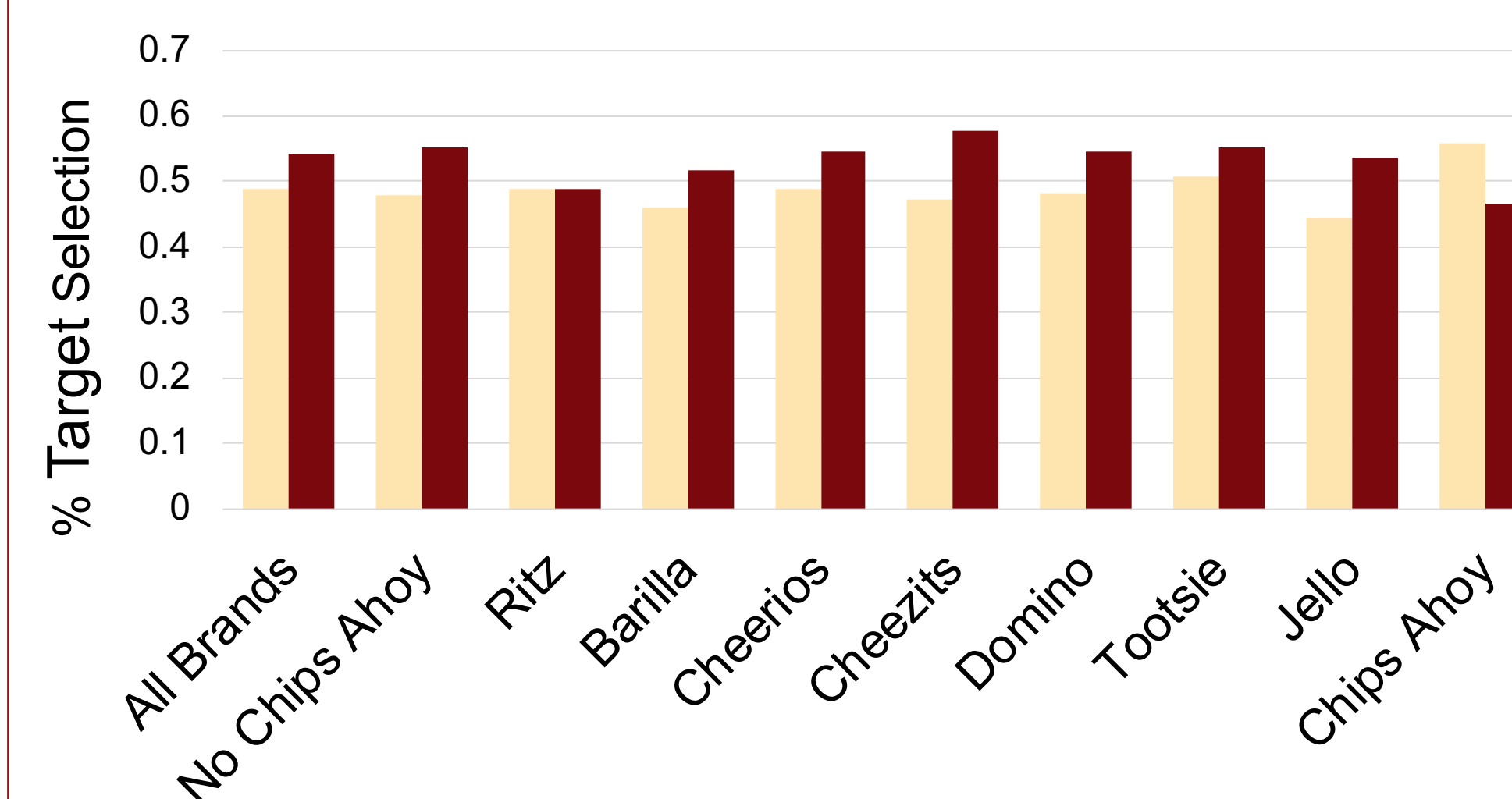
- The trial being ternary rather than binary ($\beta = 0.42, p < 0.001$)
- The target appearing to the right of the decoy option rather than the left ($\beta = 0.21, p < 0.001$)
- The target being horizontal rather than vertical ($\beta = 2.22, p < 0.001$)
- Neither brand familiarity ($\beta = -0.07, p = 0.570$) nor color was a significant factor ($\beta = -0.01, p = 0.943$)

Results

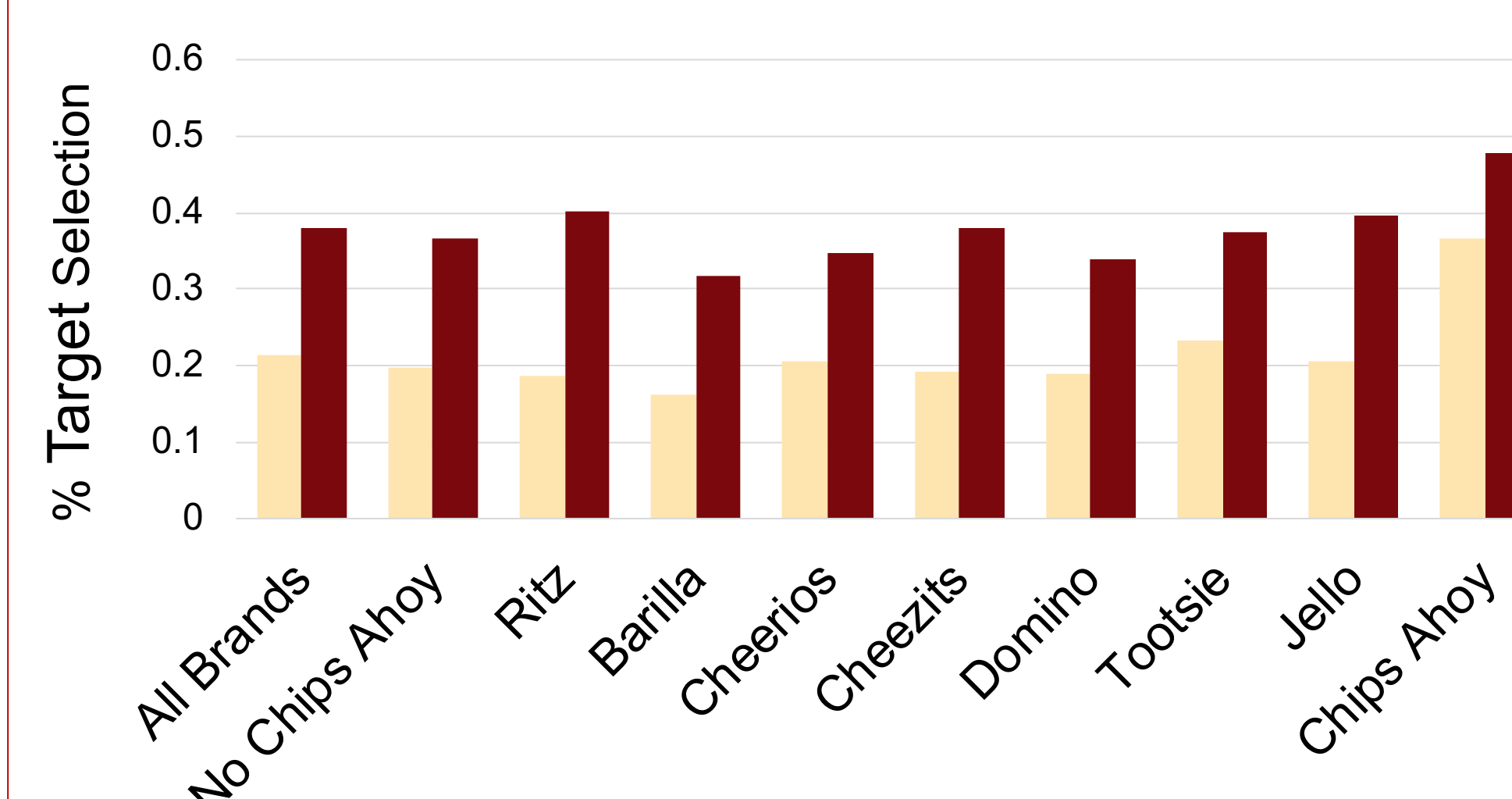
Observance of the attraction effect

McNemar's tests for marginal homogeneity revealed that the target option was selected more frequently when a supporting decoy was present and when targets were vertical ($\chi^2 = 76.77, p < 0.001$) but not horizontal in orientation ($\chi^2 = 1.29, p = 0.256$). The exception was Chips Ahoy, where an anti-attraction effect was observed for horizontal target options.

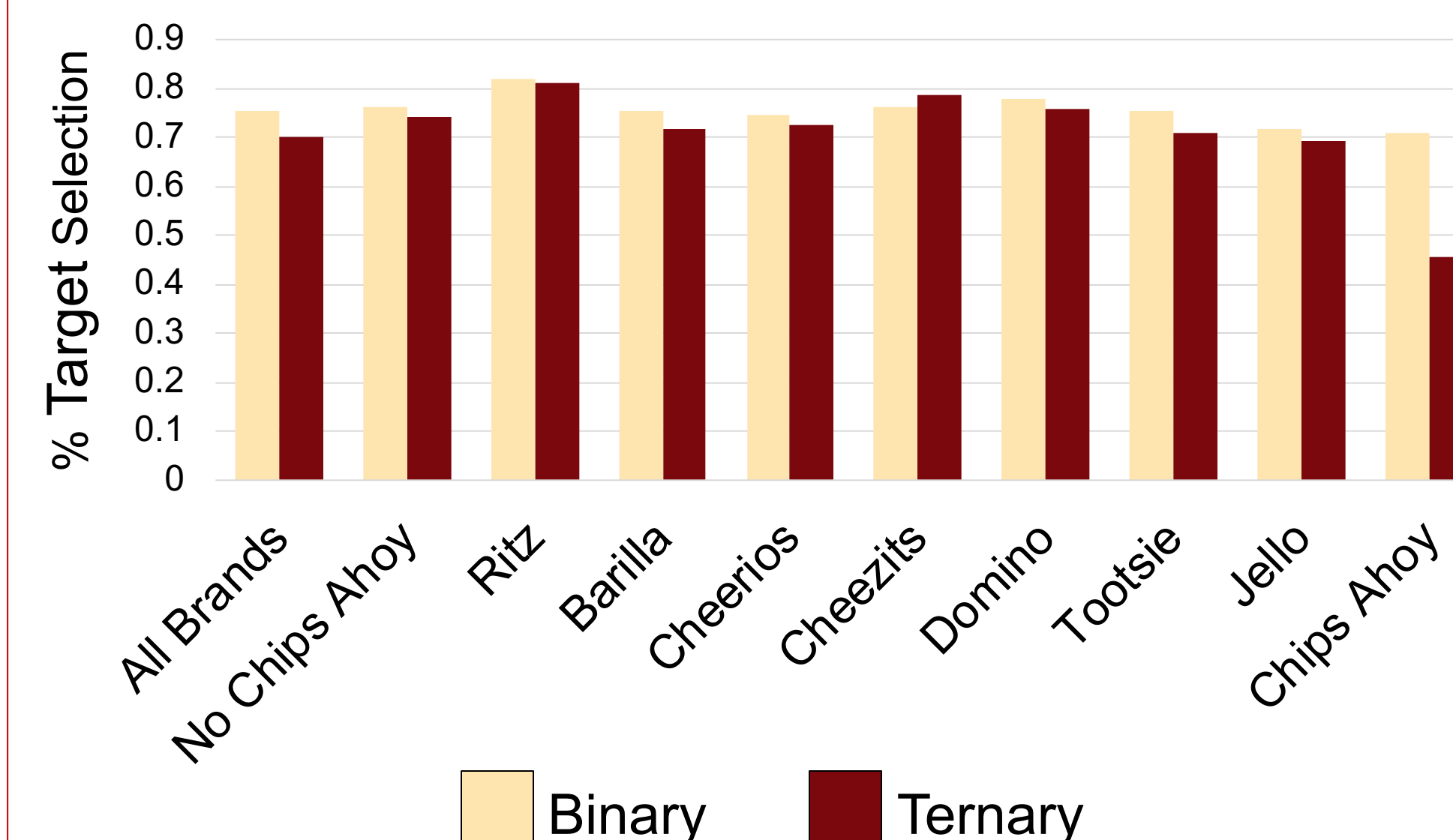
Attraction Effect Overall



Strong Attraction Effect for Vertical Decoy Trials



No Attraction Effect for Horizontal Decoy Trials



The proportion of participants who selected the decoy option in the binary and ternary trials for all brands together, individual brands and all brands but Chips Ahoy.

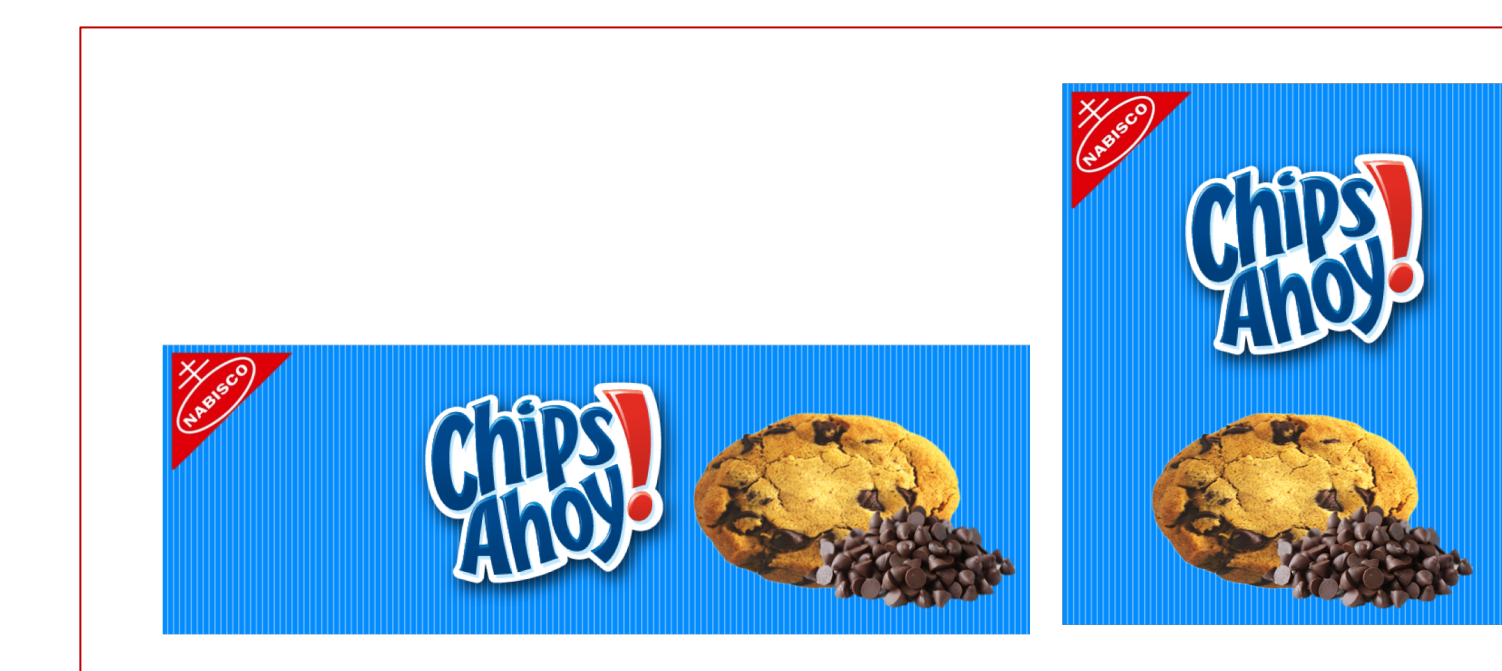
Conclusion

The attraction effect can be observed using perceptual stimuli modeled after real-life consumer goods depending on the nature in which they are presented. Specifically, the whether the target option appears on the left or right of the decoy and, critically, the orientation of the options are important factors in deciding whether or not presenting a decoy option will inflate the propensity to select an associated target option as larger than a competitor. This work provides evidence that the attraction effect has the potential to be meaningfully applied in the marketing sphere.

Future Research

Understanding the effect of dimensions

Chips Ahoy was the only brand to display an anti-attraction effect with horizontal targets, likely due to it being the only brand to have a greater disparity in dimensions between orientations, pictured below. Using a series of increasingly elongated packages, a next study will determine the effect of package dimensions on the attraction effect.



Understanding the effect of orientation

Are vertical items more sensitive to the attraction effect, or are they only enhanced because they were the least favored options starting out? We will be conducting a proceeding study assessing whether the same patterns regarding orientation hold if the vertical packages are larger such that there is a 50/50 target/competitor selection breakdown binary trials.

References

- Frederick, S., Lee, L., & Baskin, E. (2014) "The Limits of Attraction," *Journal of Marketing Research*, 51(4), 487-507.
- Huber, J., Payne, J. W., & Puto, C. (1982). "Adding asymmetrically dominated alternatives: Violations of regularity and the similarity hypothesis." *Journal of Consumer Research*, 9, 90-98.
- Trueblood, J. S., Drown, S., Heathcote, A., & Bussemeyer, J. R. (2013), "Not just for consumers: Context effects are fundamental to decision-making," *Psychological Science*, 24 (4), 1-8.

For questions or comments, please contact Sophie Alman: sophie.alman@chicagobooth.edu

ACKNOWLEDGMENTS: This research was conducted at the University of Chicago Booth School of Business, supported in part by the Master of Arts Program in the Social Sciences at the University of Chicago.