



A COGNITIVE BIAS- 10 MINTUES TO SAVE \$10

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Abstract

A cognitive bias is a systematic pattern of deviation from norm or rationality in judgment. Cognitive biases may sometimes lead to perceptual distortion, inaccurate judgment, illogical interpretation, or what is broadly called irrationality. (Wikipedia, 2018)

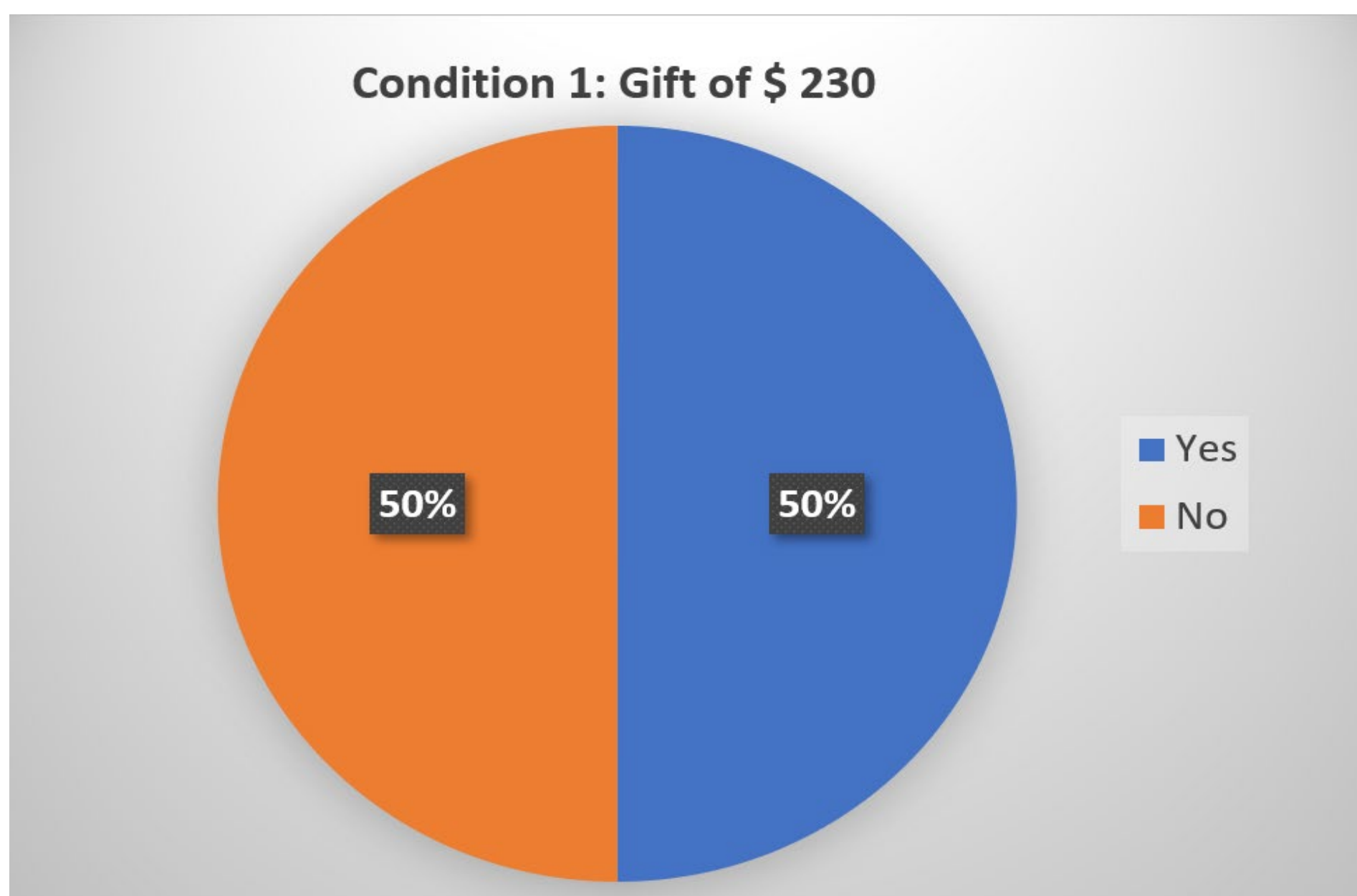
This research was designed a experiment to test the irrational illusion. It was a type of cognitive bias and it lead a systematic error of inductive reasoning. People displayed this bias when they believed they were smart, and they made the right decision by doing mathematic calculation to save a big portion of the money vs their spending amount. They thought they could save 33.33% spending if they went for \$30 gift, but they only saved 4.34% spending if they went for \$230 gift. Therefore, they believed that they had made the right decision to go for \$30 gift because the trip made them feel that they saved a lot of money.

Methodology

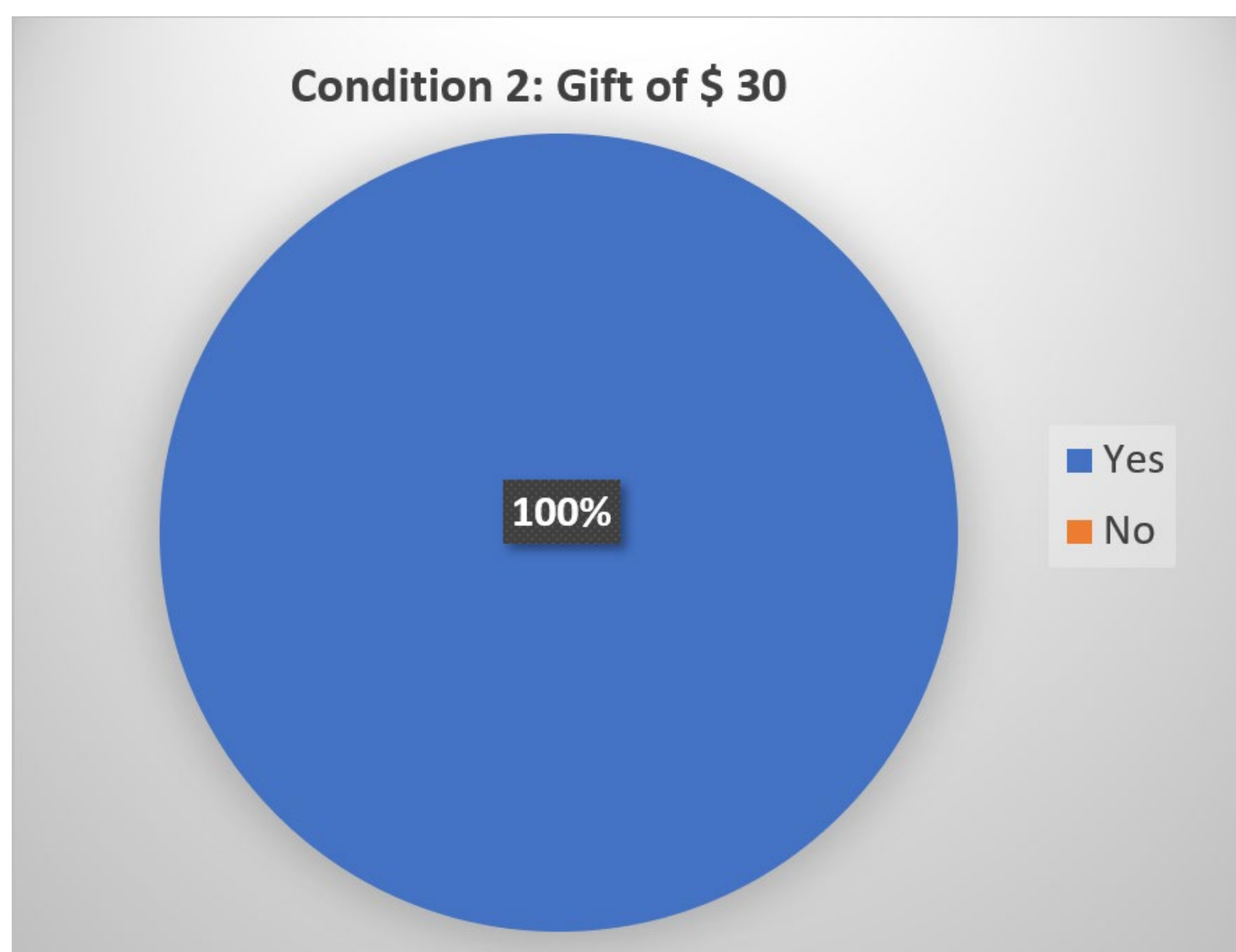
The author constructed two sets of questions that proposed two similar situation but with two different gift values. The questions were asked:

Condition 1: You need to buy a gift for your family member or your friend for his/her coming birthday for \$230, and you know you can save \$10 from a store that is 10 minutes away. Would you make the trip to buy the gift?

Condition 2: You need to buy a gift for your family member or your friend for his/her coming birthday for \$30, and you know you can save \$10 from a store that is 10 minutes away. Would you make the trip to buy the gift?



Condition 1: Gift of \$ 230	
Yes	6
No	6
Total	12



Condition 1: Gift of \$ 30	
Yes	12
No	0
Total	12

Comparison of proportions calculator

Sample 1

Proportion (%):

Sample size:

Sample 2

Proportion (%):

Sample size:

Results

Difference	49.99999 %
95% CI	15.4418 to 74.6218
Chi-squared	7.667
DF	1
Significance level	P = 0.0056

Conclusion

The author conducted the comparison of proportions with 95% CI and derived that actually cognitive bias(irrational illusion) did hold true in this controlled environment test where only class students were considered as test sample. In this given situation, the P-values was less than 0.05 which indicated that the difference was likely not due to randomness. In other words, the result was a statistically significant.

So we are successful to accept that irrational illusion bias existing in both situations for this controlled experiment.

Reference

1. www.Wikipedia.org