

What's Your Beef?

The Effect of Visual Representation on Framing

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Introduction

- **Purpose:** How are consumer preferences affected by framing and visual representation of ingredients?
- The **framing effect** suggests that the phrasing of information affects whether people see it in a positive or negative light (Peters et al., 2006).
- A study by Levin & Gaeth (1988) found that customers were more likely to show a preference for meat labeled "75% lean" than they were for meat labeled "25% fat."
- **Visual information is more efficient** than verbal information when it comes to learning and processing (Verdi et al., 1997).

Hypotheses:

1. Participants will rate the positively framed (80% lean) beef as a higher quality as compared to the negatively framed (20% fat) beef.
2. Participants are less affected by framing and less likely to rate a difference if they are given the visual representation of the percentage.
3. Participants will be equally likely to rate both packages of neutrally framed beef the same, regardless of whether or not the graph is present.

Methods

- Online participants on **Amazon Mechanical Turk** were shown one of six (between subjects) evenly randomized pictures of ground beef labels (vegans and vegetarians were asked to refrain from participating).
- Six different labels: 80% lean, 20% fat, 80% lean with the visual, 20% fat with the visual, both percentages shown, and both percentages shown with the visual.
- 219 participants (removed seven outlying responses, less than 10 or more than 120 seconds to complete the survey).

	1	2	3	4	5	6	7
How healthy does this product seem?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How good do you think this product will taste?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How likely are you to buy this product?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Data



Fig. 1. The above is one of six figures shown: positively framed and including a visual representation.



Fig. 2. The above is one of six figures shown: negatively framed and lacking a visual representation.

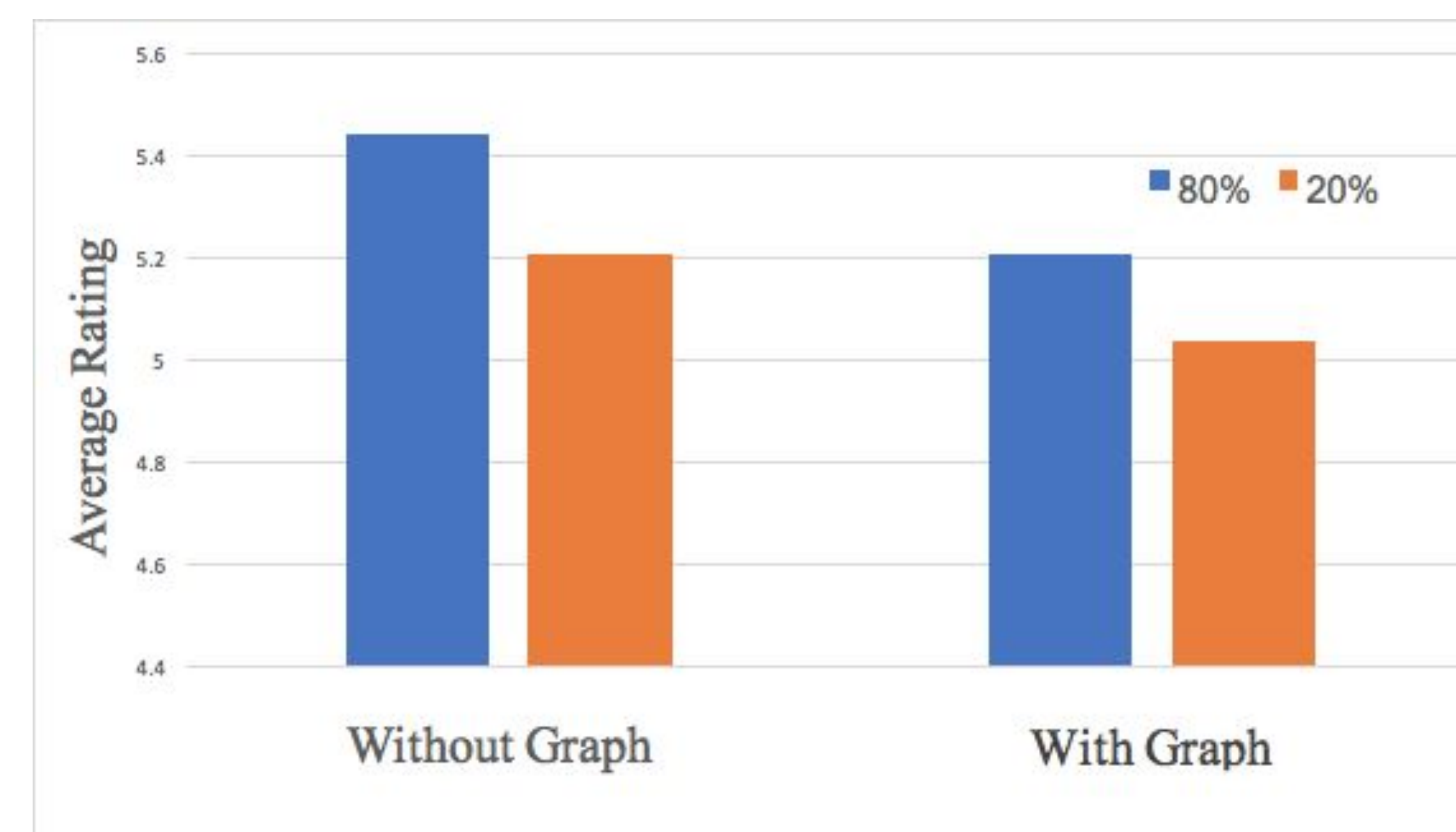


Fig. 3. The average ratings of positively (80% lean) and negatively (20% fat) framed beef, with or without a given graph; positive graphs are always rated higher.

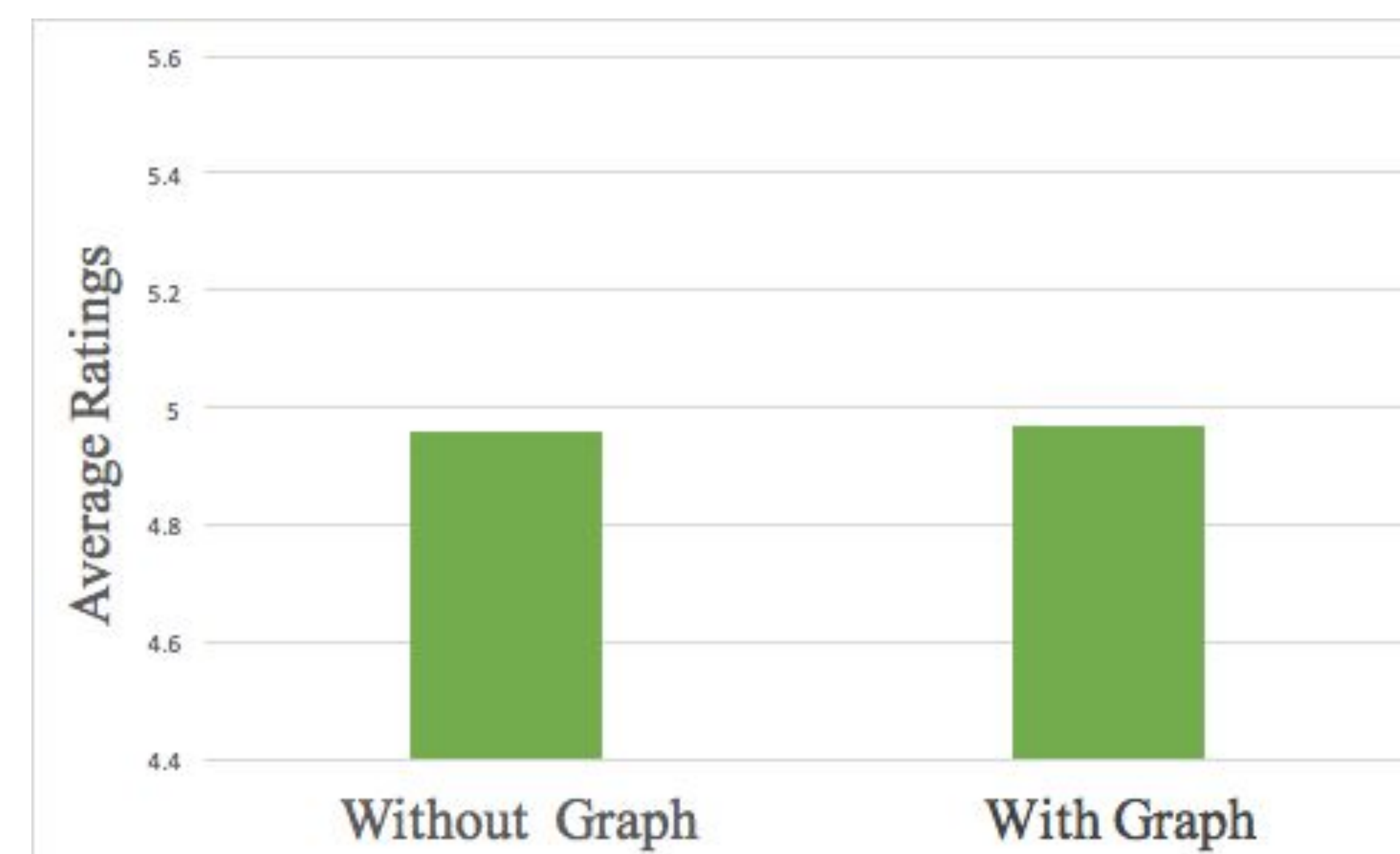


Fig. 4. The ratings of neutrally framed (both percentages shown) labels have little difference.

Results

We conducted a 2 (Graph: with, without) x 3 (Framing: 80% lean, 20% fat, both 80% lean and 20% fat) ANOVA test on the participant's average ratings. Positive framing ($M = 5.32$, $SD = 1.31$), negative framing ($M = 5.12$, $SD = 1.33$), and neutral framing ($M = 4.96$, $SD = 1.46$) *did not differ significantly* in resulting ratings, $F[2,177] = 1.05$, $p > .05$. Furthermore, the addition of a visual representation ($M = 5.07$, $SD = 1.30$) *did not produce significant different ratings* between positive and negative framings compared to those without it ($M = 5.20$, $SD = 1.43$); similarly, differences between ratings of packages with neutral framing labels ($M = 4.96$, $SD = 1.46$) *were not significantly different* than differences of the other framings, $F[2,177] = 0.13$, $p > .05$. While there was a **trend** in our data, the results were **not statistically significant**.

Discussion

- It is possible that online participants **may have been distracted** while taking the survey, which could account for the smaller differences in trends.
- There was no way to validate participant's responses or take into account different control variable as the study was online.
- The labels with the graphs included were **overall rated as lower quality and less healthy** than the labels without graphs in both the 80% and 20% conditions. The conditions with both the 80 and 20% shown the label with the graph was instead rated (on average) as higher quality, though only by a minimal amount.
- In a **follow-up study**, we would like to survey a larger, more controlled sample size and analyze each survey question independently rather than averaging the answers. We also would like to see if results differ if the experiment is performed in person, or if other types of meat are given.

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References

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