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Is a “star” worth a thousand words?: The interplay between product-review texts and rating valences

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About the authors

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Abstract

Purpose – This study investigates how the interplay of valences (positive or negative) between review texts and ratings affect consumers’ reactions to the reviews and the product being assessed.

Design/methodology/approach – An experimental design with hypothetical movie reviews was used to investigate how inconsistent text-rating reviews affect people’s intention to consume a particular product and their perceptions of the review itself.

Findings – We found that text valences (positive or negative) significantly influence how subjects perceive the interestingness and trustworthiness of reviews. The texts also have an influence on the subjects’ movie-attendance intention compatible with their valence. In addition, we found a crossover interaction between texts and ratings that affects a review’s trustworthiness.

Research limitations/implications – This study enriches our understanding of consumer decision making when different formats of information about the same object are presented.

Practical implications – Marketers can benefit by incorporating review texts and rating valences to enhance the prediction accuracy of their products’ sales performances. Review publishers can get a better understanding of how to present their reviews to enhance their perceived interestingness and trustworthiness.

Originality/value – Product reviews are commonly found in the mass media. These reviews use ratings as evaluative summaries of the texts. However, little research has been conducted regarding the communication effects that the ratings have in relation to the texts. This study seeks to fill this gap.

Keywords – information valence, negativity effect, product reviews

Paper type – Commentary paper
**Introduction**

In making purchase decisions, consumers refer to multiple sources of information with mass media advertising being the most common. However, product reviews are another popular form that consumers utilize with online reviews proliferating on the Internet. Reviewers are commonly innovators and opinion leaders. They use and evaluate new products and disseminate their evaluations making them an early link in an innovative diffusion process (West & Broniarczyk, 1998).

Reviews are especially important when a product possesses substantial experience attributes making it difficult for pre-consumption quality assessment. Consumers seek purchase recommendations from external sources (Rogers, 2003; West & Broniarczyk, 1998). Marketers also seek to understand the influential and predictive powers of reviews. Knowing whether reviews are positive or negative enables marketers to forecast their products’ sales. If reviews are negative, corrective measures, such as revising promotional strategies or redesigning the product, may be instituted (Basuroy, Chatterjee, & Revid, 2003).

Little research has been done from the publishers’ perspective. Review publishers in newspapers, magazines, Internet websites, etc. provide readers with product information for making consumption decisions. However, they are not concerned with the sales of the reviewed products, but with the sales of their publications. Understanding what satisfies their readers is necessary.

Previous research also has ignored the use of ratings. Several studies have found that reviews can help predict a consumer’s purchase intention and product sales (Basuroy et al., 2003; Eliashberg & Shugan, 1997; Wyatt & Badger, 1984, 87/88, 90). These studies have investigated the impact of texts or ratings but not their interplay. Investigating them separately is not comprehensive enough. Although we assume that the ratings are a summary
of the texts and their valences are consistent, this may not always be valid because ratings may be biased by consumer perceptions and/or editorial policies.

We are interested in how this text-rating interplay affects a consumer’s attitude towards a review and its product. Theoretically, our study enriches our understanding of consumer decision making when information is presented in different formats. Practically, this study also provides insight for marketers and publishers to use in considering the role of product reviews in their marketing strategies.

The current study focuses on single-review scenarios. We admit that it sacrifices some generalization but we believe that the decision-making process differs between single and multi-review scenarios. Studying multiple-review scenarios would have introduced extraneous factors thus we recommend that it be investigated seperately.

In the following, we discuss the marketing value of reviews. We then develop our hypotheses and describe our methodology. We conclude with a discussion and recommendations for future research.

**Literature review**

*What marketers want from reviews*

Many studies have investigated consumers’ responses to reviews. Wyatt and Badger (1984, 87/88, 90) found that text valence significantly influences a consumer’s intention to see a movie consistent with its valence. Burzynski and Bayer (1977) found that if audiences receive negative information about a movie before watching it, their evaluation of it is hampered (Wyatt & Badger, 1984). Focusing on market-level responses to reviews, Eliashberg and Shugan (1997) found that rating valence plays a significant role in forecasting movie sales. Basuroy et al. (2003) found that rating valance is significantly associated with initial sales. These findings are significant for marketers because they indicate that review valence is associated with consumers’ responses.
Marketers are interested in reviews because they indicate possible failures enabling timely corrective measures. It is important for marketers to understand whether review texts and ratings have consistent influential power over purchase intention.

*What publishers want*

The printed media is a major outlet for product reviews. Some reviewers position themselves as “consumption advisors” evaluating product quality and making purchase recommendations (e.g., Cirulis, 1998; Hu, 1998). The popularity of reviews may indicate that readers are willing to buy and read them.

In addition to being informative, writing interesting reviews is a benefit, if not a necessity (Basuroy et al., 2003; Wyatt & Badger, 1987/88). Wyatt and Badger (1987/88) believed that a movie review should be trustworthy and interesting. Basuroy et al. (2003) and Holbrook (1999) also suggested that reading reviews should be fun.

Consumers want reviews to be unbiased and evaluate a product solely on its quality, but interactions among consumers, publishers, and marketers are complicated. Readers may suspect that a publisher is biased if a product’s company is also an advertiser. Some practices in the movie industry may also create mistrust. Studios sometimes pay for junkets where reviewers are invited to prescreen a movie and interview its stars. The reviewers are then expected to write favorable reviews. If not, they might not be invited again (Rosenbaum, 2000).

Thus, instead of being concerned about product sales, publishers will be more concerned with whether readers think their reviews are interesting and trustworthy.

**Hypotheses**

*Weight of a review's text and rating*

Ratings serve a data reduction function and can be viewed as single-dimension indicators
of product quality. In situations where both texts and ratings are present in a review, we expect the ratings to play a supplementary role in influencing the readers’ attitudes toward products. From the publishers’ perspective, if readers are concerned only with the ratings, they do not need to spend money to hire people to write review articles – giving ratings would be very economical because the information would be compressed. We hypothesize that:

H1. In a product review containing both text and rating, the text is more significant in affecting a) product purchase intention, b) perceived review interestingness, and c) perceived review trustworthiness.

The Problem of text-rating inconsistency

Past research has paid little attention to text-rating interplay. West and Broniarczyk (1998) studied only ratings in their study citing Wyatt and Badger (1990) to support their approach. However, Wyatt and Badger (1990) studied only texts. The influential superiority of texts has not been verified.

When giving a rating to a product, reviewers may need to weight a product’s attributes and compress them into a single-dimension indicator. However, this process is subjective (West & Broniarczyk, 1998) creating the possibility of text-rating inconsistencies.

Something similar happens during reading. Readers may not place the same weight on various product attributes that the reviewers did. Thus, readers may have their own perception of the texts but find that the ratings are somewhat different from what they expected. Inconsistencies may be exacerbated when the ratings are assigned by editors and not the reviewers themselves.

Negativity effect on purchase intention
Attention must be given to inconsistent reviews. The negativity effect implies that positive and negative information does not have symmetrical influence on people’s decision making (Kahneman & Tversky, 1979; Skowronski & Carlston, 1989). Negative reviews hurt sales more than positive reviews help (Basuroy et al., 2003). This suggests that when both positive and negative information is present, significantly lower purchase intention is produced by a Pos-Neg or a Neg-Pos review\(^1\) than by a Pos-Pos review but not significantly higher than Neg-Neg review. When consumers read negative information, they maintain their “status quo” and will not make a purchase decision until they obtain sufficient positive information. This leads us to hypothesize that:

**H2a.** Pos-Pos reviews produce significantly higher purchase intention than inconsistent and Neg-Neg reviews.

**H2b.** Inconsistent reviews do NOT produce significantly higher purchase intention than Neg-Neg reviews.

*Negativity effect on review interestingness*

Positive and negative information also produce different reactions (Larsen, Norris, & Cacioppo, 2003). In advertising research, audiences who are not interested in or do not feel an ad is pleasant, evaluate it lower (Goldberg & Gorn, 1987; Olney, Holbrook, & Batra, 1991). Mitchell (1986) found that negative information results in less favorable attitudes while positive information produces higher interestingness.

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\(^1\) Reviews with positive texts and ratings are abbreviated Pos-Pos. Reviews with negative texts and ratings are abbreviated Neg-Neg. Reviews with positive texts and negative ratings are abbreviated Pos-Neg. Reviews with negative texts and positive ratings are abbreviated Neg-Pos.
H3a. Pos-Pos reviews produce significantly higher interestingness than inconsistent and Neg-Neg reviews.

H3b. Inconsistent reviews do NOT produce significantly higher interestingness than Neg-Neg reviews.

_Inconsistency on trustworthiness_

Wyatt and Badger (1987) did not find text valence affected trustworthiness. This may have been because they did not consider text-rating valence interplay. Research has focused on consumer decision-making using inconsistent information from different sources (Gershoff, Broniarczyk, & West, 2001; West & Bronizrczyk, 1998).

Consistent text-rating valences enhance a review’s trustworthiness (Roggeveen & Johar, 2002). Readers rely on a review they trust when making decisions. Reading reviews may reduce pre-purchase uncertainty (West & Bronarczyk, 1998), but inconsistent reviews are not definitive. They do not reduce uncertainty and are not trustworthy. This leads to the following hypothesis:

H4. Consistent reviews are more trustworthy than inconsistent reviews.

_Method_

We chose movie reviews because movies possess substantial experience attributes and are difficult to assess before watching. Consumers commonly consult movie reviews prior to making a decision to see a movie.

We designed hypothetical reviews to investigate text-rating valence interplay and its effect on intention to see a movie and interest in and trust of a review. We created reviews with Pos-Pos, Neg-Neg, Pos-Neg and Neg-Pos scenarios.
In addition to text and rating valences, we added two control variables: text length (long, medium, and short) and rating location (before or after the text). With short texts, it is possible that subjects will rely more on the ratings. Evaluations may be affected by the primacy and recency sequence effect of the rating’s location.

We used this combination of variables and generated 24 reviews by using a procedure adopted by Wyatt and Badger, (1984, 87/88, 90). First, we compiled a list of over 20 actual review statements and then we revised it into one positive review (see Appendix). Next, we generated versions with negative adjectives and various lengths.

We used a seven-point scale to measure the three dependent variables: “This review is interesting”, “This review is trustworthy”, and “I am interested in going to see this movie”.

We collected 30 responses for each of the 24 versions giving us a sample size of 720. Our data was collected in three high-traffic areas in Hong Kong. Subjects were randomly assigned a review. After reading it, their perceptions were measured. We then conducted our manipulation checks and collected their demographic information.

Findings

Sample characteristics are summarized in Table 1.

Hypothesis testing

H1 states that in reviews containing text and a rating, the texts have significantly more influence on purchase intention, review interestingness, and review trustworthiness. First, we ran three ANCOVAs with text and rating valences as independent variables, and with review length and rating location as covariates. Because none of the covariates were significant, we re-ran three ANOVAs without them. Table 2 contains the results.
Our assessment shows that text valence was significant in explaining differences in movie-going intention, interestingness, and trustworthiness. However, rating valence was only significant in explaining differences in movie-going intention. This suggests that H1 is supported.

We also found a significant interaction between text and rating valences on trustworthiness. An analysis for simple effects was conducted when we tested H3.

**Negativity effect and purchase intention**

H2 contains two sub-hypotheses that assess the impact of the negativity effect of inconsistent reviews on movie-going intention. H2a hypothesizes that Pos-Pos reviews produce significantly higher purchase intention. As shown in Table 3, the Tukey HSD test revealed that Pos-Pos reviews produced significantly higher average purchase intention than Neg-Neg and Neg-Pos reviews. However, no significant difference was found between Pos-Pos and Pos-Neg reviews. The negativity effect was not found in Pos-Neg reviews. Therefore, H2a is not supported.

H2b hypothesizes that inconsistent reviews do NOT produce significantly higher movie-going intention than Neg-Neg reviews. The Tukey HSD test revealed that Neg-Pos reviews did not produce significantly higher average movie-going intention than Neg-Neg reviews. However, a significant difference was found between Pos-Neg reviews and Neg-Neg reviews. H2b is not supported (Table 3).

Although both hypotheses are not supported, they provide support for H1, showing that text valence produces a stronger influence on purchase intention than rating valence.

[Insert Table 3 about here]

**Text-rating consistency and review interestingness**
H3 contains two sub-hypotheses assessing the impact of the negativity effect of inconsistent reviews on interestingness. H3a hypothesizes that Pos-Pos reviews produce significantly higher interestingness than inconsistent and Neg-Neg reviews. The Tukey HSD test revealed that Pos-Pos reviews produced significantly higher interestingness than Neg-Neg and Neg-Pos reviews. However, no significant difference was found between Pos-Pos reviews and Pos-Neg reviews. H3a is not supported (Table 3).

H3b hypothesizes that inconsistent reviews do NOT produce significantly higher perceived review interestingness than Neg-Neg reviews. The Tukey HSD test revealed that Neg-Pos reviews did not produce significantly higher interestingness than Neg-Neg reviews and was only marginally higher than Pos-Neg reviews. H3b is not supported (Table 3).

Similar to H2, the results of H3 showed text valence has a greater influence on interestingness than rating valence. The interestingness of Pos-Neg reviews was not significantly lower than Pos-Pos reviews and was marginally higher than Neg-Neg reviews.

Text-rating consistency and review trustworthiness

H4 hypothesizes that consistent reviews are perceived as more trustworthy than inconsistent reviews. As shown in Table 2, a significant interaction effect was found between text and rating valences. This was mainly due to consistent reviews producing higher trustworthiness. We then conducted an analysis of simple effects by using a one-tailed t test and compared the means as suggested by Keppel and Zedeck (1989). Referring to Figure 1 and Table 4, the results suggest:

- When text valence is positive, an inconsistent rating produces marginally lower trustworthiness thus marginally supports H4.
- When text valence is negative, an inconsistent rating produces significantly lower trustworthiness thus supports H4.
- When rating valence is positive, an inconsistent text produces significantly lower trustworthiness thus supports H4.
- When rating valence is negative, an inconsistent text does not produce significantly lower trustworthiness thus not supports H4.

These results suggest that consistent reviews produce higher trustworthiness. In addition, trustworthiness is hampered if a review has a negative text with a positive rating.

Discussion and implications

This study investigated how text-rating interplay in reviews affects perceptions of interestingness and trustworthiness toward reviews as well as purchase intention by using movies as an example. Reviews are used for an increasing array of products and services, and understanding how consumers react to reviews is important.

We created review scenarios with different combinations of text and rating valences and found that subjects respond more to text valence than rating valence. When a text is positive, a review is generally viewed as positive and greater weight is placed on it in determining whether a review is interesting and can be trusted, and the product worth purchasing. However, it is a mistake to completely ignore the influence of rating valences. They exert a negativity effect on purchase intention and affect trustworthiness.

Implications for marketers

Marketers should understand that, although not as influential, ratings are significant in influencing consumers and should be incorporated in forecasting product sales. This is especially important if it is suspected that text and rating valences are inconsistent. They may
believe additional reviews in different media provide a more comprehensive picture of how their products are being evaluated. This is not wrong, but inconsistent reviews may also generate a significant negative effect on sales that should not be ignored.

The negativity effect will be strong when consumers know little about a product — negative information is especially harmful for new products.

**Implications for publishers**

Our results also have strong implications for publishers. First, we found that readers depend more on text valences than rating valences in assessing interestingness. This supports the proposition that the summarized nature of ratings does not provide sufficient information to affect perception.

Second, we also found that positive reviews are perceived to be more interesting. If a publisher’s major objective is to provide reviews for leisure reading, it may be reasonable to provide positive reviews. However, providing only positive reviews may lead readers to believe that there is a hidden agenda.

Another concern is how readers perceive trustworthiness. Our findings show that consistent reviews, especially positive ones, produce higher trustworthiness. The worst scenario is when reviews have negative texts with positive ratings. This creates a strong dissonance in readers’ minds and severely hampers trustworthiness. Publishers should be especially cautious in ensuring text-rating consistence. It may be helpful to introduce a formal rating system that clearly communicates how attributes are weighed. Publishers may consider not printing ratings at all – readers will have to rely on the texts.

**Recommendations for future research and conclusion**

This study is an early investigation of review text-rating consistency on consumers’ purchase intentions and their perceptions of the reviews. Although this study investigated
movie reviews, we share Basuroy et al’s (2003) view that our results should be insightful for other products with substantial experience attributes (e.g., restaurants, computer games, hotels, to name a few). It will be fruitful to expand this study further.

Our research studied how subjects responded to one review. However, in real life, people also encounter situations where magazines present multiple reviews. In these scenarios, a reader’s behavior might be quite different. Researchers may investigate how consumers respond in multiple-review scenarios.

Our study was with Chinese subjects, thus, some cultural issues should be mentioned. Although research suggests that Chinese cultural values, such as face giving, may make Chinese and Western consumers respond differently (Tsang & Prendergast, 2005), our findings report some consistency with Basuroy et al., (2003) and Wyatt and Badger (1984, 87/88, 90). However, for a more generalized understanding about how text-rating valence interplay affects consumer behavior, expanding the present study to other cultural units is necessary.

To conclude, this research used a field experiment and found that text-rating interplay significantly influences how consumers perceive review interestingness and trustworthiness as well as interest in using the product. Although using texts and ratings in reviews is common, our research made an early attempt to investigate the impact of inconsistent reviews. Our findings provide valuable insight for marketers and publishers. We recommend our study be expanded to cover multi-review scenarios, additional product types, and additional cultures in order to obtain more generalized results.

References


Box Office Effects of Film Critics, Star Power, and Budgets, *Journal of Marketing*, 67 (October), 103-117.


Freeman and Company.


Appendix: A Sample Movie Review (a Positive Text and a Positive Rating)

Rating :

The life of stuntmen is an innovative theme. This movie depicts the adventurous working lives of these challenge-lovers. The scriptwriter has thoroughly researched the lives and mentalities of stuntmen and developed a good understanding of their characters. The plot focuses on the banter and conflicts between stuntmen from Mainland China, Hong Kong, and Taiwan. The action scenes are comparable to Hollywood productions. Their choreography is systematically shot. Although the director is a novice, the film is skillfully directed. Both lead actors are very good in their roles. Lisang Feng is very believable in his action scenes and Zhijing Guo shows her youth and innocence. Excellent sound mixing perfectly matches the classical music and drums to the screen action. World renowned European film cinematographer, Timothy Grant, uses his picturesque style throughout the entire film. A surprise ending, with a metaphor describing life as being weather-like, provides food-for-thought for the audience.
Figure 1: Analysis of Simple Effects of H4

![Graph showing perceived trustworthiness ratings for positive and negative texts.](image-url)
<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>306</td>
<td>42.5</td>
</tr>
<tr>
<td>Female</td>
<td>414</td>
<td>57.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>720</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 or below</td>
<td>108</td>
<td>15.0</td>
</tr>
<tr>
<td>20 – 29</td>
<td>432</td>
<td>60.1</td>
</tr>
<tr>
<td>30 or above</td>
<td>179</td>
<td>24.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>719</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Educational Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary or below</td>
<td>296</td>
<td>41.2</td>
</tr>
<tr>
<td>Non-degree postsecondary</td>
<td>147</td>
<td>20.4</td>
</tr>
<tr>
<td>University degree or above</td>
<td>276</td>
<td>38.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>719</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Monthly Personal Income (HK$)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below $5,000</td>
<td>266</td>
<td>37.1</td>
</tr>
<tr>
<td>$5,000 -- $9,999</td>
<td>174</td>
<td>24.3</td>
</tr>
<tr>
<td>$10,000 -- $19,999</td>
<td>210</td>
<td>29.3</td>
</tr>
<tr>
<td>$20,000 or above</td>
<td>67</td>
<td>9.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>717</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* Valid percent, missing responses have been excluded.
Table 2: ANOVA Results of H1

<table>
<thead>
<tr>
<th></th>
<th>$F$ Values</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Product-Purchase Intention (H1a)</td>
<td>Perceived Interestingness (H1b)</td>
<td>Perceived Trustworthiness (H1c)</td>
</tr>
<tr>
<td>Main Effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text valence</td>
<td>42.01**</td>
<td>13.75**</td>
<td>4.12*</td>
</tr>
<tr>
<td>Rating valence</td>
<td>4.00*</td>
<td>0.09</td>
<td>0.16</td>
</tr>
<tr>
<td>Interaction</td>
<td>0.68</td>
<td>0.01</td>
<td>5.44*</td>
</tr>
</tbody>
</table>

* $p \leq 0.05$  
** $p \leq 0.01$

Table 3: ANOVA Results of H2, H3, and H4

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Text Valence</th>
<th>Rating Valence</th>
<th>Movie-Attendance Intention (H2) Mean (S.D.)</th>
<th>Perceived Interestingness (H3) Mean (S.D.)</th>
<th>Perceived Trustworthiness (H4) Mean (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pos</td>
<td>Pos</td>
<td><strong>3.81</strong> (1.32)\textsuperscript{1, 2}</td>
<td><strong>3.69</strong> (1.20)\textsuperscript{a, b}</td>
<td><strong>3.83</strong> (1.17)</td>
</tr>
<tr>
<td>2</td>
<td>Neg</td>
<td>Neg</td>
<td>2.92 (1.34)\textsuperscript{1, 3}</td>
<td>3.32 (1.15)\textsuperscript{a}</td>
<td>3.68 (1.28)</td>
</tr>
<tr>
<td>3</td>
<td>Pos</td>
<td>Neg</td>
<td>3.51 (1.47)\textsuperscript{1, 4}</td>
<td>3.66 (1.17)</td>
<td>3.65 (1.16)</td>
</tr>
<tr>
<td>4</td>
<td>Neg</td>
<td>Pos</td>
<td>3.04 (1.46)\textsuperscript{1, 2, 4}</td>
<td>3.34 (1.44)\textsuperscript{b}</td>
<td>3.43 (1.32)</td>
</tr>
</tbody>
</table>

Means with the same superscripted numbers differ significantly at $p \leq 0.01$ by Tukey HSD test

Means with the same superscripted Roman letter differ significantly at $p \leq 0.05$ by Tukey HSD test

Bold numbers: the highest mean values

Underlined numbers: the lowest mean values

* A post hoc test was not conducted because a significant interaction effect was found

* $p \leq 0.05$  
** $p \leq 0.01$
Table 4: Row and Column Mean Comparison of H4

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Text Valence</th>
<th>Rating Valence</th>
<th>Mean (S.D.)</th>
<th>t</th>
<th>Support H4?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column</td>
<td>Pos</td>
<td>Pos</td>
<td>3.83 (1.17)</td>
<td>1.45*</td>
<td>Marginal</td>
</tr>
<tr>
<td></td>
<td>Pos</td>
<td>Neg</td>
<td>3.65 (1.16)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Neg</td>
<td>Pos</td>
<td>3.43 (1.32)</td>
<td>1.83**</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Neg</td>
<td>Neg</td>
<td>3.68 (1.28)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Row</td>
<td>Pos</td>
<td>Pos</td>
<td>3.83 (1.17)</td>
<td>3.05***</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Pos</td>
<td>Neg</td>
<td>3.43 (1.32)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Neg</td>
<td>Neg</td>
<td>3.65 (1.16)</td>
<td>0.22</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Neg</td>
<td>Neg</td>
<td>3.68 (1.28)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* $p \leq 0.10$ (one-tailed)
** $p \leq 0.05$ (one-tailed)
*** $p \leq 0.01$ (one-tailed)