Seeing is Believing:

The Effects of Images on Trust and Purchase Intent in eWOM for Hedonic and Utilitarian Products

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ABSTRACT

Images are frequently used in online reviews, yet little research explores the effects that images have on online consumer behavior. This two-study investigation examines the effects of images in electronic word of mouth (eWOM) for both hedonic and utilitarian products. Results show that images affect the relationship between review text and purchase intention as well as trust for both product categories. However, images were shown to be more effective for hedonic than utilitarian products. Interestingly, it was found that congruence between the image and text is not a significant predictor of trust or purchase intention in some conditions (i.e., the images may not have to perfectly reflect the text to facilitate these outcomes for utilitarian products).

1. INTRODUCTION

Word-of-mouth (WOM) was first described as an oral form of non-commercial communication between individuals who were personally acquainted with each other (Arndt, 1967). WOM refers to friends and family communicating about their experiences with a product or service. Electronic WOM or 'eWOM' extends beyond friends and acquaintances to include experiences and opinions shared via the internet (King, Racherla, & Bush, 2014). These customer comments are not just shared among friends on sites such as Facebook, but also on platforms specifically designed for reviews (e.g., Tripadvisor.com). There, customers are able to rate products and services based on a variety of factors (Schindler & Bickart, 2005).

Substantial differences exist between WOM and eWOM, for example eWOM assessments are typically provided by individuals who are not known to the reader. Research suggests that eWOM still facilitates higher credibility, empathy and relevance for consumers than does direct sources from the supplier of the product or service (Bickart & Schindler, 2001). This may be because an anonymous channel of communication allows for more self-disclosure by reviewers (Sun, Youn, Wu, & Kuntaraporn, 2006). Because these reviews are so highly regarded by consumers, eWOM remains a significant system of engagement, and as such, is important to both customers (Steffes & Burgee, 2009) and companies (Amblee & Bui, 2011).

As review platforms become more sophisticated, it is easier for reviewers to provide richer information, thus better informing consumers. Many review platforms provide social network functionalities, with the goal of fostering virtual communities (Chang, Wong, Eng, & Chen, 2018). Indeed, reviewers may add images in order to achieve a variety of positive outcomes: increase emotional presence (e.g., Septianto & Chiew, 2018), improve credibility (e.g. Munzel, 2016), or simply to transmit more information to reduce reliance on heuristic processing (i.e., when one's ability to consider decision factors carefully is constrained, they use shortcuts to make judgments, which can lead to mistakes) (Book, Tanford & Chang, 2018).

Numerous websites now enable reviewers to post images along with their text. Although the ability to share images on some review platforms has existed for some time, research on the influence of images on the effectiveness of eWOM is not extensive. Rather, the focus has been primarily on social media platforms (Hoffman & Daugherty, 2013). Indeed, a quick search of Google Scholar shows numerous eWOM articles over the past few years, with little to no studies on how images may affect the reviews. Therefore, we ask the following question: Does the addition of images impact how reviews are received by consumers?

This study aims to explore how consumer provided images in online product reviews influence consumer behavior. Drawing from media richness and dual-coding theory, we examine the effects of images on trust and purchase intention for both hedonic and utilitarian products. Consistent with these theoretical premises, we posit that the inclusion of images in reviews will enhance trust and purchase intention. A two-study investigation is described in which participants were presented with different reviews, some of which included images, and others that consisted of text only. This was done with the objective of assessing 1) whether the inclusion of images enriched the reception of the review and elevated trust and purchase intention, 2) whether the nature of the product (i.e., hedonic versus utilitarian) impacted the level of trust and purchase intention achieved through the inclusion of images, and 3) whether the relevance of the image to the text enhanced trust and purchase intention. Should the findings demonstrate that images impact the effects of the reviews, these findings could represent a starting point for future research and a premise that has not yet be examined in the context of online reviews.

2. CONCEPTUAL FRAMEWORK AND HYPOTHESES

2.1 Trust and Purchase Intent

The connection between eWOM and purchase intention has been well-established (e.g., Furner, Zinko, & Zhu, 2018) with research showing purchase intent can be increased by encouraging consumers to actively participate in social online experiences (Albert, Aggarwal, & Hill, 2014). This connection is underpinned by degrees of trust associated with source credibility (Li & Wang, 2018). Trust generally refers to the degree of comfort that one feels when one is certain about the actions of another party (Mayer, Davis, & Schoorman, 1995, Drake & Furner, 2020). Review characteristics such as argument quality (Racherla, Mandviwalla, & Connolly, 2012), positive or negative arguments and sidedness (i.e., the condition of having a specific number or form of sides) have been shown to affect trust and purchase intention (Cheung, Luo, Sia, & Chen, 2009). Likewise, characteristics of the reviewer have also been shown to affect purchase intention in eWOM. For example, Hu, Liu, and Zhang (2008) showed that reviewer reputation and exposure along with temporal effects increase product sales when reviews were positive.

There are several different types of trust, such as interpersonal trust, character-based trust and transaction trust (Serino, Furner, & Smatt, 2005). This study employs transactional trust, as this conceptualization of trust is consistent with the majority of e-commerce studies (e.g., Furner, Racherla, & Babb, 2014). Transactional trust refers to a mental state that determines whether the focal individual has sufficient trust to engage with in a transaction (Tan & Thoen, 2000).

2.2 The Effects of Images

There is a well-established stream of literature examining the effects of images on advertising. Although much of the research explores older print media (e.g., Chowdhury, Olsen, & Pracejus, 2008), there has been a recent revitalization of the topic with regard to the effects of banner advertising on webpages (e.g., Flores, Chen, & Ross, 2014). Images have been shown to be more attractive and positive in valence than plain text since images have the ability to grab a user's attention faster. Likewise, images are able to convey more information which is processed more quickly than text (Gerrig, Zimbardo, Campbell, Cumming, & Wilkes, 2011). When compared with video, static images have been shown to present an idea or concept faster (Mei, Hua, & Li, 2008).

Two theoretical models offer explanations for why images enhance consumer engagement and form the basis of the theoretical framework in this study. First, media richness theory (MRT) suggests that some media are more effective at transmitting information than others because media differ in their ability to transmit context and social cues (Daft & Lengel, 1986). As more information is included in the channel, the 'richer' (i.e. more persuasive and less ambiguous) the message will be. Text only is considered to be the least rich media, so by adding images, reviewers increase the richness of the communication channel; resulting in a fuller message.

MRT posits that the reduction of ambiguity and enhancement of reader experience may be achieved through the selection of rich information delivered through the appropriate communication channel. This theoretical framework lays the foundations for the present study by illuminating that the greater quantities of information contained in images can alleviate ambiguity and that this information will be more effectively received.

By extension, dual coding theory states that images are encoded as imaginal codes and words as verbal codes when input is committed to memory (Paivio, 1971; Sternberg, 2003). Images are labelled significantly more spontaneously than words are imagined. The effect the images have on one's ability to reduce uncertainty is greater than that of text: this phenomenon has been described as the "picture superiority effect" due to the larger number of memory codes for images (i.e., pictures).

In this respect, we can draw parallels with MRT's concept of information richness leading to enhanced reader comprehension. These memory codes act as multiple retriever routes for the images (Unnava & Burnkrant, 1991). Research shows that when larger numbers of alternative memory routes exist, the effect that memory has on future decisions is stronger (Hartman, Hunt, & Childers, 2013). Therefore, MRT provides a basis for the belief that image inclusion enriches eWOM and dual coding consolidates this proposition by contending that images are more readily retained. This becomes relevant when memory retrieval is required for future purchase intention. Indeed, while examining electronic marketplaces, Hong and Cho (2011) found that trust and purchase intention coorelate at 0.7. Using duel coding theory (via image and discursive processing), Kim (2019) identified a positive effect on purchase intention. Increasing media richness (e.g., adding images to text) has been shown to increase purchase intention (e.g., Kim & Sundar, 2016). Based on these findings, we predict:

H1a: Reviews with images will have a larger impact on purchase intention than text alone.

Likewise, such a reduction of uncertainty has been shown to lead to increased feelings of trust (e.g., Dumrongsiri, 2010; Park, Xiang, Joisam, & Kim, 2013). The addition of visual material to text has been shown to be effective in increasing trust in an online review (e.g., Kim & Sundar, 2016 showed how adding video to text would increase trust in the review). Likewise, Basso, Goldberg, Greenspan, and Weimer (2001) indicated that an increase of media richness (e.g., adding images to text) would result in increased trust. With these findings in mind, we predict that:

H1b: Reviews with images will have a larger impact on trust than text alone.

2.3 Hedonic vs. Utilitarian Products

Marketing researchers have long classified products and services as fostering either hedonic or utilitarian value (Sen & Lerman, 2007). Hedonic products are viewed as not just objects but as subjective symbols that can sometimes represent status to others (e.g., name brand handbags). Pleasure and emotion are the major motivations for their purchase (Hirschman & Holbrook, 1982). Alternatively, utilitarian products are those necessities that are essential to achieve a goal or complete a practical task, such as detergent and tools (Dhar & Wertenbroch, 2000). Some products such as vehicles or hotels can be seen as hedonic or utilitarian, depending on how they are viewed by the individual consumer (Batra & Ahtola, 1991).

Extending MRT's supposition that the degree of richness is commensurate with the degree of informational specificity required, the Verbal Additive Paradigm has been applied to utilitarian products (Holbrook & Moore, 1981). This paradigm suggests that, when considering such products, information is processed by consumers in a rational and linear manner. Since utilitarian products do not inspire or foster great emotion, plain text might be sufficient to translate information to buyers of utilitarian products, but plain text may not be as effective for hedonic products (Eckman, 1997).

By contrast, and consistent with both MRT and dual-coding theory, the Consciousness–Emotion–Value (CEV) model of the consumption experience states that the consumption experience can be intrinsically pleasing when the experience provides pleasure to the senses, fun and fantasies (Holbrook, 1984). Hirschman and Holbrook (1982) argued that these forms of enjoyment offer hedonic value to the consumption experience, differing from utilitarian value. Such emotional drives have been linked to images across the sciences, in everything from neurology (e.g., Quirk & Strauss, 2001) to management, (e.g., Ashforth & Humphrey, 1995).

The link between images and emotions is a driver of the theory of imaginative constructions (e.g., Hackley, 2003). In 2012, Lin, Lu and Wu explored how images in blogs may affect purchase motivation and overall impression of blogs. They found that images in hedonic blogs more positively impact purchase intention than those in utilitarian blogs. The mental process of absorbing information regarding a hedonic product has been suggested to be manifested in fantasy and imagination (Dewi & Ang, 2001). Fantasy and imagination have been shown to relate to the construction of symbolic meaning and facilitate imaginative construction of reality (Spangenberg, Voss, & Crowley, 1997). As such, images may be more effective in transmitting rich messages to consumers, when they are seeking to link their imaginative construction (Nodelman, 1988).

H2a: Images will have a larger impact on purchase intention when the product is hedonic in nature rather than utilitarian.

Likewise, this use of imagery in hedonic decision making (e.g., Dewi & Ang, 2001) suggests that images will more closely relate to the intended purchase than text alone, resulting in higher trust. Indeed, images are considered high in terms of media richness, and as such the amount of information that can be communicated with images is high (Daft & Lengel, 1986), which supports the hedonic construction of reality (Spangenberg, Voss, & Crowley, 1997). We propose that images will decrease uncertainty, resulting in increased perceptions of trust (e.g., Dumrongsiri, 2010; Park, Xiang, Joisam, & Kim, 2013).

H2b: Images will have a larger impact on trust when the product is hedonic in nature rather than utilitarian.

Using marketing theory as a foundation for studying how images will influence the effectiveness of eWOM, research shows that image-based elements capture attention more than text (Pieters & Wedel, 2004). Sense-making suggests that consumers will attempt to rectify the images with the text

of a review (e.g., expecting a hedonic review to have hedonic images attached) (see Weick, 1995 for a review of sensemaking theory). If there is an incongruence between text and images, uncertainty will occur (Dimoka, Hong, & Pavlou, 2011). As such, trust and purchase intent will decrease.

H3a: Images related to the text will have a larger impact on purchase intention than unrelated images.
H3b: Images related to the text will have a larger impact trust than unrelated images.

3. METHODS

A two-study investigation is presented where hypotheses were tested using web-based review simulations (i.e., a subject was given a review of a product and then asked how much they trust the review and how the review might affect their intent to purchase the product). This approach is typical in eWOM research (e.g., Furner & Zinko, 2018; Plotkina, & Munzel, 2016; Weisstein, Song, Andersen, & Zhu, 2017). This approach is effective because simulation-based research controls for variations in the environments by facilitating a standard setting across the study. The protocol developed by Potts (1995) was applied, conducting a scenario-based simulation experiment which required participants to interact with a mock-up of a web page that presented the user with product reviews written by consumers.

4. STUDY 1 OVERVIEW

Study 1 presented reviews for a vehicle. The auto industry was chosen for two reasons: first, consumers view vehicles as both hedonic and also utilitarian (Lee, 2007). Second, although individuals are able to test drive new vehicles, often problems arise after automobiles are owned for a number of years, and the high costs make these purchases high-risk for most consumers. A simple test-drive on such a large purchase is not likely to be fully effective in reducing uncertainty, which often leads individuals to search for additional information (Sismeiro & Bucklin, 2004).

All studies asked participants to read one of the short reviews about a Jeep, and then respond to questions regarding trust and purchase intention. Jeep was used for two reasons: first, by using the same product for both the hedonic and utilitarian purchase, a built-in control exists since all participants are rating the same product. Second, the development of the measurement tool showed the utilitarian scenarios to have face validity (i.e., see below). In both studies, a manipulation check was performed by asking those subjects who viewed reviews with images how much that image played a role in their trust and purchase intention answers.

The following six scenarios were developed for this study (see Appendix for example reviews):

1. Review with hedonic text, no image.
2. Review with hedonic text, neutral image.
3. Review with hedonic text, and hedonic image.
4. Review with utilitarian text, no image.
5. Review with utilitarian text, neutral image.
6. Review with utilitarian text, and utilitarian image.

The Appendix shows the 'hedonic text, hedonic image' review for Jeeps (and 'utilitarian text, utilitarian image' for the hotel). The text was consistent throughout the reviews, the first three had the same hedonic text (e.g., I enjoy going off road in my jeep), and the last three had the same utilitarian text (e.g., I live in an area that often floods, and the Jeep sits high off the ground, making the drive home with the kids easier).

4.1 Measurement Tool Development

Consistent with Liu, Ferris, Zinko, Perrewé, Weitz, & Xu (2007), a panel of three academic experts who have done marketing research were given several written scenarios and images to assess (i.e., hedonic, utilitarian, and neutral). They were then provided definitions of hedonic and utilitarian products and asked to sort the scenarios and images into the proper categories. All experts were able to do this with 100% success. Furthermore, they were able to match the images and written scenarios with the same achievement rate. The panel members agreed that the items consistently and comprehensively reflected the theoretical underpinnings of the constructs, thus establishing the face validity of the measurement tools.

The scenarios were followed by a series of questions that were adapted from Furner, Zinko, and Zhu (2016), used to measure purchase intent. The subjects were then asked a manipulation check on all surveys with a response (i.e., to what affect did the response from the hotel affect your decision). These items were all measured on a 7-point Likert scale. Finally, demographics were collected.

4.2 Subjects

Responses totaling 360 adults (6 different surveys X 60 participants for each survey) were acquired via Amazon.com's Mechanical Turk (Mturk). The data collected from Mturk has not only shown to be either more accurate or indistinguishable from many other forms of survey collection (Casler, Bickel, & Hackett, 2013; Hauser & Schwarz, 2016; Paolacci, Chandler, & Ipeirotis, 2010), but is also more representative of the U.S. population that typical samples of convenience (Berinsky, Huber, & Lenz, 2012). Furthermore, data gathered from Mturk has been published in top marketing journals such as *Journal of Marketing* (e.g., Luo & Toubia, 2015; Roggeveen, Grewal, Townsend, & Krishnan, 2015) and *Journal of Marketing Research* (e.g., Laran, Janiszewski, & Salerno, 2016; Yoon & Kim, 2016). The average age of participants was 36.49, and 67% were female.

5. STUDY 1 RESULTS

A MANOVA was run using SPSS 23. To test for the homogeneity of covariance matrices, Box's M was evaluated and found to be significant (57.147; F = 3.755; $p < .000$). Therefore, the Pillai's Trace test - which is the most robust of the multivariate tests in face of the assumption violation (Olson, 1976) - was used, resulting in a value of .959, F = 4101.043, $p < .000$. The manipulation check question averaged 4.2 for the images that matched, 2.9 for the images that were neutral, and 1.0 for the images that did not match. This suggests that the scenario manipulations were successful. Tables 1 and 2 shown below list the means and differences between the groups (i.e., using the Tukey HSD post hoc).

Interestingly, the utilitarian review with the utilitarian image is not significantly different from the utilitarian review and neutral image (although in both cases, the $p = .55$). When considering purchase intent, the results showed support for our hypothesis in the case of the utilitarian reviews and images related to the text had a larger impact on purchase intention and trust than unrelated images. However, there were significant findings for all hedonic reviews.

6. STUDY 2 OVERVIEW

In order to control for the possibility of mono-method bias in which pre-existing attitudes about the product used in Study 1 (i.e. Jeeps) biases results, a similar experiment was conducted using a different product and an expanded sampling pool. Like Study 1, Study 2 tested the hypothesis using web-based simulations. The scenarios consisted of hotel stays for a vacation (hedonic) vs a business (utilitarian) trip. Also, like Study 1, 6 scenarios were presented with the same manipulations (e.g., review with hedonic text, no image; review with hedonic text, neutral image, etc.). Finally, the measures for this study were developed using the same procedure as Study 1 in that scenarios and images were

Table 1. Mean and differences (Tukey) of Trust for Jeep Reviews

	Review	Mean	Std. Dev	Comparison	Mean Difference	Std. Error	Sig.
1	Hedonic, hedonic image	5.73	0.880	neutral image	0.48*	.226	.05
				no image	1.10*	.226	.00
2	Hedonic, neutral image	5.25	1.445	hedonic image	-0.48*	.226	.05
				no image	.62*	.226	.02
3	Hedonic, no image	4.63	1.314	hedonic image	-1.10*	.226	.00
				neutral image	-.62*	.226	.02
4	Utilitarian, utilitarian image	5.93	.936	neutral image	.20	.192	.55
				no image	.87*	.192	.00
5	Utilitarian, neutral image	5.73	1.103	utilitarian image	-.20	.192	.55
				no image	.67*	.192	.00
6	Utilitarian, no image	5.07	1.103	utilitarian image	-.87*	.192	.00
				neutral image	-0.67*	.192	.00

N=360 (60 X 6 groups)

Table 2. Mean and differences of Purchase Intent for Jeep Reviews

	Review	Mean	Std. Dev	Comparison	Mean Difference	Std. Error	Sig.
1	Hedonic, hedonic image	5.68	0.965	neutral image	.60*	.218	.02
				no image	1.12*	.218	.00
2	Hedonic, neutral image	4.92	1.619	hedonic image	-.60*	.218	.02
				no image	.52*	.218	.05
3	Hedonic, no image	4.53	1.359	hedonic image	-1.12*	.218	.00
				neutral image	-.52*	.218	.05
4	Utilitarian, utilitarian image	5.92	0.907	neutral image	0.2	.192	.55
				no image	0.87*	.192	.00
5	Utilitarian, neutral image	5.32	1.334	utilitarian image	-0.2	.192	.55
				no image	0.67*	.192	.00
6	Utilitarian, no image	4.8	1.299	utilitarian image	-0.87*	.192	.00
				neutral image	-0.67*	.192	.00

N=360 (60 X 6 groups)

provided to a panel of three academic experts who have done marketing research and were given several written scenarios and images to assesses. Like Study 1, these experts were able to match the scenarios into the same categories as above with 100% success. Also, like Study 1, outcomes were developed based on Furner et al. (2016).

6.1 Subjects

The participants were 360 working adults (6 different surveys X 60 participants for each survey). The use of working adults is common in both marketing and organizational research (e.g., Furner & Zinko, 2017; Welbourne, Gangadharan, & Esparza, 2016). Although Mturk has been shown to include individuals who report having a job that requires business travel, in an effort to expand the sampling pool to improve generalizability, MBA students at a large university on the east coast of the United States were asked to find working adults whom are likely to take business trips to fill out the surveys, in exchange for extra credit. IP address and time checks were performed to assure adhesion to the requirements on the part of the participants. The average age of participants was 38.57, and 69% were female.

7. STUDY 2 RESULTS

MANOVA was run using SPSS 23. In testing for the homogeneity of covariance matrices, Box's M was significant (88.178; F= 5.794; $p < .000$), therefore we report the Pillai's Trace test, with a value of .975, F = 6881.798 and a $p < .000$. The manipulation check question averaged 4.4 for the images that matched, 2.7 for the images that were neutral, and 1.2 for the images that did not match. This suggests that the scenario manipulations were successful. Tables 3 and 4 shown below list the means and differences between the groups (i.e., using the Tukey HSD post hoc).

The results demonstrate that similar to Study 1, there was little difference between neutral images and images that reflected the same tone as the text in determining trust levels for utilitarian reviews.

8. DISCUSSION

Our findings suggest that the inclusion of images in product reviews increases trust and purchase intention. H1a stated that reviews with images would have a larger impact on purchase intention than text alone. In both Study 1 and 2, this hypothesis was supported, with significant differences

Table 3. Mean and differences of Trust for Hotel Reviews

	Review	Mean	Std. Dev	Comparison	Mean Difference	Std. Error	Sig.
1	Hedonic, hedonic image	6.12	0.555	neutral image	.88*	.149	.00
				no image	1.47*	.149	.00
2	Hedonic, neutral image	5.23	1.079	hedonic image	-.88*	.149	.00
				no image	.58*	.149	.00
3	Hedonic, no image	4.65	1.014	hedonic image	-1.47*	.149	.00
				neutral image	-.58*	.149	.00
4	Utilitarian, utilitarian image	5.78	1.075	neutral image	0.23	.177	.39
				no image	.75*	.177	.00
5	Utilitarian, neutral image	5.55	0.891	utilitarian image	-0.23	.177	.39
				no image	.52*	.177	.01
6	Utilitarian, no image	5.03	0.938	utilitarian image	-.75*	.177	.00
				neutral image	-.52*	.177	.01

N=360 (60 X 6 groups)

Table 4. Mean and differences of Purchase Intent for Hotel Reviews

	Review	Mean	Std. Dev	Comparison	Mean Difference	Std. Error	Sig.
1	Hedonic, hedonic image	5.92	0.671	neutral image	.83*	.201	.00
				no image	1.87*	.201	.00
2	Hedonic, neutral image	5.08	1.319	hedonic image	-.83*	.201	.00
				no image	1.03*	.201	.00
3	Hedonic, no image	4.05	1.199	hedonic image	-1.87*	.201	.00
				neutral image	-1.03*	.201	.00
4	Utilitarian, utilitarian image	5.92	1.078	neutral image	0.42	.193	.08
				no image	.97*	.193	.00
5	Utilitarian, neutral image	5.50	0.928	utilitarian image	-0.42	.193	.08
				no image	.55*	.193	.01
6	Utilitarian, no image	4.95	1.157	utilitarian image	-.97*	.193	.00
				neutral image	-.55*	.193	.01

N=360 (60 X 6 groups)

between reviews with an image and those with no image ranging from .52 (i.e., hedonic, purchase intent for Jeep, see Table 2) to 1.87 (i.e., hedonic, purchase intent for the hotel review, see Table 4). It is not surprising that images will have a larger effect on the review for a hotel room than a Jeep, as hospitality services are experiential in nature and lack the ability to "try before you buy" (Liu, Liao, & Chen, 2013), making them high risk and not returnable. Likewise, H1b (reviews with images would have a larger impact on trust than text alone) was also supported, with significant differences between reviews with an image and no image ranging from .52 (i.e., hedonic, trust for hotel review, see Table 3) to 1.47 (i.e., hedonic, trust for the hotel review, see Table 3).

Hypotheses 2a&b stated that images will have a larger impact on trust and purchase intention when the product is hedonic in nature rather than utilitarian. This hypothesis was also supported, as there was a larger increase for the addition of images to hedonic than utilitarian across both hotels and Jeeps (e.g., in the Jeep study, the mean difference for trust in the hedonic condition was 1.10, while it was only .87 for utilitarian).

H3a&b stated that images related to the text will have a larger impact on trust and purchase intention than unrelated images. These hypotheses were partially supported in that neutral images were acceptable to utilitarian reviews. That is to say, there was a significant change in trust and purchase intention when the image was not congruent with the text in all cases (e.g., a hedonic image with utilitarian text, or a utilitarian image with hedonic text); but a neutral image was also effective in increasing outcomes, as a matching image with utilitarian products (e.g., a neutral image was not significantly different that a utilitarian image when paired with utilitarian text). Alternatively, the hypotheses were all supported when considering hedonic reviews (e.g., a neutral image was significantly different that a hedonic image when paired with hedonic text). In hindsight, this is not surprising, as utilitarian products do not inspire the same emotional response as hedonic images, and as such a 'generic' image of the product may be sufficient to relay the needed information for uncertainty reduction when the product is utilitarian, but not when it is hedonic.

8.1 Theoretical Implications

The findings of this study extend previous literature, which has largely concentrated on image use in print media. One cannot simply assume that existing print media theories can be applied to eWOM as consumer knowledge and behavior are changing in light of ubiquitous technology use. Past research in the area of print media has contributed the theoretical insight that the addition of images to text always produces positive results. When focusing on the eWOM environment, the theory that trust is enhanced by images is both confirmed and extended in the present study.

In this study, we make two key theoretical contributions. Although images are common in online reviews, previous literature has not explored the use of images in eWOM and, thus, the present study seeks to address this gap. As such, we contribute the broad theoretical insight that image inclusion in eWOM reviews is influential in building trust and driving purchase intention. We thus extend the eWOM paradigm and make the salient point that content richness beyond text is an important aspect of review trust and purchase intent. This insight prompts new questions for eWOM researchers regarding which image characteristics are most effective in fostering purchase intention, what volume of images is optimal (to avoid information overload) or how readers process images in relation to text, for instance, do readers pay more or less attention to the text of the review when images are present or use the image as a heuristic (Downen, Furner, Cataldi, 2019)? However, the core finding that images are significant for eWOM reviews for trust and purchase intent facilitation provides an important theoretical basis for eWOM research.

The second theoretical development to emerge from this study is that the nature of the image used in the eWOM context is significant. While previous research confirms the general assumption that images are trust-inducing, this study shows that the nature of the image (hedonic or neutral) will yield different kinds of trust and thus purchase behavior. Neutral images appeared to reduce uncertainty (thus cultivating trust), while hedonic images served to enhance excitement (potentially animating purchase intention). This theoretical development is drawn from the confirmation of H3 (i.e., that images related to the text will have a larger impact on purchase intent and trust than unrelated images). In the case of hedonic reviews, there was shown to be a significant difference between hedonic and neutral images. This is consistent with the hypothesis. When exploring utilitarian vs neutral reviews for both the Jeeps and hotels, there was no significant difference as both could be seen as uncertainty reducing images. This can logically be explained in the operationalization of the study. For the hedonic Jeep, pictures were shown of the Jeep running through the mud (See Appendix). Likewise, for the hotel, the images were of amenities such as the pool. For the utilitarian images, the hotel image was of a conference room and business center, while the neutral was the outside of the hotel and the front desk. Likewise, the Jeep had groceries in the trunk and child seats in the back seat, while the neutral were images of the jeep, parked. In both cases, the neutral image sufficiently reduced uncertainty while falling short of fostering the excitement that a hedonic purchase produces. This insight enables a more nuanced theorization of image use in eWOM, suggesting that the nature of the image itself may, on the one hand, induce trust through uncertainty reduction via neutral images but, on the other, catalyze purchase behavior if accompanied by dynamic or hedonic images. This development corroborates the traditional theory that images *in general* induce trust but further scaffolds this by suggesting that the nature of the image is also significant since trust and purchase intention are not necessarily motivated by the same images.

8.2 Practical Implications

This study carries practical implications for review and e-commerce platform managers. Khatwani & Srivastava (2018, p. 63) argues that "organizations are increasingly recognizing the importance of gaining solid insights into consumer behavior and preferences that can be translated into marketing strategies." Assuming that review platform managers are motivated to increase sales and reduce the number of returns (Zinko, Stolk, Furner & Almond, 2020), platform managers manipulate the order in which reviews are presented to consumers and prioritize those reviews which are most likely to foster

purchase intention. Our results suggest that prioritizing reviews that contain images and a positive tone are most likely to foster purchase intention. Consistent with the theoretical development outlined, if platform managers wish to build trust, mitigate the risk of returns via a "no surprises" approach and cultivate enduring consumer faith in the product, then the inclusion of neutral or utilitarian images is likely to be most effective. This may be particularly pertinent in the context of mundane or utilitarian products where the expectation of excitement or hedonic appeal is already low. However, with hedonic products, a combination of neutral and hedonic image inclusion may optimize purchase intention through the affirmation of trust via uncertainty reduction and the purchase-inducing excitement of hedonic images.

Specifically, results suggest that reviews with images foster purchase intention better than reviews without images in all cases, implying that review platforms should prioritize reviews with images. Further, our finding that the congruence between the review text and image does not influence outcomes suggests that review platform managers do not need to devote resources to evaluating and classifying review images. Finally, our finding that the influence of images on consumer outcomes is stronger for hedonic images amplifies the importance of prioritizing reviews with images when the product is hedonic.

8.3 Limitations

Like similar studies that employ a quazi-experimental procedure, there are several challenges to generalizability (e.g. Jafarzadeh, Abedin, Aurum, & D'Ambra, 2019). First, one of the products used in this experiment (i.e., the Jeep) is well known. So, if some subjects are the fans of Jeep, their responses may be in favor of Jeep regardless of information contained in the reviews. Thus, selecting Jeep as a product in the study may introduce evaluation bias. An effort to minimize this bias was made by the reporting of a second study that explored the same concepts, but used a fictional hotel, and findings were robust across both product categories.

A second limitation of this study (i.e., like others if its type) is that the participants are not fully representative of an active purchaser of the products presented. Indeed, the subjects are not actually doing research for buying an actual car or hotel room. Again, like other studies of this nature, the results must be considered in the context of the procedures. While this procedure is consistent with numerous other eWOM and e-commerce simulation based experiments, this limitation must be acknowledged.

Finally, the images presented are of a professional nature (i.e., the images shown in the Appendix do not look like they were taken by an amateur consumer/user on a cell phone). Research shows that individuals are becoming more and more professional with the pictures they post. It has become common place to edit (Yamamiya, Cash, Melnyk, Posavac, & Posavac, 2005); retouch (Kleemans, Daalmans, Carbaat, & Anschütz, 2018) and overall alter images based on intended impression (Won Kim & Chock, 2015). It is for this reason that we have opted to present images that are in line with common place posting. That being said, it is possible that those who view the presented reviews may not view them in the same light as reviews with more amateur-looking images.

8.4 Avenues for Future Study

This study presents a foundational assessment of images in eWOM. In doing so, it shows that images do play a role in eWOM by facilitating trust and purchase intention better than text only reviews. The studies presented here focus on specific product categories, drawing conclusions based on consumer experiences with particular products. With the varied results, it would, therefore, be fruitful to conduct future research on a wider range of reviews across multiple product categories to test the findings presented here. Equally, while the findings suggest that images do enrich consumer perceptions of reviews and lead to greater trust and purchase intention as MRT and dual coding theory predict, further study into why this is the case, what kind of images offer the greatest degree of richness and memorisation, and how consumers utilize images in their purchase decisions would extend the useful insights foregrounded here.

As discussed in the limitations subsection, specific types of images (i.e., professional) were used. Further research is needed in not only the quality of the images, but also the quality of the text. For example, would reviews with spelling errors in the text be as readily trusted by consumers? Likewise, would some images be seen as too amateur or informal to be taken as legitimate by consumers? eWOM studies which consider not only text, but also images promises to advance the paradigm and better reflect real-world online review experiences.

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APPENDIX
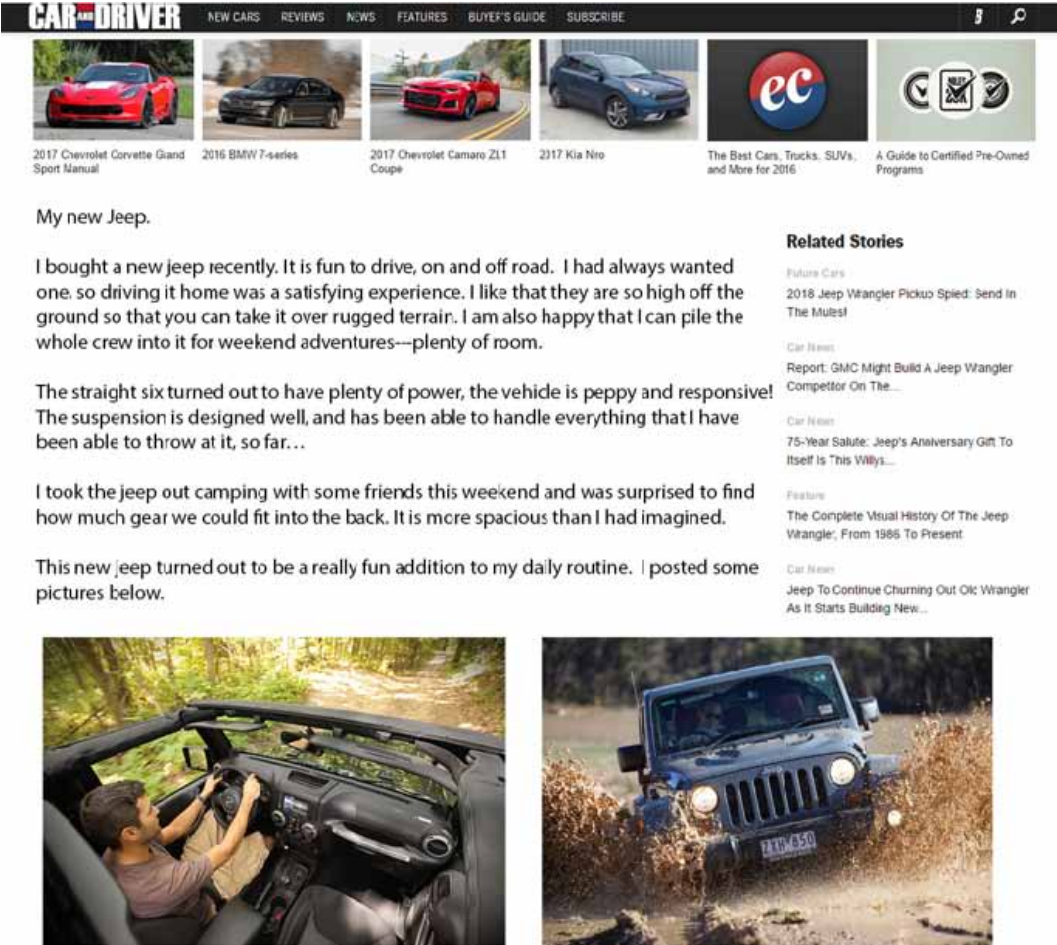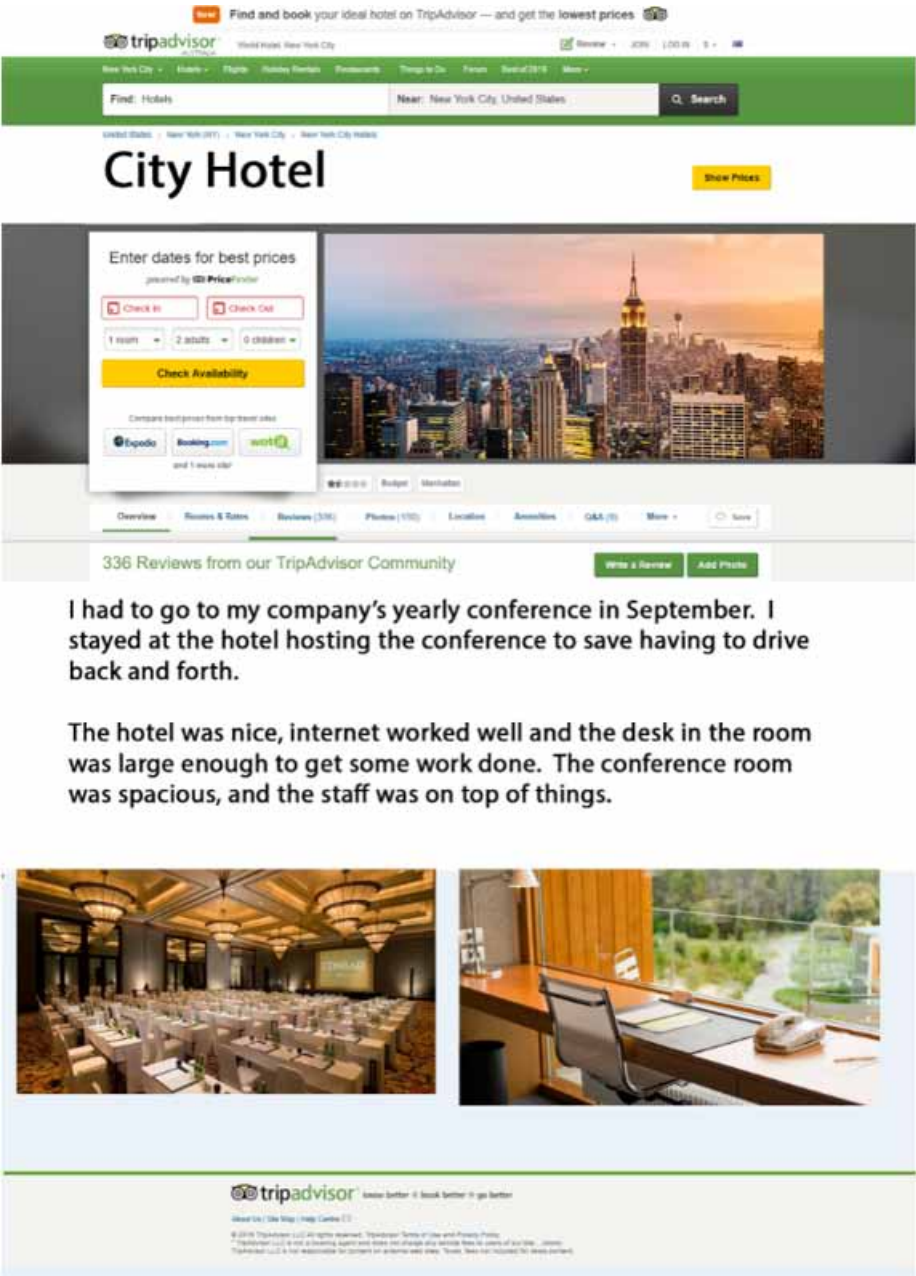
Study 1: Hedonic Text, Hedonic Image

Figure 1.

Figure 2.

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