



## Online Information Review

Can two-sided messages increase the helpfulness of online reviews?

Ming-Yi Chen

### Article information:

To cite this document:

Ming-Yi Chen , (2016), "Can two-sided messages increase the helpfulness of online reviews?", Online Information Review, Vol. 40 Iss 3 pp. 316 - 332

Permanent link to this document:

<http://dx.doi.org/10.1108/OIR-07-2015-0225>

Downloaded on: 15 November 2016, At: 23:00 (PT)

References: this document contains references to 69 other documents.

To copy this document: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)

The fulltext of this document has been downloaded 400 times since 2016\*

### Users who downloaded this article also downloaded:

(2016), "The effect of customers' perceived benefits on virtual brand community loyalty", Online Information Review, Vol. 40 Iss 3 pp. 298-315 <http://dx.doi.org/10.1108/OIR-09-2015-0300>

(2016), "Figshare: a universal repository for academic resource sharing?", Online Information Review, Vol. 40 Iss 3 pp. 333-346 <http://dx.doi.org/10.1108/OIR-06-2015-0190>

Access to this document was granted through an Emerald subscription provided by emerald-srm:563821 []

### For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit [www.emeraldinsight.com/authors](http://www.emeraldinsight.com/authors) for more information.

### About Emerald [www.emeraldinsight.com](http://www.emeraldinsight.com)

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

\*Related content and download information correct at time of download.

# Can two-sided messages increase the helpfulness of online reviews?

Ming-Yi Chen

*Department of Marketing,  
National Chung Hsing University, Taichung City, Taiwan*

316

Received 9 July 2015  
Revised 27 October 2015  
Accepted 18 December 2015

## Abstract

**Purpose** – Online reviews are increasingly available for a wide range of products and services. Several studies have demonstrated the benefits of the presence of customer reviews to an online retailer, but the issue of what makes online reviews helpful to a consumer in the process of making a purchase decision remains uninvestigated. The paper aims to discuss this issue.

**Design/methodology/approach** – Given the strategic potential of online reviews, this study drew on past research to develop a conceptual understanding of the components of helpfulness and to further empirically test the model using actual online review data from iPeen.com in Taiwan. A content analysis of 989 reviews across four products identified the interplay effects of review sidedness, reviewer's expertise, and product type on the helpfulness of an online review.

**Findings** – For search goods, consumers consider two-sided reviews to be more helpful than one-sided reviews when the reviewers are experts in writing such articles, whereas they consider two-sided reviews to be equally helpful as one-sided reviews when the reviewers are novices. Conversely, for experience goods, consumers consider one-sided reviews to be more helpful than two-sided reviews when the reviewers are experts in writing review articles, but they consider one-sided reviews to be equally helpful as two-sided reviews when the reviewers are novices.

**Practical implications** – With an understanding of how review sidedness affects online review helpfulness, online retailers could establish the policy for promoting the helpfulness of reviews more effectively.

**Originality/value** – This research yields at least three important contributions: first, it contributes to the message sidedness literature by showing which arguments (one- or two-sided) are deemed to be helpful; second, it contributes to the online peer review literature by demonstrating the importance of considering product type and heuristic cues (i.e. the reviewer's expertise) when explaining helpfulness; and third, the results in this research demonstrate that people are drawn to dual-processing; that is, the judgment of online review helpfulness is determined by heuristic cues (e.g. the status of the reviewer) and systematic processing (e.g. review content).

**Keywords** Novice and expert, Online review helpfulness, Review sidedness, Search and experience goods

**Paper type** Research paper

## 1. Introduction

Online reviews can be defined as peer-generated product evaluations that are written by consumers on the internet, and posted on company or third party websites. Online retail websites or forums offer consumers the opportunity to post product reviews with content in the form of numerical star ratings and open-ended comments about the products. Industry statistics indicate that nearly all consumers (98 percent) prefer searching dozens or even hundreds of product reviews from other consumers before making a purchase decision (Riegner, 2008). They rely heavily on online reviews to

---

The research reported here was funded by the Ministry of Science and Technology and based on results from the Project MOST-102-2410-H-005 -032.



make decisions that may range, for example, from which film to watch to which digital camera to buy. In particular, an online review can effectively mitigate certain risks for females and may attract them to buy online (Bae and Lee, 2011). Some studies have recognized that an online review is a powerful force in increasing product sales by positively shaping consumers' product attitudes and affecting their buying behaviors (Chevalier and Mayzlin, 2006; Dellarocas *et al.*, 2007; Park *et al.*, 2007; Duan *et al.*, 2008; Zhu and Zhang, 2010). Thus, both academic and industrial researchers have called for additional studies in this particular field (Brown *et al.*, 2007).

Online retailers have been given an incentive to provide online content that customers may perceive to be helpful, such as Amazon.com posting detailed guidelines for writing reviews. They have also invested in peer review systems that enable consumers to vote on whether they found a review helpful in their purchase decision-making process. As the availability of customer reviews becomes more widespread, simply offering online reviews is more likely to be insufficient to attract consumers. One question that arises is "which types of reviews do consumers find helpful?" Online review helpfulness has been described as the extent to which consumers perceive an online review as being capable of facilitating judgment or purchase decisions (Li *et al.*, 2013). Understanding what makes some online reviews helpful in the eyes of consumers is a timely and important topic.

In reviewing the rich stream of literature related to the factors driving the perceived helpfulness of online reviews (Mudambi and Schuff, 2010; Schlosser, 2011; Willemsen *et al.*, 2011; Baek *et al.*, 2012; Kim and Gupta, 2012; Racherla and Friske, 2012; Lee *et al.*, 2013; Li *et al.*, 2013; Yin *et al.*, 2014), this study posits that consumers' perceptions of online review helpfulness are determined by three factors: its content-based features (i.e. review sidedness), its source-based features (i.e. reviewer's expertise), and the consumers' decision context (i.e. the two types of products: search goods vs experience goods).

Several studies have ignored the written content of online reviews due to the cost and effort incurred in measuring such information (Godes and Mayzlin, 2004), instead focussing on more easily quantifiable measures such as star ratings (Godes and Mayzlin, 2004; Sen and Lerman, 2007; Forman *et al.*, 2008). However, evidence has revealed that consumers reading online reviews do not rely solely on summary statistics, such as star ratings, but also consider the written content of online reviews (Chevalier and Mayzlin, 2006). Even though some studies have yielded important insights on the perceived helpfulness of review valence (Park and Lee, 2009; Willemsen *et al.*, 2011; Racherla and Friske, 2012; Lee *et al.*, 2013; Purnawirawan *et al.*, 2014; Tsao, 2014), an important part of understanding the helpfulness of online reviews – such as the effectiveness of presenting one-sided vs two-sided reviews – may have been missed.

Providing two-sided messages, rather than one-sided messages, can make an advertisement more credible (Crowley and Hoyer, 1994), while presenting multiple sides may also help an advertisement appeal to everyone when the audience's views are unknown (Tetlock *et al.*, 1989). Although this may appear to be a logical development of the theoretical viewpoint, the findings of message sidedness from advertising contexts may not generalize to online review contexts (Schlosser, 2011), because consumers have no motivation to lie, however, other approaches found in the relevant literature have suggested the opposite (Pavlou and Dimoka, 2006; Forman *et al.*, 2008; Parra and Ruiz, 2009; Korfiatis *et al.*, 2012). Thus, this study suggests that two-sided reviews that include both pros and cons will not always be more helpful in an online context – it depends on the source characteristic (i.e. reviewer's expertise) and the decision context (i.e. product type).

Online reviews are usually posted anonymously and are shared among strangers (Steffes and Burgee, 2009), so review helpfulness could be influenced by the perceived credibility or expertise of the reviewer. The personal profiles of reviewers can be used as inference cues to help consumers perceive the individual who has written the consumer review. Also, the authorship of product reviews is important in influencing consumers' perceptions of the helpfulness of such reviews (Forman *et al.*, 2008; Li *et al.*, 2013), because consumers are inclined to seek and follow the advice of expert sources in their purchase process. Expertise has been actively researched in the cognitive sciences for many years. This study defines an expert reviewer as a reviewer who is very familiar with and has significant experience in writing reviews. Some studies have shown that experts give less extreme evaluations and hold more moderate attitudes than novices (Linville, 1982), while other studies have found that experts are characterized by relatively extreme evaluations (Lusk and Judd, 1988). It is worth considering how a reviewer characteristic (i.e. the reviewer's expertise) interacts with review sidedness on the helpfulness of an online review.

With respect to the product type, this study compares search goods and experience goods (Nelson, 1970). Search goods are those products whose quality is easily assessed based on product information even before firsthand experience, whereas experience goods are those whose quality is difficult to evaluate before direct experience (Nelson, 1970). The decision context difference between search goods and experience goods can inform our understanding of the effects of review sidedness on the helpfulness of online reviews.

Thus, this study argues that different combinations of review sidedness, the reviewer's expertise and product type are possible influences on the helpfulness of an online review. With an understanding of how review sidedness affects online review helpfulness, online retailers can offer greater potential value to their customers. In practice, encouraging quality customer reviews does appear to be an important component of the strategy of many online retailers, because helpful reviews can create a source of differentiation.

## 2. Literature review and hypotheses development

### 2.1 Heuristic-systematic model (HSM)

Dual process theories examine the role played by both the information content of the message and the factors of its context affecting message credibility (Zhang and Watts, 2003). The HSM is one of the prominent theories that use the dual process approach. HSM distinguishes between systematic information processing, or when a subject exerts considerable cognitive effort in performing the task, and heuristic information processing, or when a subject exerts comparatively little effort in judging the validity of a message (Chaiken, 1980). Thus, people who engage in systematic information processing attempt to comprehend and evaluate the arguments in a message, as well as assess their validity in relation to the conclusion. By contrast, people who engage in heuristic information processing rely on more accessible information, such as the source identity or other non-content cues, in deciding whether to accept the conclusion of a message rather than processing argumentation (Chaiken, 1980).

HSM has been most influential in the field of persuasion (Smith and DeCoster, 2000) and is useful for explaining effective communication in group opinions (Briggs *et al.*, 2002; Cheung *et al.*, 2009; Zhang and Watts, 2003). HSM has also been widely applied to understand how information processing by individuals leads to their decision outcomes in online environments (Baek *et al.*, 2012; Lee *et al.*, 2008; Park and Kim, 2008;

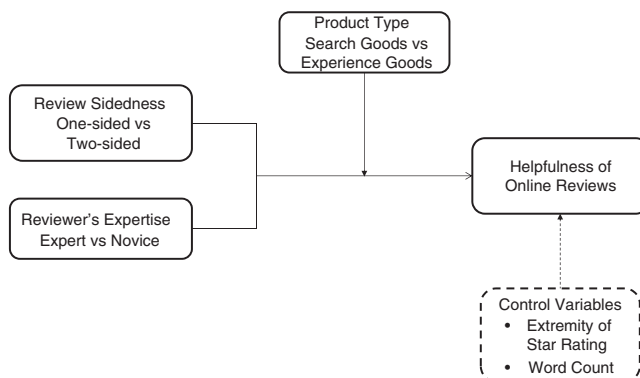
Park *et al.*, 2007; Sher and Lee, 2009; Sussman and Siegal, 2003; Zhang *et al.*, 2010). For example, Baek *et al.* (2012) and Zhang *et al.* (2010) applied HSM to explain the information processing behavior of consumers in online consumer review platforms.

This research also applies HSM to classify information in online consumer reviews into review content for systematic information processing and reviewer identity for heuristic information processing. Review contents are the arguments contained in an online review and used in systematic information processing in an objective manner (Chaiken, 1980). Conversely, reviewer identity, such as reviewer's expertise, is a non-content cue used in a subjective manner in heuristic information processing (Chaiken, 1980).

In this regard, the current research model illustrates that consumers take into account both review sidedness and reviewer's expertise in determining which review is helpful. This study further expects product type to moderate the helpfulness of an online consumer review. Product type is divided into the following categories: search or experience goods. Some studies have shown the effects of the extremity of star rating and word count on the helpfulness of online reviews (Mudambi and Schuff, 2010; Pan and Zhang, 2011; Li *et al.*, 2013). As a result, this study includes two control variables, namely the extremity of star rating and word count, as covariates in the analysis. Figure 1 illustrates the research framework.

## 2.2 The helpfulness of online reviews

An online review refers to specific instances where reviewers create product-focussed articles with the intention of informing, persuading, or reminding consumers (Berthon *et al.*, 2008). A helpful online review is defined as the perceived ability of an online review to help decision makers in understanding and evaluating the quality and performance of products sold online (Chen *et al.*, 2008; Li *et al.*, 2013). Online retailers have commonly used review "helpfulness" as the primary means of measuring how consumers evaluate a review. For example, after each online review, Amazon.com asks, "Was this review helpful to you?" Amazon provides helpfulness information alongside the review and consumers can sort reviews by the level of helpfulness. The perceived helpfulness of a review has been found to be a significant predictor of consumers' intent to comply with a review (Cheung *et al.*, 2008). Furthermore, the helpfulness of reviews has been shown to be positively linked to sales impact (Ghose and Ipeiritis, 2011), and this effect is more pronounced for less popular products (Zhu and Zhang, 2010). A potential explanation is that for less popular products, it is harder to find additional



**Figure 1.**  
Conceptual model

information sources and consumers are extra reliant on reviews that are rated as helpful. This study focusses on the sidedness of review content to understand the helpfulness of the article.

### 2.3 Review sidedness

Review sidedness refers to the style of argumentation within the review content, and whether it is one- or two-sided. A one-sided review presents only those arguments in favor of a particular argument, whereas two-sided reviews present the arguments in favor of an argument but also consider the opposing arguments. Previous evidence confirms that two-sided arguments are generally more persuasive than one-sided arguments (Crowley and Hoyer, 1994; Eisend, 2007). In particular, people are more likely to align their attitudes and product preferences with the content of a message after reading the pros and cons of an argument (i.e. a two-sided message) than they would after reading the pros or cons alone (i.e. a one-sided message). This is because acknowledging some negative aspects of a product acts against the advertiser's self-interest to sell the product and enhances advertiser credibility (Bohner *et al.*, 2003). That is, consumers deem the advertiser to be more trustworthy than if the advertisement contained only positive (i.e. one-sided) arguments.

Although this may appear to be a logical development of the theoretical viewpoint, other documented approaches have suggested the opposite (Pavlou and Dimoka, 2006; Forman *et al.*, 2008; Parra and Ruiz, 2009; Korfiatis *et al.*, 2012); that is, presenting a one-sided review is more helpful than a two-sided review. For example, extremely positive or negative ratings of eBay sellers were assessed as more informative than moderate ratings (Pavlou and Dimoka, 2006). This is because a product review that presents a one-sided argument (in favor of or against purchase) is considered more helpful in a search process, since it eliminates or strengthens the position of the product with regards to the list of alternatives or items in a consideration set. Other research has found that one-sided reviews (referring only to either positive or negative aspects) were considered much more helpful than moderate reviews, which reported both positive and negative aspects (Forman *et al.*, 2008). Previous research has examined how online settings provide instruments enabling consumers to view alternatives quickly and thus reduce the size of the consideration set in an online shopping scenario (Parra and Ruiz, 2009).

These mixed findings do not provide conclusive evidence about whether one-sided reviews or two-sided reviews are more helpful, and they leave some unresolved issues about review sidedness in the online review context. This study argues that the relative value of one-sided vs two-sided reviews may differ depending on whether the reviewer is a novice or an expert in writing review articles and whether the products are search goods or experience goods.

### 2.4 Reviewer's expertise

A reviewer's ability and expertise to accurately express their thoughts is a very important social cue for consumers (Baek *et al.*, 2012). When making purchase decisions, consumers are inclined to seek and follow the advice of expert sources (Huang *et al.*, 2009; Tan *et al.*, 2008). The degree to which a source is considered an "expert" is determined by evaluating the knowledge and competence that a source holds regarding the topic of interest (Gotlieb and Sarel, 1991). In the online environment, consumers tend to assess the expertise of reviewers based on their past behavior in terms of the number and content of the reviews written or information

provided for others' queries (Racherla and Friske, 2012). Thus, this study argues that experience in writing reviews is an important indicator in judging the expertise of a reviewer, and what defines a reviewer's expertise is that they are very familiar with, and have significant experience of, writing reviews. An "expert" has more experience in writing reviews than a "novice." Such reviewers may be knowledgeable in the domain of the particular product category. The authorship of product reviews is important in influencing consumers' perceptions of the helpfulness of any such reviews (Forman *et al.*, 2008; Li *et al.*, 2013).

### 2.5 Product type

Several studies have indicated differences in the influence of electronic word-of-mouth and online reviews across different product categories (Sen and Lerman, 2007; Park and Lee, 2009; Cheema and Papatla, 2010; Mudambi and Schuff, 2010; Zhu and Zhang, 2010; Baek *et al.*, 2012). This study also considers whether the effects of review sidedness on the helpfulness of online reviews depend on whether the products are search goods or experience goods. Experience goods are those for which it is relatively difficult and costly to obtain information on product quality prior to interaction with the product; key attributes are subjective or difficult to evaluate and compare, and there is a need to use one's senses to evaluate quality (Nelson, 1970). For search goods, it is relatively easy to obtain information on product quality prior to interaction with the product; key attributes are objective and easy to evaluate and compare, and there is no strong need to use one's senses to evaluate quality (Nelson, 1970). Examples of search goods include digital cameras and cell phones (Mudambi and Schuff, 2010), while examples of experience goods include books and films (Schlosser, 2011). Although many products involve a mix of search and experience attributes, the categorization of search and experience goods continues to be relevant and widely accepted (Huang *et al.*, 2009).

## 3. Research method

### 3.1 Hypotheses development

A review that is authored by an expert is found to be more trustworthy and useful than that of a novice when evaluating the credibility of unfamiliar information, and will have more influence on brand attitudes and purchase intentions (Eastin, 2001; Pollach, 2008). These findings have been explained by the "authority" heuristic (Chiou *et al.*, 2014; Tan *et al.*, 2008; Huang *et al.*, 2009), a cognitive decision rule ("expert statements are true") established through prior experience which teaches that experts are a valid source of information due to their authority on a subject. Furthermore, social influence theory suggests that a consumer is more likely to be influenced by online reviews posted by professional commentators through the internalization process (Lee *et al.*, 2011). Thus, a review written by an expert should be highly diagnostic of message validity. Experts are supposed to know what they are talking about and to make a convincing point irrespective of whether one-sided or two-sided reviews are provided. In contrast, novices are usually unfamiliar with online reviews and the domain of product categories, and they find it difficult to represent strong arguments when compared to an expert. This study further argues that the interplay effects of review sidedness and the reviewer's expertise on helpfulness depend on product type.

Consumers use online reviews to help them make decisions regarding both types of products, and it follows that a purchase decision for search goods may have different information requirements than a purchase decision for experience goods.

Consumers are more skeptical of experience than search attribute claims, and more skeptical of subjective than objective claims (Huang *et al.*, 2009).

In the literature on the economics of information, a close connection is made between information and uncertainty (Nelson, 1970). Information quality is critical in online reviews, as it can reduce purchase uncertainty and the consideration set, and may increase the speed of decision making (Mudambi and Schuff, 2010). Online reviews are considered to be one of the most reliable sources of pre-purchase information for experience goods, because consumers are likely to face greater pre-purchase uncertainties for experience goods than for search goods (Zhu and Zhang, 2010). Thus, uncertainty and difficulty in making an evaluation play an important role for experience goods and consumers need to seek online reviews with a clear direction to help them to make a decision efficiently.

This study argues that one-sided reviews will give rise to more clear and simple information and are considered beneficial for reducing the consideration set for experience goods. Although two-sided reviews are viewed as more balanced, they also reflect complex information about taste which cannot provide a clear indication about the reviewers themselves. On consumer ratings sites, experience goods often have many extreme ratings and few moderate ratings, which can be explained by the subjective nature of the dominant attributes of experience goods. Experience goods, such as books and films, seem to attract reviews from consumers who either love them or hate them, with extremely positive reviews being especially common (Ghose and Ipeiritis, 2006). Moreover, it is easy for consumers to discredit negative product information that is based on subjective criteria (e.g. a reviewer dislikes a book because he/she does not like the writing style of the author; Pan and Zhang, 2011). Thus, this study makes an assumption that online reviews act as a second-stage instrument for screening alternatives in the consideration set formed by the consumer for experience goods, and that in this case, extreme reviews containing one-sided arguments would be favored over moderate reviews containing two-sided arguments.

In contrast, consumers may often be less inclined to consult or fully process online reviews or others' opinions for search goods than for experience goods, which is because objective claims about tangible attributes are more easily compared and substantiated for search goods on retail websites (Zhu and Zhang, 2010). Those purchasing search goods are more likely to seek factual and balanced information about the products' objective attributes and features (Pan and Zhang, 2011). It is difficult to discount information that is based on objective criteria (e.g. a reviewer reports that a Global Positioning System (GPS) does not pick up a signal). Thus, this study argues that two-sided reviews are considered more helpful than one-sided reviews for evaluating search goods, and the hypothesis is as follows:

*H1.* There is a three-way interplay effect between review sidedness, reviewer expertise, and product type on online review helpfulness.

*H1a.* For search goods, consumers will consider two-sided reviews to be more helpful than one-sided reviews when the reviewers are experts in writing articles, while they will consider two-sided reviews to be equally helpful as one-sided reviews when reviewers are novices.

*H1b.* For experience goods, consumers will consider one-sided reviews to be more helpful than two-sided reviews when the reviewers are experts in writing articles, while they will consider one-sided reviews to be equally helpful as two-sided reviews when reviewers are novices.



### 3.2 Data collection

This study collected data through iPeen.com in Taiwan from 2009 to 2013. iPeen.com was selected because all variables could be coded from this e-commerce website. This study retrieved the publicly available pages containing all online reviews across four products (i.e. a film, a cell phone, a digital camera, and a GPS) which included a total of 989 reviews written by sample reviewers.

### 3.3 Variables

This study was able to operationalize the variables of the model using the iPeen.com dataset. The website allows consumers to evaluate the helpfulness of posted reviews, which are followed by the question “was this review helpful for you” with the three response options being: “helpful”, “average” and “unhelpful.” This study adopted a Z-score transformation to standardize the number of people who clicked “helpful” as the index of online review helpfulness. Moreover, the website identifies articles as helpful online reviews where they meet the following criterion: the percentage of the number of people who clicked “helpful” divided by the total number of people who voted is in excess of 50 percent. In total, 68.87 percent of the articles were judged as helpful reviews.

The explanatory variables are review sidedness, the reviewer’s expertise and product type. Review sidedness is coded by whether only pros, only cons or both pros and cons are mentioned. In line with Tan *et al.*’s (2008) research, this study used status cues to represent a reviewer’s expertise (i.e. status provided by a website to indicate a reviewer’s experience in writing online reviews). The website ranks a reviewer’s status according to his or her experience in writing articles, the number of posted articles, and the helpfulness of their reviews. Compared to novices, experts will have posted more than 80 articles and will have received higher evaluations of helpfulness on this website.

Product type is coded as a binary variable, with a value of 1 for search goods and 2 for experience goods. In line with prior research (Schlosser, 2011), this study identified films as experience goods. Three products were regarded as search goods: a digital camera, a cell phone, and a GPS. These are also representative of search goods used in previous research (Weathers *et al.*, 2007; Mudambi and Schuff, 2010). The two control variables are the word count of the review and the extremity of the star rating (1-6) given to a product by the reviewer. If the star rating is 3 or 4, it is coded as neutral, others are coded as extreme ratings.

### 3.4 Coding procedure

A content analysis of online review sidedness was conducted. Two undergraduate students who served as judges were unaware of the research hypotheses and independently coded the arguments of each review as positive, negative, or both. If a review was coded as either positive or negative, it was regarded as a one-sided message, whereas if a review was coded as containing both positive and negative arguments, then it was regarded as a two-sided message (Schlosser, 2011). The two judges had to become familiar with the coding scheme and then received review samples on which to practice until their initial inter-judge agreement reached an acceptable level (Rust and Cooil, 1994). To ensure coding quality, the judges initially coded the 30 most helpful reviews and the 30 least helpful reviews in the dataset, and then compared their coding results and resolved any disagreements before beginning

the remaining coding work. According to these procedures, a review is one-sided if only the pros (e.g. "Camera quality is really great, it is easy to use") or cons (e.g. "it is a little heavy") are mentioned, whereas a review is two-sided if both pros and cons are mentioned (e.g. "It could take a good picture, but uses a large amount of battery power").

This study relied on Cohen's (1960)  $\kappa$ , which prevents the inflation of reliability scores by correcting for chance agreement. The  $\kappa$  values for each product represent substantial levels of intercoder reliability (Landis and Koch, 1977). The intercoder reliability for each category is listed in Table I and all disagreements were resolved by discussion.

## 4. Results

### 4.1 The descriptive statistics

The percentage of one-sided and two-sided reviews was 67.41 and 35.39 percent, respectively. In all, 93.44 percent of the one-sided reviews were positive. Prior research has indicated positive reviews are more prevalent than negative reviews (Chevalier and Mayzlin, 2006). In total, 69.63 percent of the two-sided reviews tended to be positive. When there are more than 50 percent of negative arguments in a two-sided review, this may minimize the persuasive effectiveness of such reviews (Crowley and Hoyer, 1994; Eisend, 2006), but a t-test reveals that a negative tendency of a two-sided review is as helpful as a two-sided review with a positive tendency. The largest number of reviews was retrieved from 2011, which is because there was a very popular film released in 2011 and many reviewers discussed this on the website. Only 9.50 percent of the reviews are for search goods, which is because objective attributes about search goods are easily acquired on retail websites and consumers are less inclined to consult online reviews (Zhu and Zhang, 2010). Consumers believed that an expert's opinion ( $M = 0.62$ ,  $SD = 1.02$ ) is more helpful than a novice's opinion ( $M = -0.51$ ,  $SD = 0.74$ ,  $t(1, 987) = 20.21$ ,  $p < 0.01$ ), which supports previous findings (Willemssen *et al.*, 2011). The descriptive statistics for the variables in the full dataset are included in Table II.

### 4.2 Hypothesis testing

A three-way ANCOVA (analysis of covariance) was performed with review sidedness, reviewer's expertise and product type as independent variables. Online review helpfulness was regarded as a dependent variable. Two control variables were used: extremity of star rating and word count. The results reveal a three-way interaction ( $F(1, 979) = 16.42$ ,  $p < 0.00$ ,  $\eta^2 = 0.01$ ). Table III summarizes the results.

Consistent with *H1a*, a planned contrast reveals that for search goods, consumers will consider two-sided reviews to be more helpful ( $M = 1.81$ ,  $SD = 1.41$ ) than one-sided reviews ( $M = 0.97$ ,  $SD = 1.43$ ;  $F(1, 43) = 4.24$ ,  $p = 0.04$ ,  $\eta^2 = 0.02$ ) when reviewers are experts in writing articles, while they will consider two-sided reviews to be equally

**Table I.**

The intercoder reliability for each category ( $\kappa$  coefficient of agreement)

Product type	$\kappa$
A film	0.73
A cell phone	0.71
A digital camera	0.75
A GPS	0.71

**Notes:**  $K$  was calculated by  $P_0 - P_c / 1 - P_c$ ;  $P_0$  is observed agreement and  $P_c$  is chance agreement

Variables	Category	Frequency	%	Star Rating	Word Count	Helpfulness	
Review sidedness	One-sided review	Positive	598	93.44	5.36 (0.64)	1,050.20 (724.80)	-0.02 (1.05)
		Negative	42	6.56	4.07 (0.89)	846.70 (648.60)	-0.26 (0.93)
			<i>t</i> -value		12.31***	1.77*	1.45
	Two-sided review	Subtotal	640	64.71	5.28 (0.73)	1,036.90 (721.40)	-0.04 (1.04)
		More positive	243	69.63	5.07 (0.63)	1,053.00 (620.40)	0.06 (0.99)
		More negative	106	30.37	4.51 (0.86)	1,187.10 (745.10)	-0.08 (1.09)
<i>t</i> -value				6.82***	1.62	1.16	
		Subtotal	349	35.39	4.90 (0.75)	1,146.40 (711.30)	0.02 (1.02)
		<i>t</i> -value		7.61***	2.29**	0.75	
Year	2009	13	1.31	5.00 (0.65)	1,324.54 (661.34)	2.40 (1.54)	
	2010	5	0.51	5.60 (0.65)	827.40 (779.14)	0.49 (1.54)	
	2011	831	84.02	5.15 (0.77)	1,105.04 (716.81)	-0.01 (0.95)	
	2012	97	9.81	5.06 (0.77)	920.24 (772.99)	-0.32 (1.11)	
	2013	43	4.35	5.16 (0.59)	808.63 (546.99)	-0.22 (1.24)	
	<i>F</i> -value			0.94	3.53***	22.35***	
Product type	Search goods	94	9.5	5.23 (0.61)	946.5 (734.00)	0.35 (1.61)	
	Experience goods	895	90.5	5.14 (0.77)	1,089.1 (716.90)	-0.06 (0.95)	
	<i>t</i> -value			1.19	1.83*	3.69***	
Reviewer status	Novice	559	56.52	5.18 (0.81)	932.9 (664.80)	-0.51 (0.74)	
	Expert	430	43.48	5.10 (0.69)	1,260/80 (745.70)	0.62 (1.02)	
	<i>t</i> -value			1.53	7.29***	20.21***	
Total				5.15 (0.76)	1,075.51 (719.39)	-0.02 (1.03)	

**Notes:**  $n = 989$ . Standard deviations are in parentheses. \*, \*\*, \*\*\*Significant at  $p < 0.1$ ,  $p < 0.05$ , and  $p < 0.01$  levels, respectively

**Table II.**  
Descriptive statistics  
and comparison  
of means and SD  
for subsamples

Sources of variation	<i>F</i> -value	df	$\eta^2$
Extremity of star rating	6.43***	(1, 979)	0.00
Word count	86.24***	(1, 979)	0.05
Review sidedness (RS)	0.02	(1, 979)	0.00
Product type (PT)	18.04***	(1, 979)	0.01
Reviewer's expertise (RE)	258.76***	(1, 979)	0.16
RS $\times$ PT	1.89	(1, 979)	0.00
RS $\times$ RE	7.18***	(1, 979)	0.00
PT $\times$ RE	41.57***	(1, 979)	0.03
RS $\times$ PT $\times$ RE	16.42***	(1, 979)	0.01
Total	73.12***	(9, 979)	0.40

**Notes:** \* $p \leq 0.10$ ; \*\* $p \leq 0.05$ ; \*\*\* $p \leq 0.01$

**Table III.**  
Effects on online  
review helpfulness

helpful as one-sided reviews when reviewers are novices ( $F(1, 43) = 2.14$ ,  $p = 0.15$ ,  $\eta^2 = 0.01$ ). In contrast, for experience goods, consumers will consider one-sided reviews to be more helpful ( $M = 0.59$ ,  $SD = 1.00$ ) than two-sided reviews ( $M = 0.41$ ,  $SD = 0.69$ ;  $F(1, 379) = 7.89$ ,  $p < 0.00$ ,  $\eta^2 = 0.01$ ) when reviewers are experts in writing art

icles, while they will consider one-sided reviews to be equally helpful as two-sided reviews when reviewers are novices ( $F(1, 508) = 0.03, p = 0.87, \eta^2 = 0.00$ ), which supports *H1b*. Table IV and Figure 2 present these results.

## 5. Conclusion and general discussion

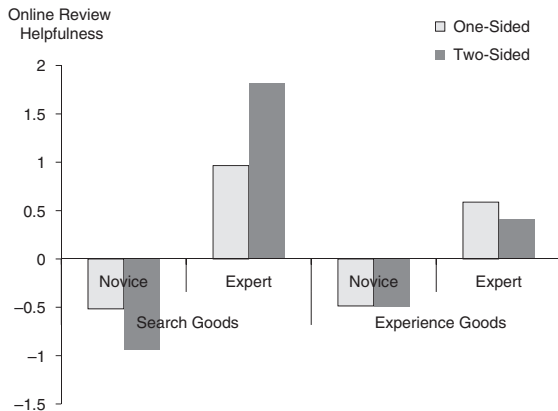
### 5.1 Theoretical implications

A helpful product review significantly affects consumer perceptions and decision-making behavior in the online shopping context (Chakravarti *et al.*, 2006). Previous research has shown that the mere presence of customer reviews on a website can improve customer perceptions of the website (Kumar and Benbasat, 2006). Furthermore, reviews that are perceived as helpful to customers have greater potential value to companies, including increased sales (Chevalier and Mayzlin, 2006). Hence, an online shopping website manager should identify helpful product reviews and increase the quality and quantity of any such reviews. This study built on these findings by exploring the antecedents of perceived helpfulness of online customer reviews and considers how online review helpfulness is determined by three factors: content-based features (i.e. review sidedness), source-based features (i.e. reviewer's expertise), and consumers' decision context (i.e. the two types of products: search goods and experience goods). The results reveal that when reviewers are experts in writing articles, one-sided reviews are more helpful than two-sided reviews for experience goods, whereas two-sided reviews are more helpful than one-sided reviews for search goods. The findings help explain why some reviews are perceived to be more helpful than others.

**Table IV.** Review sidedness on online review helpfulness by reviewer's expertise and product type

Factors	Search goods		Experience goods	
	Novice	Expert	Novice	Expert
One-sided review	-0.52 (1.07) <i>n</i> = 24	0.97 (1.43) <i>n</i> = 21	-0.49 (0.74) <i>n</i> = 354	0.59 (1.00) <i>n</i> = 241
Two-sided review	-0.94 (0.42) <i>n</i> = 23	1.81 (1.41) <i>n</i> = 26	-0.49 (0.70) <i>n</i> = 158	0.41 (0.69) <i>n</i> = 142

**Notes:** Standard deviations are in parentheses. This study adopted a Z-score transformation to standardize the index of online review helpfulness



**Figure 2.** Online review helpfulness as a function of review sidedness, reviewer's expertise, and product type

This study provides an interesting contrast to previous findings which suggest that extreme reviews are less helpful than moderate reviews for experience goods (Mudambi and Schuff, 2010). They proposed that moderate ratings are viewed as more balanced, whereas extreme reviews will give rise to more subjective thinking about the reviewers themselves. However, in line with prior findings which suggest that extreme reviews are more helpful than moderate reviews (Forman *et al.*, 2008), this study also confirms that one-sided reviews for screening alternatives in a consideration set formed by consumers are more useful than two-sided reviews for experience goods, because consumers find it difficult to acquire objective attributes on retail websites. Future studies could sample a larger set of products to determine whether the findings remain consistent, even for experience goods.

Compared with previous studies, the unique contributions of this study are multifaceted. First, they contribute to the literature on message sidedness by showing which arguments (one- or two-sided) are deemed to be helpful. In the advertising literature, presenting multiple sides can be more persuasive than an entirely favorable (i.e. one-sided) advertisement because mentioning some negative information is contrary to an advertiser's sales motive (Crowley and Hoyer, 1994). Consequently, two-sided advertisement claims are attributed to the advertiser's truthfulness rather than expertise. Nevertheless, the current research suggests that different effects emerge in online review contexts, where the reviewer has less (if any) incentive to lie. Although reviewers may present multiple sides to appeal to an audience with unknown (Tetlock *et al.*, 1989) or diverse views (Schlosser, 2005), such reviews were not always deemed the most helpful.

Second, this study is the first attempt to investigate the effects of one-sided vs two-sided arguments depending on the reviewer's expertise and the product types. The implications of one- (vs two-) sided arguments on the helpfulness of online reviews has likely been ignored due to the time and cost incurred in analyzing written content (Godes and Mayzlin, 2004). This study contributes to the literature relating to online peer review by demonstrating the importance of considering product type and heuristic cues (i.e. the reviewer's expertise) when explaining helpfulness. Third, this research also makes a contribution to information processing theory – i.e., HSM. Previous studies have focussed on heuristic cues, such as a reviewer's ranking and real name exposure, to explain the effects of reviews; that is, on the characteristics shown on the surface level of reviews (e.g. reviewer identity disclosure) that are of benefit to the helpfulness of an online review (Forman *et al.*, 2008; Pan and Zhang, 2011; Willemsen *et al.*, 2011; Baek *et al.*, 2012). The results in this research demonstrate that people are drawn to dual-processing; that is, the judgment of online review helpfulness is determined by heuristic cues (e.g. the status of the reviewer) and systematic processing (e.g. review content).

### 5.2 Managerial implications

It is clear that consumers attach different weights to different reviews depending on which content/reviewer characteristics are present and which products are being evaluated. The results can be used to develop guidelines and effective reward mechanisms for creating more helpful online reviews. For example, the results imply online retailers should consider different guidelines and effective reward mechanisms for customer feedback, depending on whether that feedback is for search goods or experience goods and the status of the reviewer is expert or novice. When reviewers are

expert in writing articles, online retailers should encourage them to provide two-sided reviews for search goods, whereas unique taste is important for experience goods.

### 5.3 Limitations and future research directions

As with any study, there are some limitations that present opportunities for future research. First, using data from a real website has the advantage of providing a more objective, data-driven approach than alternative approaches relying on subjective interpretations. However, the disadvantage of using data from a real website is that the researchers do not know the total number of people who voted and nor do they know whether those reviews would be as helpful (or unhelpful) to those who do not vote on reviews at all. Perceived helpfulness is a formative construct consisting of three dimensions: first, perceived source credibility; second, perceived content diagnosticity; and third, perceived vicarious expression (Li *et al.*, 2013), so future studies could measure the multi-dimensions of perceived helpfulness through survey methods. Moreover, the current design did not allow us to measure the personal traits of the reviewers who posted useful scores. It may be necessary to take such variables into account, since message effects are generally agreed to result from an interaction between source characteristics, content characteristics, and receiver characteristics (De Maeyer, 2012). Future research could use an experiment method to confirm that the results in this study hold.

Second, the samples of the reviews analyzed were retrieved from one particular online review site: iPeen.com in Taiwan. This is in contrast to previous studies which have used Amazon.com as a major online review site. Future research should examine whether similar findings will emerge from other online review sites, while taking into account any cultural factors. This is particularly important since message evaluations can be simultaneously affected by a chain of sources and cultural differences. Recent research suggests that people may evaluate online messages in reference both to the individual contributor of that information, and to the website from which the message derives (Huang *et al.*, 2009). Furthermore, cultural differences across various countries (e.g. China and the USA) have an impact on the way in which consumers provide online reviews (Fang *et al.*, 2013).

A final consideration for future research is the relationship between perceived helpfulness and consumer behavior. This study uses perceived helpfulness as a reflection of the degree to which a review is considered to be helpful in the consumer purchase decision-making process (Mudambi and Schuff, 2010). However, this measure does not capture purchase decision-making *per se*. Although prior research has found a positive relationship between perceived helpfulness and purchase intention (Cheung *et al.*, 2008; Parra and Ruiz, 2009), additional research is needed to test whether the conclusions can be extended to purchase behavior.

### References

- Bae, S. and Lee, T. (2011), "Gender differences in consumers' perception of online consumer reviews", *Electronic Commerce Research*, Vol. 11 No. 2, pp. 201-214.
- Baek, H., Ahn, J. and Choi, Y. (2012), "Helpfulness of online consumer reviews: readers' objectives and review cues", *International Journal of Electronic Commerce*, Vol. 17 No. 2, pp. 99-126.
- Berthon, P., Pitt, L. and Campbell, C. (2008), "Ad lib: when customers create the Ad", *California Management Review*, Vol. 50 No. 4, pp. 6-30.

- Bohner, G., Einwiller, S., Erb, H. and Siebler, F. (2003), "When small means comfortable: relations between product attributes in two-sided advertising", *Journal of Consumer Psychology*, Vol. 13 No. 4, pp. 454-463.
- Briggs, P., Burford, B., De Angeli, A. and Lynch, P. (2002), "Trust in online advice", *Social Science Computer Review*, Vol. 20 No. 3, pp. 321-332.
- Brown, J., Broderick, A.J. and Lee, N. (2007), "Word of mouth communication within online communities: conceptualizing the online social network", *Journal of Interactive Marketing*, Vol. 21 No. 3, pp. 2-20.
- Chaiken, S. (1980), "Heuristic versus systematic information processing and the use of source versus message cues in persuasion", *Journal of Personality and Social Psychology*, Vol. 39 No. 5, pp. 752-766.
- Chakravarti, A., Janiszewski, C. and Ulkumen, G. (2006), "The neglect of prescreening information", *Journal of Marketing Research*, Vol. 43 No. 4, pp. 642-653.
- Cheema, A. and Papatla, P. (2010), "Relative importance of online versus offline information for internet purchases: product category and internet experience effects", *Journal of Business Research*, Vol. 63 No. 9, pp. 979-985.
- Chen, P., Dhanasobhon, S. and Smith, M. (2008), "All reviews are not created equal: the disaggregate impact of reviews on sales on Amazon.com", working paper, Carnegie Mellon University, Pittsburgh, PA.
- Cheung, C.M.K., Lee, M.K.O. and Rabjohn, N. (2008), "The impact of electronic word-of-mouth: the adoption of online opinions in online customer communities", *Internet Research*, Vol. 18 No. 3, pp. 229-247.
- Cheung, M.Y., Luo, C., Sia, C.L. and Chen, H. (2009), "Credibility of electronic word-of-mouth: informational and normative determinants of on-line consumer recommendations", *International Journal of Electronic Commerce*, Vol. 13 No. 4, pp. 9-38.
- Chevalier, J.A. and Mayzlin, D. (2006), "The effect of word of mouth on sales: online book reviews", *Journal of Marketing Research*, Vol. 43 No. 3, pp. 345-354.
- Chiou, J.S., Hsiao, C.C. and Su, F.Y. (2014), "Whose online reviews have the most influences on consumers in cultural offerings? Professional vs consumer commentators", *Internet Research*, Vol. 24 No. 3, pp. 353-368.
- Cohen, J. (1960), "A coefficient of agreement for nominal scales", *Educational and Psychological Measurement*, Vol. 20 No. 1, pp. 37-46.
- Crowley, A.W. and Hoyer, W.D. (1994), "An integrative framework for understanding two-sided persuasion", *Journal of Consumer Research*, Vol. 20 No. 4, pp. 561-574.
- Dellarocas, C., Zhang, X.M. and Awad, N.F. (2007), "Exploring the value of online product reviews in forecasting sales: the case of motion pictures", *Journal of Interactive Marketing*, Vol. 21 No. 4, pp. 23-45.
- De Maeyer, P. (2012), "Impact of online consumer reviews on sales and price strategies: a review and directions for future research", *Journal of Product & Brand Management*, Vol. 21 No. 2, pp. 132-139.
- Duan, W., Gu, B. and Whinston, A.B. (2008), "The dynamics of online word-of-mouth and product sales – an empirical investigation of the movie industry", *Journal of Retailing*, Vol. 84 No. 2, pp. 233-242.
- Eastin, M.S. (2001), "Credibility assessments of online health information: the effects of source expertise and knowledge of content", *Journal of Computer-Mediated Communication*, Vol. 6 No. 4, available at: <http://onlinelibrary.wiley.com/doi/10.1111/j.1083-6101.2001.tb00126.x/full>
- Eisend, M. (2006), "Two-sided advertising: a meta-analysis", *International Journal of Research in Marketing*, Vol. 23 No. 2, pp. 187-198.

- Eisend, M. (2007), "Understanding two-sided persuasion: an empirical assessment of theoretical approaches", *Psychology and Marketing*, Vol. 24 No. 7, pp. 615-640.
- Fang, H., Zhang, J., Bao, Y. and Zhu, Q. (2013), "Towards effective online review systems in the Chinese context: a cross-cultural empirical study", *Electronic Commerce Research and Applications*, Vol. 12 No. 3, pp. 208-220.
- Forman, C., Ghose, A. and Wiesenfeld, B. (2008), "Examining the relationship between reviews and sales: the role of reviewer identity disclosure in electronic markets", *Information Systems Research*, Vol. 19 No. 3, pp. 291-313.
- Ghose, A. and Ipeirotis, P. (2006), "Designing ranking systems for consumer reviews: the impact of review subjectivity on product sales and review quality", *Proceedings of the 16th Annual Workshop on Information Technology and Systems*, (WITS), Milwaukee, 13-14 December, pp. 303-301, available at: [www.ipeirotis.com/wp-content/uploads/2012/01/wits2006.pdf](http://www.ipeirotis.com/wp-content/uploads/2012/01/wits2006.pdf) (accessed 2 February 2015).
- Ghose, A. and Ipeirotis, P.G. (2011), "Estimating the helpfulness and economic impact of product reviews: mining text and reviewer characteristics", *IEEE Transactions on Knowledge and Data Engineering*, Vol. 23 No. 10, pp. 1498-1512.
- Godes, D. and Mayzlin, D. (2004), "Using online conversation to study word-of-mouth communication", *Marketing Science*, Vol. 23 No. 4, pp. 545-560.
- Gotlieb, J.B. and Sarel, D. (1991), "Comparative advertising effectiveness – the role of involvement and source credibility", *Journal of Advertising*, Vol. 20 No. 1, pp. 38-45.
- Huang, P., Lurie, N.H. and Mitra, S. (2009), "Searching for experience on the web: an empirical examination of consumer behavior for search and experience goods", *Journal of Marketing*, Vol. 73 No. 2, pp. 55-69.
- Kim, J. and Gupta, P. (2012), "Emotional expressions in online user reviews: how they influence consumers' product evaluations", *Journal of Business Research*, Vol. 65 No. 7, pp. 985-992.
- Korfiatis, N., García-Bariocanal, E. and Sánchez-Alonso, S. (2012), "Evaluating content quality and helpfulness of online product reviews: the interplay of review helpfulness vs review content", *Electronic Commerce Research and Applications*, Vol. 11 No. 3, pp. 205-217.
- Kumar, N. and Benbasat, I. (2006), "The Influence of recommendations on consumer reviews on evaluations of websites", *Information Systems Research*, Vol. 17 No. 4, pp. 425-439.
- Landis, J.R. and Koch, G.G. (1977), "The measurement of observer agreement for categorical data", *Biometrics*, Vol. 33 No. 1, pp. 159-174.
- Lee, J., Park, D. and Han, I. (2008), "The effect of negative online consumer reviews on product attitude: an information processing view", *Electronic Commerce Research and Applications*, Vol. 7 No. 3, pp. 341-352.
- Lee, J., Park, D.H. and Han, I. (2011), "The different effects of online consumer reviews on consumers' purchase intentions depending on trust in online shopping malls: an advertising perspective", *Internet Research*, Vol. 21 No. 2, pp. 187-206.
- Lee, M., Kim, M. and Peng, W. (2013), "Consumer reviews: reviewer avatar facial expression and review valence", *Internet Research*, Vol. 23 No. 2, pp. 116-132.
- Li, M., Huang, L., Tan, C.H. and Wei, K.K. (2013), "Helpfulness of online product reviews as seen by consumers: source and content features", *International Journal of Electronic Commerce*, Vol. 17 No. 4, pp. 101-136.
- Linville, P.W. (1982), "The complexity-extremity effect and age-based stereotyping", *Journal of Personality and Social Psychology*, Vol. 42 No. 2, pp. 193-211.
- Lusk, C.M. and Judd, C.M. (1988), "Political expertise and structural mediators of candidate evaluations", *Journal of Experimental Social Psychology*, Vol. 24 No. 2, pp. 105-126.



- Mudambi, S.M. and Schuff, D. (2010), "What makes a helpful online review? A study of customer reviews on Amazon.com", *MIS Quarterly*, Vol. 34 No. 1, pp. 185-200.
- Nelson, P. (1970), "Information and consumer behavior", *Journal of Political Economy*, Vol. 78 No. 20, pp. 311-329.
- Pan, Y. and Zhang, J.Q. (2011), "Born unequal: a study of the helpfulness of user-generated product reviews", *Journal of Retailing*, Vol. 87 No. 4, pp. 598-612.
- Park, C. and Lee, T.M. (2009), "Information direction, website reputation and eWOM effect: a moderating role of product type", *Journal Business Research*, Vol. 62 No. 1, pp. 61-67.
- Park, D. and Kim, S. (2008), "The effects of consumer knowledge on message processing of electronic word-of-mouth via online consumer reviews", *Electronic Commerce Research and Applications*, Vol. 7 No. 4, pp. 399-410.
- Park, D.H., Lee, J. and Han, I. (2007), "The effect of on-line consumer reviews on consumer purchasing intention: the moderating role of involvement", *International Journal of Electronic Commerce*, Vol. 11 No. 4, pp. 125-148.
- Parra, J.F. and Ruiz, S. (2009), "Consideration sets in online shopping environments: the effects of search tool and information load", *Electronic Commerce Research and Applications*, Vol. 8 No. 5, pp. 252-262.
- Pavlou, P.A. and Dimoka, A. (2006), "The nature and role of feedback text comments in online marketplaces: implications for trust building, price premiums, and seller differentiation", *Information Systems Research*, Vol. 17 No. 4, pp. 392-414.
- Pollach, I. (2008), "Electronic word-of-mouth: a genre approach to consumer communities", *International Journal of Web Based Communities Archive*, Vol. 4 No. 3, pp. 284-301.
- Purnawirawan, N., Dens, N. and Pelsmacker, P. (2014), "Expert reviewers beware! The effects of review set balance, review source and review content on consumer responses to online reviews", *Journal of Electronic Commerce Research*, Vol. 15 No. 3, pp. 162-178.
- Racherla, P. and Friske, W. (2012), "Perceived 'usefulness' of online consumer reviews: an exploratory investigation across three services categories", *Electronic Commerce Research and Applications*, Vol. 11 No. 6, pp. 548-559.
- Riegner, C. (2008), "Wired China: the power of the world's largest internet population", *Journal of Advertising Research*, Vol. 48 No. 4, pp. 496-505.
- Rust, R.T. and Cooil, B. (1994), "Reliability measures for qualitative data: theory and implications", *Journal of Marketing Research*, Vol. 31 No. 1, pp. 1-14.
- Schlosser, A.E. (2005), "Posting versus lurking: communicating in a multiple audience context", *Journal of Consumer Research*, Vol. 32 No. 2, pp. 260-265.
- Schlosser, A.E. (2011), "Can including pros and cons increase the helpfulness and persuasiveness of online reviews? The interactive effects of ratings and arguments", *Journal of Consumer Psychology*, Vol. 21 No. 3, pp. 226-239.
- Sen, S. and Lerman, D. (2007), "Why are you telling me this? An examination into negative consumer reviews on the Web", *Journal of Interactive Marketing*, Vol. 21 No. 4, pp. 76-94.
- Sher, P.J. and Lee, S.H. (2009), "Consumer skepticism and online reviews: an elaboration likelihood model perspective", *Social Behavior and Personality: An International Journal*, Vol. 37 No. 1, pp. 137-143.
- Smith, E.R. and DeCoster, J. (2000), "Dual-process models in social and cognitive psychology: conceptual integration and links to underlying memory systems", *Personality and Social Psychology Review*, Vol. 4 No. 2, pp. 108-131.
- Steffes, E.M. and Burgee, L.E. (2009), "Social ties and online word of mouth", *Internet Research*, Vol. 19 No. 1, pp. 42-59.

- Sussman, S.W. and Siegal, W.S. (2003), "Informational influence in organizations: an integrated approach to knowledge adoption", *Information Systems Research*, Vol. 14 No. 1, pp. 47-65.
- Tan, K.W.P., Swee, D., Lim, C., Detenber, B.H. and Alsagoff, L. (2008), "The impact of language variety and expertise on perceptions of online political discussions", *Journal of Computer-Mediated Communication*, Vol. 13 No. 1, pp. 76-99.
- Tetlock, P.E., Skitka, L. and Boettger, R. (1989), "Social and cognitive strategies for coping with accountability: conformity, complexity, and bolstering", *Journal of Personality and Social Psychology*, Vol. 57 No. 4, pp. 632-640.
- Tsao, W.C. (2014), "Which type of online review is more persuasive? The influence of consumer reviews and critic ratings on moviegoers", *Electronic Commerce Research*, Vol. 14 No. 4, pp. 559-583.
- Weathers, D., Sharma, S. and Wood, S.L. (2007), "Effects of online communication practices on consumer perceptions of performance uncertainty for search and experience goods", *Journal of Retailing*, Vol. 83 No. 4, pp. 393-401.
- Willemsen, L.M., Neijens, P.C., Bronner, F. and de Ridder, J.A. (2011), "'Highly Recommended!' The content characteristics and perceived usefulness of online consumer reviews", *Journal of Computer-Mediated Communication*, Vol. 17 No. 1, pp. 19-38.
- Yin, D., Bond, S.D. and Zhang, H. (2014), "Anxious or angry? Effects of discrete emotions on the perceived helpfulness of online reviews", *MIS Quarterly*, Vol. 38 No. 2, pp. 539-560.
- Zhang, K.Z.K., Lee, M.K.O. and Zhao, S.J. (2010), "Understanding the informational social influence of online review platform", in Sabherwal, R. and Sumner, M. (Eds), *Proceedings of the 31st International Conference on Information Systems*, Association for Information Systems, St Louis, MO, pp. 1103-1120.
- Zhang, W. and Watts, S. (2003), "Knowledge adoption in online communities of practice", in March, S.T., Massey, A. and Degross, J.I. (Eds), *Proceedings of the 24th International Conference on Information Systems*, Association for Information Systems, Seattle, WA, pp. 96-109.
- Zhu, F. and Zhang, X. (2010), "Impact of online consumer reviews on sales: the moderating role of product and consumer characteristics", *Journal of Marketing*, Vol. 74 No. 2, pp. 133-148.

### Further reading

- Li, J. and Zhan, L. (2011), "Online persuasion: how the written word drives WOM evidence from consumer-generated product reviews", *Journal of Advertising Research*, Vol. 51 No. 1, pp. 239-257.

### About the author

Ming-Yi Chen is an Assistant Professor in the Department of Marketing at the National Chung Hsing University. Her research interests are internet marketing, communication and persuasion, consumer psychology. She received her PhD in Management from the National Chengchi University. Her papers have been published in the *International Journal of Advertising*, *European Journal of Marketing*, *Electronic Commerce Research*, and *Journal of Computer-Mediated Communication*. Ming-Yi Chen can be contacted at: myc@dragon.nchu.edu.tw

---

For instructions on how to order reprints of this article, please visit our website:

[www.emeraldgroupublishing.com/licensing/reprints.htm](http://www.emeraldgroupublishing.com/licensing/reprints.htm)

Or contact us for further details: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)