

**Cognitive Processing in Purchase Decisions -
How Online Consumer Product Reviews on E-Commerce Platforms are used by
Consumers in Purchase Decisions**

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List of Abbreviations

AI	artificial intelligence
e-commerce	electronic commerce
eWOM	electronic word-of-mouth
OCR	online consumer product review
WOM	word-of-mouth

Abstract

With the rise of the Internet, consumers' purchasing behavior has changed drastically. More and more people shop online, and thus, are affected by online consumer product reviews (OCR). The importance of OCRs is widely acknowledged in the business and academic context, and numerous studies have been undertaken to assess the influence of OCRs on consumer behavior. Nevertheless, insufficient effort has been put into integrating those findings. In this study, a systematic literature review is conducted to give an overview of the current state of knowledge on cognitive information processing of OCRs on e-commerce platforms during purchasing decisions. To classify the identified studies, an integrative framework by Cheung and Thadani (2012, p. 464) which describes the impact of OCRs on consumer behavior has been adapted. The framework has been further expanded by recently discovered factors which influence the impact of OCRs on the decision-making process. This review serves as a crucial building block for future eWOM research.

Keywords: *consumer purchase decision, e-commerce, electronic word-of-mouth, eWOM, eWOM communication, information processing, literature review, OCR, product reviews*

1. Introduction

Over the last 20 years consumers' shopping behavior has changed drastically, especially with the rising importance of reviews on e-commerce platforms, consumer review sites, online discussion forums, blogs, and social network sites. This new type of word-of-mouth (WOM) communication, called electronic word-of-mouth (eWOM) communication, enables consumers to exchange their opinions and inform themselves about other people's product experiences prior to making a purchase decision (Gupta and Harris 2010, p. 1041). In recent years, eWOM has become an immensely powerful force of marketing. Indeed, research conducted by the Pew Research Center (2016, p. 1) has shown that when making a first-time purchasing decision around 82% of US adults refer to online reviews on an occasional or regular basis while 40% stated to do so almost always. Another study by PwC (2016, p. 26) revealed that overall, around half of the consumers read online reviews before making a purchasing decision and 79% of consumers believed that online reviews can be trusted as much as personal recommendations from friends or relatives (BrightLocal 2020, p. 10).

Prior research has shown that the impact of eWOM can be analyzed at market-level and individual-level. Market-level analysis focuses on the impact of eWOM messages on market-level parameters like product sales which is an already widely researched field. Recently, a meta-analysis covering 96 studies revealed an overall positive correlation between eWOM and sales thus stressing the importance of managing online reviews for companies (Babić Rosario et al. 2016, p. 314). However, this paper focuses on the individual-level analysis, whereby eWOM is seen as "a process of personal influence, in which communications between a communicator (sender) and a receiver can influence consumer purchase decision" (Cheung and Thadani 2012, p. 461).

In this paper, a systematic review of eWOM literature on an individual level is conducted. Therefore, relevant individual-level eWOM studies have been identified, summarized, and put in relation including the most important theoretical foundations. Only research papers are included which base their insights on studies in the context of online consumer product reviews on e-commerce websites such as online brand or shopping sites. Specifically excluded is any other type of eWOM such as research based on effects of eWOM in the context of online discussion forums, online consumer review sites, blogs, or social networking sites.

The paper follows this structure: At the beginning, eWOM communication is defined and put in contrast to traditional WOM communication. Further, the concept of online consumer product reviews, being a part of eWOM, is explained. Then, the most important theories to understand cognitive information processing in the context of OCRs are presented. In the main part, the research question how online consumer product reviews on e-commerce platforms are used by consumers in purchase decisions is answered. Therefore, an integrative framework of the impact of eWOM communication by Cheung and Thadani (2012, p. 464) is used to classify the relevant papers based on social communication literature. Furthermore, the different factors of influence in the cognitive processing part of decision-making are described. The paper concludes by discussing the managerial implications resulting from the influences of OCRs in purchasing decisions and showing the limitations of the papers included as well as proposing further research directions.

2. Theoretical Foundations

To understand how consumer use online consumer product reviews on e-commerce platforms in purchase decisions, it is crucial to gain insights into the background of eWOM as well as the cognitive processing context. In this chapter, the following questions are answered:

- (1) What is electronic word-of-mouth communication and what differentiates it from traditional word-of-mouth communication?
- (2) What can be understood by online consumer product review?
- (3) How do individuals process (electronic) WOM information?

2.1 Electronic Word-of-Mouth Communication

For a long time, literature on consumer behavior and marketing has recognized the strength of interpersonal influence via word-of-mouth communication. Arndt (1967, p. 295), in one of the early studies on the effects of WOM, defines WOM as expressed face-to-face communication about a product or service. Researchers observed that consumers regard WOM as more trustworthy and compelling than traditional media like advertisements (Herr, Kardes, and Kim 1991, p. 460). With the fast development of technology and the intensive spread of the internet, WOM shifted its context to the virtual environment and the so-called electronic word-of-mouth (eWOM) became increasingly prevalent. People were no longer limited to face-to-face communication, but other opportunities for acquiring and providing product information have developed like online discussion forums, online consumer review sites, blogs, or social networking sites (Cheung and Lee 2012, p. 461). As one of the first researcher focusing on eWOM, Hennig-Thurau et al. (2004, p. 39) defined eWOM as any favorable or unfavorable statement given about a product or firm by future, present, or past customers that is made publicly available to a large number of individuals via the Internet.

Although eWOM shares various important aspects with traditional WOM, one should not ignore the differences which exist: First, due to technological advances, scalability has become unrivaled and eWOM's speed of diffusion has increased (Dellarocas 2003, p. 1410). Second, eWOM is more measurable than traditional WOM and remains for a longer time because eWOM is usually transferred in a text-based form and archived on the Internet (Lee, Park, and Han 2008, p. 341). Another factor increasing eWOM's measurability is the higher quantity of online WOM content compared to the traditional WOM context (Chatterjee 2001, p. 129). Third, in contrast to traditional WOM communication, eWOM information can be exchanged in an asynchronous way with no need for simultaneous information exchange in the presence of all communicators (Hung and Li 2007, p. 485). A final key difference is that one does not necessarily know the sender of an eWOM message, and thus, may question the credibility. While eWOM can be posted by unknown individuals, traditional WOM is usually transmitted by family or friends (Dellarocas 2003, p. 1410; Park, Lee, and Han 2007, p. 128).

In the last few years, eWOM literature has especially focused on online consumer product reviews (OCRs), which are regarded as a type of eWOM communication (Bae and Lee 2011, p. 255). Being one of the most prominent (Purnawirawan, Pelsmacker, and Dens 2012, p. 244) and important (Sen and Lerman 2007, p. 77) types of eWOM, OCRs are evaluative information provided by customers and published on a company's or third-party's website (Mudambi and Schuff 2010, p. 186). Reviews usually consist of a textual part and a numeric star rating which is associated with the product (Yin, Mitra, and Zhang 2016, p. 131). Even though being seen as a part of eWOM, one must not forget about several unique features of OCRs which differentiates them from eWOM (Cheong and Morrison 2008, p. 2): First, only consumers create OCRs whereas eWOM can be created by both, consumers and marketers. Furthermore, OCRs are usually published on e-commerce or online review websites where there is no control over who can access the information, while in some eWOM contexts, like

social networking sites, one can decide who can read the information. This leads to the third difference being that OCRs are usually communicated to the public while eWOM can also be communicated to a specific target audience (Cheong and Morrison 2008, p. 2). Another unique feature is that OCRs can serve as both, an informant and a recommender role (Park, Lee, and Han 2007, p. 127): While being more customer-focused in their informant role, OCRs have the format of positive or negative recommendations in their recommender role.

2.2 Cognitive Information Processing

According to traditional WOM research, WOM information plays an essential part in recommendation-based heuristics, whereby the decision maker acquires recommendations to reduce the quantity and uncertainty of information that must be analyzed to make a decision (Olshavsky and Granbois 1979, p. 99). In this process, the decision maker's predisposition influences the criteria applied by the decision maker, and thus, defines whether and how much WOM information is gathered, as well as the impact of the information on the purchase decision (Wilson and Peterson 1989, p. 27). Usually, the decision maker evaluates the source of information to assess its credibility (Chatterjee 2001, p. 129). Due to the unknown source in the eWOM context, the theoretical framework of attribution theory by Kelley (1973) is often used to explain the assumptions made in the context of an unknown source and the impact of OCRs on the consumer (Park and Park 2013, p. 551; Qiu, Pang, and Lim 2012, p. 638; Sen and Lerman 2007, p. 91).

In general, attribution theory examines how individuals make causal inferences about why a communicator takes a particular stance or acts in a particular way (Kelley 1973, p. 107). Individuals can relate the communicator's persuasive statement regarding a stimulus (product) to the stimulus itself (product performance), and/or to non-stimulus factors (character traits of the communicator or situational factors) (Mizerski 1982, p. 302). Depending on the attribution of the communication to stimulus or non-stimulus factors, the message can have a different

impact on the individual's product evaluation and purchase intention. The more an individual attributes a message to stimulus-factors, the more influenced he is, whereas the more an individual believes that a message is caused by non-stimulus factors, the less influenced he is (Mizerski 1982, p. 302; Sen and Lerman 2007, p. 91). Kelley (1973, p. 113) refers to this as the discounting principle.

Another often used theoretical framework to understand the effectiveness of persuasive communication in the context of eWOM is the so-called elaboration likelihood model (ELM) developed by Petty and Cacioppo (1986). According to ELM, there are two routes via which attitude change can be influenced: the central and peripheral route. A significant difference between those two routes is the level of thoughtful information processing or elaboration. The likelihood of elaboration is governed by the personal motivation and ability to elaborate. Individuals who seek to and have the ability to process a message, will deal with persuasive arguments with higher chance via the central route. This means they are more likely to analyze persuasive arguments thoughtfully, pay attention to the arguments, and then form their own views in response to the arguments. On the other hand, individuals who do not seek to and do not have the ability to process a message, deal with persuasive arguments with higher chance via peripheral routes for which less cognitive processing is needed. This allows them to focus on non-content related cues to make a decision. As a result, attitude shifts elicited by the central route tend to be more durable and predictive of behavior than those caused through the peripheral route. In the context of ELM, prior knowledge or expertise refers to the ability to process information, while involvement refers to the motivation to do so. Thus, ELM claims that the same information can be processed in several ways depending on the level of consumer involvement and expertise (Petty and Cacioppo 1986, p. 191).

3. Integrative Framework of the Impact of eWOM Communication

In this literature analysis, identified individual-level based OCR papers in the e-commerce context are reviewed and presented, following an integrative framework of the impact of eWOM communication developed by Cheung and Thadani (2012, p. 464). This framework is based on the principles of communication research. Hovland, one of the pioneers in the field of social communication studies, defines social communication as the “process by which an individual (the communicator) transmits stimuli (usually verbal symbols) to modify the behavior of other individuals (communicatees)” (Hovland 1948, p. 371). Thus, he claims that the process involves four key components, namely the communicator transferring a message, the stimulus, which is the message transferred by the communicator, the receiver being a person answering to the message and the response directed from the receiver to the communicator. Putting this in the context of eWOM, respectively, eWOM communication is the message (stimulus) transferred by the information-sharing customers (communicator) to the information-seeking customer (receiver) resulting in the impact of eWOM (response) which can be influenced by contextual factors (Cheung and Thadani 2012, p. 463). This integrative framework inspired by Cheung and Thadani (2012, p. 464) and expanded by new insights from this literature review is depicted in Figure 1. The new factors are characterized by orange frames.

- INSERT FIGURE 1 ABOUT HERE -

In this section, the relevant OCR studies are reviewed and assigned to the five components of social communication. To identify relevant studies, a three-step process has been applied. First, systematic research on databases like EBSCO and Google Scholar has been conducted. It included keywords like “eWOM”, “online consumer reviews” or “product review”. Second, cross-references in relevant papers have been analyzed. Third, the three most important marketing journals in the OCR context (*Journal of Consumer Research*, *Journal of Marketing*

and *Journal of Marketing Research*) have been reviewed manually to make sure that all major articles are included. Since all included papers are peer-reviewed and from research papers with major importance in the marketing, psychology or information system context, a high reliability of the results is assumed.

3.1 Responses

Responses refer to the impact of eWOM communication on review readers (Cheung and Thadani 2012, p. 463). The most studied responses in the reviewed papers are product attitude, review helpfulness and purchase intention. Other responses being observed are product choice, persuasiveness, and review credibility. Since most studies measure product choice through questions asking which product a customer would buy (Huang and Chen 2006, p. 419), product choice is categorized under purchase intention in the framework. Moreover, the proxy measure for review persuasiveness is often review helpfulness (Zhang, Craciun, and Shin 2010, p. 1339) which is why those two dimensions are combined in the framework. In real world data sets, the effect on perceived helpfulness is often analyzed by observing helpfulness votes on retail websites such as Amazon (Yin, Mitra, and Zhang 2016, p. 134). However, one must not ignore that there are other items which influence the perceived helpfulness. Although the relationship between the responses is well-established and proven in online consumer behavior research, the observations in the OCR context are rare. Purnawirawan, Pelsmacker, and Dens (2012, p. 251) suggest that perceived helpfulness affects attitude, and thus, intention formation. In addition, Moore (2015, p. 30) shows that product attitude and review helpfulness have an impact on the product choice. Qiu, Pang, and Lim (2012, p. 638) claim that review credibility is seen as one of the most essential factors that influence whether a review is adopted. This is in accordance with the information adoption model from a related field, namely virtual information influence in organizations, which suggests that helpfulness and credibility have an impact on the adoption of information (Sussman and Siegal 2003, p. 59). Due to the relatedness to traditional WOM

studies and eWOM communication being regarded as form of social influence, Cheung and Thadani (2012, p. 463) hypothesize that eWOM adoption influences the purchase intention. However, this relationship is not empirically proven in the context of OCRs in e-commerce. Another relationship, which is not empirically proven in this context, is the effect of purchase intention on purchase. However, a literature review in the online shopping context by Chang, Cheung, and Lai (2005, p. 553) proves this relation.

3.2 Stimuli

Stimuli refers to the messages of eWOM communication (Cheung and Thadani 2012, p. 463). In past research, a focus was put on easily observable factors like valence and volume, but in more recent research factors such as review content have been discovered.

Review valence usually refers to a judgement about a product which can be positive, negative, or neutral. Previous studies have shown that consumers weigh positive or negative reviews differently, which can influence the persuasiveness and perceived usefulness (Sen and Lerman 2007, p. 92; Zhang, Craciun, and Shin 2010, p. 1340). Also, the balance of reviews in a set impacts the perceived helpfulness. Namely, Purnawirawan, Pelsmacker, and Dens (2012, p. 251) find that in a set of positive reviews including negative ones, customers perceive the reviews as more favorable than they are. Still there is no agreement among researchers whether positive or negative reviews are more influential: On the one side, some studies confirm the existence of a negativity bias, meaning that there exists a preference for negative over positive information in terms of importance. For instance, Lee, Park, and Han (2008, p. 342) argue that negative reviews circulate quicker between potential consumers, and therefore, have a significant impact on their purchasing decision, especially if there is a high volume of negative reviews. Zhang, Craciun, and Shin (2010, p. 1340) claim that in the eyes of most consumer, negative reviews are perceived as more persuasive than positive ones. However, extremely unfavorable reviews may be less helpful because they may contradict customers' initial

impressions, and thus, do not offer any value to the decision-making process (Mudambi and Schuff 2010, p. 196). On the other side, some studies claim that there is a preference for positive over negative information, a so-called positivity bias (Sen and Lerman 2007, p. 90). Moreover, Sen and Lerman (2007, p. 90) suggest that the impact of OCR's valence on usefulness depends on the product type being hedonic or utilitarian. Hedonic products are primarily emotional and are bought out of desire for the intrinsic pleasure, whereas utilitarian products are primarily cognitive and are bought out of need (Holbrook and Hirschman 1982, p. 138). Sen and Lerman (2007, p. 90) claim that negative reviews for hedonic products are perceived as less helpful than negative ones for utilitarian products. Thus, readers only show a negativity bias for utilitarian reviews. Depending on the product type, Langan, Besharat, and Varki (2017, p. 426) observe that review valence has an impact on the effect of review variance on purchase intention. Namely, for positive valenced products variance pushes product evaluation in an unfavorable manner while for negative valence products variance pushes the product evaluation in a favorable manner. These effects may be amplified or subdued by the nature of a product. Similarly, Zhang, Craciun, and Shin (2010, p. 1340) demonstrate that the consumption goal associated with the reviewed product influences the persuasiveness of that review. They suggest that negative reviews are more influential than positive ones when a product is associated with prevention goals. Positive reviews, on the other hand, are more influential than negative ones when the product is associated with promotion goals. In addition, Huang and Chen (2006, p. 425) claim that consumer decisions are influenced by the relative amount of favorable against unfavorable customer comments. Concretely, only when the number of positive OCRs was significant enough to outnumber the negative OCRs, those reviews could profoundly affect consumer purchasing intentions. This means that helpfulness and persuasiveness of positive and negative reviews may also depend on volume or other contextual factors. In further research Yin, Mitra, and Zhang (2016, p. 141) propose that the reason for these mixed findings can be

caused by the confirmation bias. They observe that individual reviews that differ from product average ratings, the foundation on which customers establish first beliefs, are regarded as less helpful. Accordingly, if the average product rating is high, positive reviews are more helpful (positivity bias) but if the average product rating is low, negative reviews are more helpful (negativity bias) (Yin, Mitra, and Zhang 2016, p. 141). In a last study about valence, the researchers Allard, Dunn, and White (2020, p. 103) suggest that negative reviews being perceived as unfair heighten the sense of empathy for the company and more likely result in supportive consumer responses.

Volume is another factor which influences the decision-making process. In general, Park, Lee, and Han (2007, p. 126) claim that the quantity of reviews can be an indicator for a product's popularity, since it is reasonable to believe that the amount of reviews corresponds to the number of people who bought the product. They also show that the purchasing intention grows as the number of OCRs increases even if the review quality is low. However, the degree of such impacts varies based on other factors. Park, Lee, and Han (2007, p. 141) apply the ELM to investigate how the level of customer's involvement modifies the effects of OCRs. They discover that the volume of OCRs has a greater impact on low-involvement customers, whereas the quality of the reviews has a greater impact on high-involvement customers. Concretely, high-involvement consumers are affected by the volume when the quality of reviews is high (Park, Lee, and Han 2007, p. 141). Gupta and Harris (2010, p. 1048) suggest a moderating role of customer's involvement in the relationship of review volume on time spent in the decision process and product choice. They state that for consumers with high involvement, the more the volume of reviews increases, the more effort they spent studying information and assessing the recommended product. In this process they are willing to give up personal preferences to choose a recommended product as long as the product's optimality on other criteria is not jeopardized. However, for consumers with low involvement, a higher number of reviews does not result in

deeper information processing. Rather, the restricted search and consideration activities of low involvement consumers, while using a peripheral route in information processing, allow them to rely on external cues. As a result, even a single review can cause a low-involved consumer to make a poor decision (Gupta and Harris 2010, p. 1048). Skepticism, in addition, influences the impact of volume. Sher and Lee (2009, p. 142) reveal that the purchasing intention of individuals with low skepticism is more influenced by the volume than the quality of reviews. They base their insights on ELM and suggest that customers with low skepticism are comparable to those with a low demand for cognition in that they are influenced with a higher chance by peripheral indicators. This means that low skepticism customers are more likely to take the peripheral route in creating attitudes and are therefore more persuaded by external cues such as the volume of reviews (Sher and Lee 2009, p. 142). In addition, the effect of variance on product evaluation is influenced by the volume (Park and Park 2013, p. 551) which brings us to the next influential factor.

Since product reviews often contradict each other, it is also interesting to observe how variance influences the decision-making process. Park and Park (2013, p. 551) claim that when customers have negative prior expectations about a product, sets of reviews which have a high variance are more likely to push the product evaluation in an unfavorable manner than those with low variance. On the other hand, in the case of positive prior expectations, high variance sets of reviews can boost or weaken product evaluation conditional on product category, argument quality and volume. This relationship can be understood through the attribution of the causes of variance which the customer incorporates in the decision-making process. When the causes of variance are attributed to non-product related factors, high-variance reviews seduce consumers to make biased product evaluations consistent with their prior expectations. However, when the causes of variance are attributed to product related factors, sets of reviews with high variance can push the product evaluation in an unfavorable manner irrespective of

prior positive expectations. The study suggests that consumers frequently seek extreme variance in product reviews to create product evaluations in compliance with their prior assumption about the decision by producing non-product related attributions. (Park and Park 2013, p. 551). In addition, Langan, Besharat, and Varki (2017, p. 426) observe that when comparing utilitarian and hedonic products, larger levels of review variance correspond to lower purchasing intentions for utilitarian products. In a set of reviews Qiu, Pang, and Lim (2012, p. 638) suggest that conflicting aggregated ratings influence the attribution about a review, and thus, the perceived credibility. They show that the presence of an individual review which conflicts the aggregated rating of a product, unfavorably impacts the customer's product-related attribution. The customer attributes the review to non-product reasons, which results in a decreased credibility of that review. This effect is stronger for positive than for negative individual reviews (Qiu, Pang, and Lim 2012, p. 638).

Furthermore, Langan, Besharat, and Varki (2017, p. 426) observe the interaction of review variance and valence in the context of different product types and stress the importance of observing those two decision cues collectively. This is especially important since they demonstrate that consumers who evaluate review valence or variance separately are more likely to draw inaccurate conclusions about the other decision heuristic. Concretely, they discover that higher levels of variance frequently contribute to erroneous impressions of the average rating of the product and vice versa (Langan, Besharat, and Varki 2017, p. 426).

Another impactful stimulus is review quality, which is defined as the quality of the content of an OCR being relevant, sufficient, understandable and objective (Park, Lee, and Han 2007, p. 128). Park, Lee, and Han (2007, p. 141) suggest that consumer's purchasing intentions are positively influenced by review quality. This relationship especially holds for highly involved customers. Only if the review quality is high, highly involved customers are affected by the volume of reviews. However, Sher and Lee (2009, p. 142) heighten that the relationship

of review quality on purchasing intention does not hold for highly skeptical customers. They claim that highly skeptical customers form their opinion on intrinsic beliefs and are predisposed against other external information. Contradicting the ELM theory, they do not take the central route of information-processing which is aligned with thoughtful processing of information. Therefore, they are unable to be persuaded through argument quality since they will not believe any claims made in OCRs (Sher and Lee 2009, p. 142). Lee, Park, and Han (2008, p. 349) had a further look at negative OCRs and their impact on product choice. They suggest that negative OCRs of high quality have a greater influence on consumer attitudes than those of low quality. Also, they claim that the effect of review quality on product choice is moderated by the level of consumer's involvement. More concretely, this means that for high-involvement consumers the degree of unfavorable change in attitude about a product because of negative reviews is greater than for low-involvement consumers. They also discover a three-way interaction between review quality, the proportion of negative reviews and involvement. Depending on the negative review's quality, high-involvement customers are likely to conform to reviewers' perspectives when the proportion of unfavorable OCRs increases. However, regardless of the negative review's quality, consumers with low involvement more likely conform to reviewers' viewpoints (Lee, Park, and Han 2008, p. 349). Furthermore, Park and Park (2013, p. 551) suggest that argument quality also influences whether sets of reviews with low variance or high variance are more likely to push product evaluations in a favorable manner for search products. Search products are those for which customers can access information on product quality before purchasing, whereas customers must possess experience products to assess their quality (Nelson 1970, p. 312).

Moreover, Mudambi and Schuff (2010, p. 196) demonstrate that review extremity and review depth have an influence on the perceived helpfulness. They point out that extended reviews are usually more in-depth with more product specifications and information on how

the product should be used. Therefore, higher perceived helpfulness is related to extended reviews which is also consistent with the findings of Reich and Maglio (2020, p. 60) and Yin, Mitra, and Zhang (2016, p. 143). However, Mudambi and Schuff (2010, p. 196) emphasize that these impacts also depend on other contextual factors like product type. In concrete, they demonstrate that a moderate review is perceived as more helpful for experience products while the review depth stronger influences the review helpfulness for search products.

In a set of reviews, customers' purchasing decisions are also influenced by the balance and sequence in which the OCRs are presented (Purnawirawan, Pelsmacker, and Dens 2012, p. 250). The researchers show that unbalanced review sets, consisting of an unequal number of positive and negative reviews, are perceived as more useful than balanced ones since they give the reader a clear path to follow. If the review set is unbalanced, they also observed an influence of the review sequence on the perceived helpfulness. Positive wrapping in favorably balanced groups (favorable/unfavorable/favorable OCR) and negative wrapping in unfavorably balanced groups (unfavorable/favorable/unfavorable OCR) increases the perceived usefulness (Purnawirawan, Pelsmacker, and Dens 2012, p. 251). As another novel element which influences the persuasive power of OCRs in set of reviews, Pang and Qiu (2016, p. 355) introduce review chunking. They claim that review chunking, defined as clustering of reviews by their valence, has differing consequences on product attitude depending on consumer's involvement. Whereas review chunking has a detrimental impact on product attitude for consumers with low motivation to think, the effect on consumers with high motivation to think varies on whether positive or negative reviews are presented first. Those consumers have a more favorable attitude toward a product when positive OCRs are provided first, and a more negative attitude when negative OCRs are provided first (Pang and Qiu 2016, p. 373).

More recently, researchers also investigated the effect of the review's content on the consumer's purchasing decision. For instance, it is suggested that different explanation types

(Moore 2015, p. 42), positive emotions (Rocklage and Fazio 2020, p. 347), as well as expressed emotional arousal (Yin, Bond, and Zhang 2017, p. 459) used in OCRs have an influence on the perceived helpfulness. This relationship, however, is moderated by the product type of the reviewed product. Moore (2015, p. 32) differentiates between explained actions, stating the function of a product, or explained reactions stating how a consumer will feel after choosing the product, which a writer can use in his review. Since utilitarian products concentrate on the functions of a product and hedonic products concentrate on product's emotional experience, Moore (2015, p. 32) could prove that explained actions are most beneficial for utilitarian products, and explained reactions are most effective for hedonic products. Rocklage and Fazio (2020, p. 347) focus on positive emotions and prove that positive emotions used in hedonic product reviews are perceived as helpful, whereas positive emotion used in utilitarian product reviews are considered as unhelpful. According to them, due to the emotional context of hedonic products, readers already expect an emotional review which is why helpfulness is supported. On the other hand, due to the cognitive context of utilitarian products, readers do not expect emotionality which is why an emotional review is against their expectations leading to the perception of unhelpfulness. In addition, Yin, Bond, and Zhang (2017, p. 459) observe an effect of expressed emotional arousal on perceived helpfulness. They discover that the marginal impact of arousal on perceived helpfulness is high at low levels of arousal but decreases at greater levels, resulting in a pattern of diminishing returns. The perceptions of reviewers' effort explain some of this effect and why the effect is stronger in an utilitarian context (Yin, Bond, and Zhang 2017, p. 459). Moreover, Kronrod and Danziger (2013, p. 735) explore the effect of the use of figurative language on product attitude. They claim that this relation also depends on the consumption context. According to their findings, figurative language is more effective for product reviews in a hedonic than utilitarian consumption context. This is because figurative language is seen less as the norm for descriptions of utilitarian products which is more

connected with reasoned and less emotive attitudes (Kronrod and Danziger 2013, p. 735). Furthermore, Packard and Berger (2017, p. 582) maintain that the endorsement style influences the persuasiveness of product reviews. They claim that explicit endorsements in which people deliberately advocate something to others are more persuasive than implicit endorsements in which people claim they personally appreciated or loved a product. They suggest that people getting explicit recommendations are more likely to like and purchase a good because people assume that explicit endorsements imply not just that the sender loved the goods more, but also that he or she knew more about the category. This, however, is not always true which is why people sometimes make inferior decisions due to the access to OCR information (Packard and Berger 2017, p. 582). Furthermore, Jensen et al. (2013, p. 314) suggest that in an overall positive review, a minor piece of negative information positively influences reviewer credibility, and the use of emotional words negatively influences the reviewer credibility, whereas the use of lexical complexity has no impact.

Finally, Jin, Hu, and He (2014, p. 563) suggest that the posting date of a review also influences the consumer's decision-making process. In contrast to common belief that older reviews are less influential, they show that the impact of older versus recent OCRs is influenced by the time of consumption. They demonstrate that consumer preferences toward distant-future buying decisions are more influenced by out-of-date reviews while consumer preferences toward near-future buying decisions are more influenced by recent reviews. These effects hold independently from product type or differentiation in valence (Jin, Hu, and He 2014, p. 563).

3.3 Communicators

The communicator refers to the information-sharing customers (Cheung and Thadani 2012, p. 463). When confronted with an abundance of information in the form of several reviews from numerous users, individuals use source characteristics as a convenient and efficient heuristic to base their product purchasing choices (Forman, Ghose, and Wiesenfeld 2008, p. 308).

One of these source characteristics is the source credibility which exists of expertise and trustworthiness (Cheung and Thadani 2012, p. 466). Expertise refers to the consumer's knowledge and experience in a certain product category (Packard and Berger 2017, p. 574). Packard and Berger (2017, p. 582) claim that people are more persuaded by a review if they believe that the reviewer has more expertise. This is congruent with the findings of Reich and Maglio (2020, p. 61) who suggest that people buy a reviewed product with a higher chance if the reviewer admits to having made a previous buying mistake in that subject since this allows the reader to assume that the reviewer has more expertise. Although higher level of expertise in OCRs itself can lead to higher persuasiveness of that review, Huang and Chen (2006, p. 426) discover that expert recommendations have less impact on consumer choice and purchasing decisions than those from consumers. As another component of source credibility, trustworthiness affects the impact of a review in the decision-making process (Rocklage and Fazio 2020, p. 347). Moreover, Forman, Ghose, and Wiesenfeld (2008, p. 308) reveal that consumers complement or replace product information with information about the reviewer when assessing the helpfulness of reviews. When evaluations are more equivocal, reviewer's sharing of personal information is an even higher predictor of perceived helpfulness. Langan, Besharat, and Varki (2017, p. 425) add to the findings regarding source credibility by observing that consumers' product judgements are only influenced by source credibility if the brand equity is low. Finally, Jensen et al. (2013, p. 315) argue that reviewer credibility positively influences the perceived product quality, and thus, impacts the product attitude.

As another source characteristic, Yin, Bond, and Zhang (2017, p. 459) suggest that the effort of a reviewer in constructing a review influences the effect of expressed emotional arousal on perceived helpfulness.

Moreover, according to recent papers, different forms of customer attributions have varying effects on OCRs persuasion (Park and Park 2013, p. 551; Qiu, Pang, and Lim 2012, p.

638; Sen and Lerman 2007, p. 91). Attribution theory examines how individuals make causal inferences about why a communicator acts in a particular way (Kelley 1973, p. 107). First, Sen and Lerman (2007, p. 91) discovered that the more a consumer associates an OCR with the actual performance of the product, the more the communicator is considered as credible. This leads to a stronger perception that the product possesses the attributes mentioned, and thus, the more persuasive the review is. On the contrary, the more a consumer associates an OCR with non-product related attributes, the more the consumer discounts the product's real performance as cause for the communicator to write the review. This leads to a stronger perception of reviewer's bias, and thus, the less persuasive the review is. These findings are in alignment with the discounting principle of Kelley (1973, p. 113). Similarly, Qiu, Pang, and Lim (2012, p. 638) claim that product-related review attribution has a beneficial impact on the credibility of the review. As mentioned earlier, the effect of review variance on product evaluation is influenced by the attribution of the cause of variance as well (Park and Park 2013, p. 551).

3.4 Receivers

The receiver is seen as the information-seeking customer reading the review (Cheung and Thadani 2012, p. 463). Different characteristics of the information-seeking customer, like level of involvement or skepticism as well as prior expectations can influence the impacts of certain stimuli on the consumer's responses in the decision-making process.

Based on the ELM, involvement refers to the motivation to process information (Petty and Cacioppo 1986, p. 146). As discussed earlier, the level of involvement can influence the impact of volume and review quality (Park, Lee, and Han 2007, p. 141) as well as review chunking (Pang and Qiu 2016, p. 373) in the decision-making process. Furthermore, the level of involvement moderates the effect of review quality on product attitude (Lee, Park, and Han 2008, p. 349) as well as the effect of review volume on product choice (Gupta and Harris 2010, p. 1048). Using the ELM, previous studies argue that a different level of involvement influences

the preference for different reviews' role. Low-involvement customers regard the recommender role as more significant because they rarely process reviews and instead focus on product popularity. Customers with a high level of involvement, on the other hand, value the informant role because they process the content of the review rather than relying solely on product popularity (Park, Lee, and Han 2007, p. 127).

Another characteristic of the information-seeking customer which can influence the persuasive effect of an OCR is skepticism. As mentioned before, depending on the level of consumer skepticism, consumers are either more influenced by the quantity or quality of a review (Sher and Lee 2009, p. 142).

Moreover, prior expectations influence whether high variance sets of reviews boost or weaken product evaluations (Park and Park 2013, p. 551), as well as initial beliefs about a product influence if positive or negative reviews are perceived as more helpful (Yin, Mitra, and Zhang 2016, p. 141). The stronger the trust in own beliefs, the stronger the confirmation bias (Yin, Mitra, and Zhang 2016, p. 141).

3.5 Contextual Factors

Several studies indicate that the context in which the eWOM communication takes place can play a crucial role when it comes to determining what makes a review useful to consumers (Rocklage and Fazio 2020, p. 347; Sen and Lerman 2007, p. 91). One factor is the product type which can be differentiated between hedonic and utilitarian or search and experience product. Hedonic products are primarily emotional and are bought out of desire, whereas utilitarian products are primarily cognitive and are bought out of need (Holbrook and Hirschman 1982, p. 138). It is distinguished between search and experience products in the sense that customers can access information on product quality before to purchase for search goods whereas customers must possess an experience good to assess its quality (Nelson 1970, p. 312). The product type influences the impact of review depth and review extremity (Mudambi and Schuff

2010, p. 194), as well as explanation type (Moore 2015, p. 42) and positive emotions (Rocklage and Fazio 2020, p. 347) on the perceived helpfulness. In addition, the product type can also influence the impact of a set of reviews with high variance on the overall product evaluation in the presence of positive prior expectations (Park and Park 2013, p. 551). Furthermore, Sen and Lerman (2007, p. 91) discover that there is an interplay between the product type, reader's attributions about reviewer's involvement, and review valence. They demonstrate that readers only show a negativity bias for utilitarian reviews which is also suggested by Langan, Besharat, and Varki (2017, p. 422) who observed the interaction of review variance and valence in the context of different product types.

Moreover, Dai, Chan, and Mogilner (2020, p. 1067) demonstrate that the purchase type influences the review helpfulness. They differentiate between experiential purchases such as an event to experience and material purchases such as a tangible product which one keeps in possession (Dai, Chan, and Mogilner 2020, p. 1052). The researchers show that, even though, consumers utilize OCRs for both experience and material purchases, they rely less on them for experiential ones. They ascribe this to consumers' assumptions that evaluations of experiential purchases are less objective (Dai, Chan, and Mogilner 2020, p. 1067).

In addition, as explained earlier, the consumption goals and consumption timeframe can influence the decision-making process (Jin, Hu, and He 2014, p. 563; Kronrod and Danziger 2013, p. 735; Zhang, Craciun, and Shin 2010, p. 1340).

4. Discussion

As digitization shifts increasingly from on-site purchases to the Internet, online consumer reviews nowadays play a more consistent and prominent role in the potential buyers' purchase decisions than ever before. The body of knowledge on OCRs is fragmented. Therefore, the primary goal of this research paper was to conduct a systematic review of the available literature on this field. Reviewing twenty-six research papers which focused on the effect of OCRs in the e-commerce context on consumer behavior, one can observe a pattern. Earlier research focuses more on easily observable variables like review volume while more recent research focuses on more difficult variables to assess such as the content of the review. Additionally, more recent studies try to further expand existing findings by incorporating variables which moderate relationships, and thus, try to explain some of the divergence in older findings. This paper is based on an integrative framework of the impact of eWOM communication developed by Cheung and Thadani (2012, p. 464) in their literature review on eWOM communication from 2012. The present research paper adapted this framework to the findings on the effect of OCRs in the e-commerce context and showed that research on OCR has widely emerged over the past 10 years. Thus, the framework has further been expanded by more recently researched influential factors of OCRs.

4.1 Managerial Implications

The most important take away from this literature review is that there does not exist a one-fits-all best solution when it comes to managing online consumer product reviews. Although researchers suggest that marketers should manage OCRs, the approaches in which they should be managed diverge (Lee, Park, and Han 2008, p. 350; Zhang, Craciun, and Shin 2010, p. 1340). The findings on the effect of differing stimuli variables on the potential buyer are sometimes inconsistent and often depend on various other factors like product type or even involvement

of the potential buyer. To incorporate the different influential factors, one could program an artificial intelligence (AI) to oversee the review management process. AI could help to identify the product type, and thus, suggest specific guidelines for writing a review which is helpful to other consumers. If consumers shop more frequently and have an account at a retailer's website, AI could be used to analyze which kind of person an individual can be classified as and prioritize different reviews, based on the findings about characteristics and involvement, which have the highest chance to be perceived as helpful.

4.2 Limitations and Future Research

Even though a variety of studies has been observed, there are limitations which one must consider when applying the findings. Firstly, the focus of this research paper lies on eWOM communication in the form of OCRs. Even though OCRs are a subcategory of eWOM, it must be examined if the findings are generalizable to the overall eWOM context. Secondly, only research papers are included which base their findings on OCRs in the e-commerce context. A lot of research that has been done on OCRs in other contexts like review sites is neglected. Thirdly, only papers using the individual-level of analysis, concretely focusing on the effects on online consumer behavior, are observed. Fourthly, the aim of this paper is to give a current state of knowledge on the topic focusing on top-rated academic journals. Findings based on non-academic or not exceptionally good rated academic papers are neglected.

Further research should focus on a more generalizable review on eWOM communication by expanding the literature analysis. More concretely, future research should include the whole spectrum of eWOM and expand the scope to all places on the Internet where eWOM can be exchanged. In addition, further research should include analysis on the market-level to demonstrate the overall impact of eWOM communication. With a more profound base of empirical studies, it is also suggested to perform a quantitative meta-analysis to further assess

and understand the influence of stimuli, communicators, and receivers on responses in the eWOM communication context.

Regarding the reviewed papers themselves, it is observable that the literature is fragmented. Even though product attitude, review helpfulness and purchase intention were the most studied response factors, there are barely any studies which include all these response factors or even investigate in their interrelationship. In this study, an overview is given about which characteristics of OCRs were analyzed regarding which response variables. Further research should investigate the research gaps of unobserved relationships between some OCR characteristics and response variables and how the response variables are interrelated. Moreover, this research paper points out a lot of characteristics of OCRs which influence the response in the decision-making process. However, the bulk of these characteristics have only been investigated once. If they were investigated more often, like review valence, there are inconsistent outcomes. This might be the case because a lot of studies observe direct impacts and ignore interacting or moderating factors. However, several papers incorporating multiple characteristics show an interacting or moderating role of various characteristics. Further research should incorporate multiple influential characteristics to observe if there exist interacting or moderating relationships. In addition, future research should explore new characteristics like cultural background which might influence the decision-making process. Another limitation of the reviewed papers is that a lot of research has been conducted in an experimental context. Even though experiments are a widely accepted way of proving hypotheses, they do not examine actual purchase decisions and might lead to differing results. Moreover, it is noticeable that many researchers used students as a population. This raises the question whether students represent the whole group of people engaging with OCRs. Further research should ideally include studies in a laboratory as well as a real world setting and contain a more representative sample.

5. Conclusion

To conclude, this literature review provides an overview of the current state of knowledge on cognitive information processing of online consumer product reviews on e-commerce platforms in purchasing decisions. A conceptual framework of the impact of eWOM communication by Cheung and Thadani (2012, p. 464) has been adapted and further expanded to assess how consumers use OCRs on e-commerce platforms in purchase decisions. Diverse stimuli, communicators, and receivers' characteristics as well as contextual factors have been identified which influence the impact of OCRs in the decision-making process. A crucial role in information processing plays the receivers' level of involvement as well as the receiver's attribution of a review: If the level of involvement is high, more effort is put in thoughtful processing of the information of review (Gupta and Harris 2010, p. 1048; Park, Lee, and Han 2007, p. 141). If a consumer attributes the review to product related factors, the review is perceived as more credible (Sen and Lerman 2007, p. 91). The review's credibility as well as factors influencing the helpfulness and persuasiveness of a review, and product attitude are assessed. Depending on these findings, marketers should manage OCRs. They could program an artificial intelligence (AI) to oversee the review management process. AI could help to identify the product type, and thus, suggest specific guidelines for writing a helpful review. AI could also analyze which kind of person an individual is and suggest the most helpful reviews for this specific person. Overall, this review puts the different findings of the effect of OCRs on consumer behavior in a framework and discovers research gaps which future researchers can use to base their investigation on.

Figures

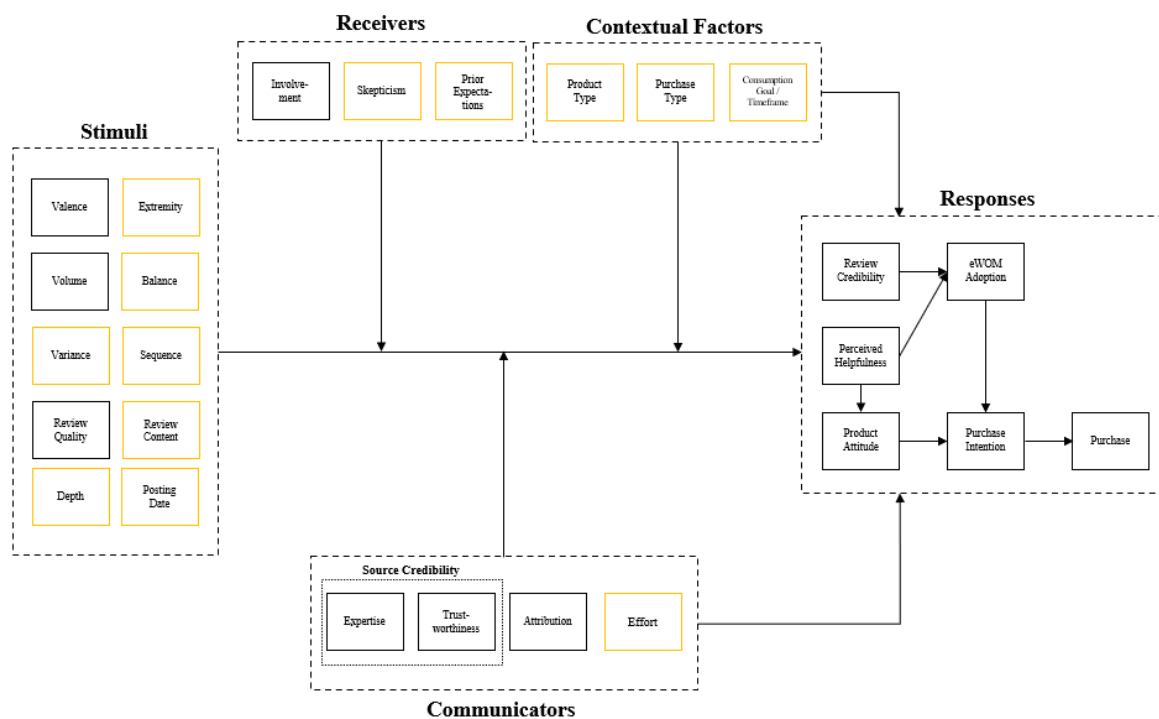


Figure 1- An integrative framework of the impact of eWOM communication inspired by Cheung and Thadani (2012, p.464)

Appendix A: Literature Review Table

Author/s (Year)	Journal	Research Focus	Theoretical Background	Product type	Sample	Method/Analysis	Independent Variable(s)	Dependent Variable(s)	Main Findings
Allard, Dunn and White (2020)	<i>Journal of Marketing</i>	Effect of reviews being perceived as unfair on empathy toward firms being wronged	Equity theory Empathy	Bottle Coffee shop Garden tools Nonprofit organization Restaurant	n _{1a} = 88 students n _{1b} = 223 students n ₂ = 312 students n ₃ = 615 participants n ₄ = 599 participants n ₅ = 642 participants	Study 1a+b: Experiment with 3 (review type: fair negative vs. unfair negative vs. positive) one-factor between-participants design • GLM analysis Study 2: Experiment with 4 (review type: fair negative vs. moderately unfair negative vs. highly unfair negative vs. positive) one-factor between-participants design • GLM analysis Study 3: Experiment with 3 (review type: fair negative vs. unfair negative vs. positive) x 3 (empathy manipulation: employee perspective vs. reviewer perspective vs. control) between-participants design • Regression analysis Study 4: Experiment with 3 (review type: fair negative vs. unfair negative vs. positive) x 2 (firm response type: neutral vs. empathetic) between-participants design • Regression analysis Study 5: Experiment with 3 (review type: fair negative vs. unfair negative vs. positive) x 2 (employee-spotlight manipulation: absent vs. present) between-participants design • Regression analysis	Study 1a+b: • Review type Study 2: • Review type Study 3: • Review type • Empathy Study 4: • Review type • Firm response type Study 5: • Review type • Employee spotlight	Study 1a: • Donation amount Study 1b: • Purchase intention • Empathy • Product choice Study 2: • Willingness to pay • Empathy Study 3: • Product attitude Study 4: • Purchase intention • Empathy Study 5: • Voucher value • Empathy	<ul style="list-style-type: none"> Negative reviews being perceived as unfair activate feelings of empathy toward firms which leads to supportive consumer responses Reduced empathy if consumers adopt the reviewer's perspective in the evaluation process Increased empathy if review is perceived as highly unfair, if identity of employee is made more salient or if firm responds in empathetic way
Cheung and Thadani (2012)	<i>Decision Support Systems</i>	Systematic review of eWOM research on individual-level	Social communication	Diverse	n = 25 articles	Systematic literature review	N/A	N/A	<ul style="list-style-type: none"> eWOM studies can be classified by the social communication framework Research on eWOM is fragmented and often variables are only observed ones The interrelationship between different effects of eWOM communication have not sufficiently been researched
Dai, Chan and Mogilner (2020)	<i>Journal of Consumer Research</i>	Effect of purchase type on perceived helpfulness	Experiential vs. material purchase	Cooking class Espresso machine Ice cream shop Ice cream machine Various others	n ₁ = 6,508,574 reviews n ₂ = 203 students n ₃ = 301 participants n ₄ = 218 participants n ₅ = 757 participants	Study 1: Data collection from Amazon • Regression analysis Study 2: Experiment with 2 (cooking class) x 2 (espresso machine) between-subjects factorial design • ANOVA Study 3: Experiment with (experiential product) x (material product) between-subjects factorial design • ANOVA Study 4: Experiment with 2 (ice cream shop) x 2 (ice cream machine) between-subjects factorial design • ANOVA Study 5: Experiment with 2 (purchase type: experiential vs. material) x 2 (purchase assessment: control vs. quality) between-subjects design • ANOVA	Study 1: • Purchase type Study 2: • Purchase type Study 3: • Purchase type Study 4: • Purchase type Study 5: • Purchase type • Purchase assessment	Study 1: • Review helpfulness Study 2: • Product choice Study 3: • Perceived helpfulness • Quality assessment beliefs Study 4: • Product choice • Quality assessment beliefs • Reliance on reviews Study 5: • Product choice • Quality assessment beliefs • Reliance on reviews	<ul style="list-style-type: none"> Consumers utilize consumer reviews for both experience and material purchases, although they rely on them less for experiential purchases than for material ones Consumers assume that evaluations of experiential purchases are less objective than evaluations of material ones
Forman, Ghose and Wiesenfeld (2008)	<i>Information Systems Research</i>	Effect of revelation of identity-descriptive information by reviewers on perceived helpfulness	Social identity theory	Book	n = 175,714 reviews	Data collection from Amazon • Regression analysis	• Equivocality • Reviewer identity disclosure	• Perceived helpfulness	<ul style="list-style-type: none"> When confronted with an abundance of information in the form of several evaluations from numerous users, individuals use source characteristics as a convenient and efficient heuristic device to base their purchasing choices Individuals are influenced by user-generated product evaluations through a heuristic process in which they focus on source attributes in addition to or instead of the text of the reviews When evaluations are more equivocal, reviewer sharing of personality information is a higher predictor of perceived helpfulness
Gupta and Harris (2010)	<i>Journal of Business Research</i>	Effect of eWOM recommendations on product consideration and quality of choice depending on involvement	Dual process theory - Elaboration likelihood model (ELM) - Heuristic-systematic model (HSM)	Laptop	n = 198 students	Experiment with 2 (strength of eWOM: single or multiple e-WOM) x 2 (optimality: optimal or suboptimal recommendation) factorial design • ANOVA	• Strength of eWOM • Optimality • Motivation to process information	• Product choice • Total time spent on the site • Time spent considering the recommended option	<ul style="list-style-type: none"> Consumer with high motivation to process information: <ul style="list-style-type: none"> As strength of eWOM recommendations grows, more effort will be spent studying information in general and assessing the recommended product in particular Willing to give up some personal preferences in order to choose a recommended product, as long as the product's optimality on other criteria is not jeopardized Consumer with low motivation to process information: <ul style="list-style-type: none"> The restricted search and consideration activities are directed by e-WOM recommendations Willing to make suboptimal decisions based on eWOM recommendations

Author/s (Year)	Journal	Research Focus	Theoretical Background	Product type	Sample	Method/Analysis	Independent Variable(s)	Dependent Variable(s)	Main Findings
Huang and Chen (2006)	<i>Psychology & Marketing</i>	Herding in product choices on the internet	Interpersonal theory - persuasive Impression formation literature Source credibility literature	Books	n ₂ = 180 students	Study 2: Experiment with 2 (review valence: three different proportions of positive and negative customer reviews) factorial design • ANOVA	Study 2: • Review valence	Study 2: • Product choice	<ul style="list-style-type: none"> • Consumer decisions are influenced by relative amount of good against unfavorable customer comments • Negative comments dramatically reduce herding effects • Only when the number of positive remarks is significant enough to outnumber the negative thoughts about a product could those comments truly affect consumer purchasing intentions • Consumer recommendations, rather than expert recommendations, have a bigger impact on consumer choice and purchasing decisions
Jensen et al. (2013)	<i>Journal of Management Information Systems</i>	Effect of review content (lexical complexity, two-sidedness, affect intensity) on reviewer credibility as well as effect of reviewer credibility on perception of product quality and purchasing intention	Language expectancy theory	Digital camera	n = 255 students	Experiment with 2 (lexical complexity: high versus low) x 2 (two-sidedness: high versus low) x 2 (affect intensity: high versus low) between-subjects design • ANCOVA • Regression analysis	ANCOVA: • Lexical complexity • Two-sidedness • Affect intensity Regression analysis: • Reviewer credibility	ANCOVA: • Reviewer credibility Regression analysis: • Perceived product quality • Purchase intentions	<ul style="list-style-type: none"> • High affect intensity causes reduced credibility attribution, while two-sidedness causes higher credibility attribution • Product quality perceptions improved as a result of the reviewer's credibility
Jin, Hu and He (2014)	<i>Journal of Retailing</i>	Effect of OCR's time variance on consumer's decision-making	Construal level theory	Hard disk Hotel Printer Restaurant Wine	n ₂ = 218 students n ₃ = 43 students n ₄ = 110 students	Study 2: Experiment with 2 (consumption timeframe: near vs. distant) x 2 (posting date of OCR: two days ago vs. six months ago) x 2 (product type: experience vs. search) between-subjects design • ANOVA Study 3: Experiment with 2 (consumption timeframe: near vs. distant) x 2 (posting date of OCR: two days ago vs. six months ago) mixed design • ANOVA Study 4: Experiment with 2 (consumption timeframe: near-future vs. distant-future) x 2 (contradicting reviews: positive recent reviews and negative outdated reviews vs. negative recent reviews and positive out-dated reviews) between-subjects design. • ANOVA	Study 2: • Consumption timeframe • Posting date • Product type Study 3: • Consumption timeframe • Posting date Study 3: • Consumption timeframe • Contradicting reviews	Study 2: • Perceived influence • Experienced engagement Study 3: • Number of reviews chosen from recent or out-dated posting date Study 4: • Product evaluation • Purchase intention	<ul style="list-style-type: none"> • Consumer preferences are changing toward near-future buying decisions as a result of recent online reviews • Consumer preferences toward distant-future buying decisions are more influenced by out-of-date online reviews
Kronrod and Danziger (2013)	<i>Journal of Consumer Research</i>	Effect of figurative language in OCRs on consumer's decision-making	Psycholinguistic research Hedonic vs. utilitarian consumption	Hotel Various Technology	n ₁ = 342 participants n ₂ = 198 students	Study 1: Experiment with 2 (consumption goal: hedonic vs. utilitarian) x 2 (language: figurative vs. literal) x 2 (format: ad vs. review) between-subjects design • ANOVA Study 2: Experiment with 2 (language: figurative vs. literal) between-subjects design • t-test	Study 1: • Consumption goal • Language • Format Study 2: • Language	Study 1: • Product attitude • Typicality of language Study 2: • Product choice	<ul style="list-style-type: none"> • More figurative language leads to more favorable attitudes in hedonic consumption circumstances but not utilitarian → effect is governed by conversational norms • When reading a review that uses figurative language, the likelihood of choosing hedonic over utilitarian products increases
Langan, Besharat and Varki (2017)	<i>International Journal of Research in Marketing</i>	Effect of review valence and variance on product evaluations in the context of extrinsic and intrinsic cues	Accessibility-diagnostics framework Cue diagnosticity	Laptop	n ₁ = 312 participants n ₂ = 332 participants n ₃ = 329 participants	Study 1: Experiment with 3 (online review valence: low vs. medium vs. high) x 2 (online review variance: low vs. high) x 2 (nature of the product: hedonic vs. utilitarian) between-subjects factorial design • ANOVA Study 2+3: Experiment with 2 (online review variance: low vs. high) x 2 (brand equity: low vs. high) x 2 (source credibility: low vs. high) between-subjects factorial design • ANOVA	Study 1: • Review valence • Review variance • Nature of product Study 2+3: • Review variance • Brand equity • Source credibility	Study 1+2+3: • Purchasing intention	<ul style="list-style-type: none"> • When consumers evaluate review valence or variance in isolation, they are more likely to draw inaccurate conclusions about the other decision cue • Negative valence + low variance: hedonic and utilitarian products have different purchase intentions; brand equity, but not source credibility, has an impact on purchasing intention. • Negative valence + high variance: difference in purchase intentions between hedonic and utilitarian products heightened; if high brand equity, the moderating effect of source credibility is subdued - just exists if low brand equity • Positive valence + high variance: stronger purchase intention for hedonic vs. utilitarian products; moderating effect of source credibility disappears if high brand equity - just existing if low brand equity • Positive valence + low variance: no difference in purchasing intention for hedonic vs. utilitarian products; impact of brand equity only if source credibility is high - if low source credibility consumers question overall diagnosticity • Relationship between review valence, variance and purchase intentions mediated by decision confidence
Lee, Park and Han (2008)	<i>Electronic Commerce Research and Applications</i>	Effect of negative OCR on consumer product attitude	Dual process theory - Elaboration likelihood model (ELM) Interpersonal theory - Conformity theory	MP3 player	n = 248 students	Experiment with 2 (involvement: low and high) x 2 (proportion of negative online consumer reviews: low and high) x 2 (quality of negative online consumer reviews: low and high) full factorial design • ANCOVA	• Involvement • Proportion of negative online consumer reviews • Quality of negative online consumer reviews	• Product attitude	<ul style="list-style-type: none"> • Existence of conformity effect when there is high number of negative online consumer evaluations • Depending on the quality of the negative online consumer reviews, high-involvement customers likely to conform to reviewers' perspectives when the proportion of unfavorable online consumer reviews increases • Regardless of the quality of negative online consumer evaluations, low-involvement consumers tend to conform to reviewers' viewpoints

Author/s (Year)	Journal	Research Focus	Theoretical Background	Product type	Sample	Method/Analysis	Independent Variable(s)	Dependent Variable(s)	Main Findings
Moore (2015)	<i>Journal of Consumer Research</i>	Effect of explanation type in OCRs on perceived helpfulness of review	Hedonic vs. utilitarian consumption	Book Movie	n _{1b} = 175 participants n ₂ = 132 participants n _{4a} = 117 students n _{4b} = 169 students n ₅ = 200 participants	Study 1: Experiment with 2 (product category: nonfiction vs. fiction) × 2 (valence: positive vs. negative) × 2 (explanation type: search vs. experience) between-subjects design • ANOVA Study 2: Experiment with 2 (role: reader, writer) × 2 (product type: utilitarian, hedonic) between-subjects design • ANOVA Study 4a: Experiment with 2 (product type: utilitarian, hedonic) × 2 (explanation type: action, reaction) between-subjects design • Regression analysis Study 4b: Experiment with 2 (product type: utilitarian, hedonic) × 2 (explanation type: action, reaction) × 2 (explanation content: cognitive, emotional) between-subjects design • Regression analysis Study 5: Experiment with 2 (product type: utilitarian, hedonic) × 2 (sentence type: action, reaction) × 2 (explaining: yes, no) between-subjects design • ANOVA	Study 1: • Product category • Valence • Explanation type Study 2: • Role • Product type Study 4a: • Product type • Explanation type Study 4b: • Product type • Explanation type • Explanation content Study 4b: • Product type • Sentence type • Explaining	Study 1: • Perceived helpfulness Study 2: • Explanation type Study 4a: • Product evaluation • Attitude predictability Study 4b: • Product evaluation • Attitude predictability Study 5: • Attitude predictability • Perceived helpfulness • Purchase intentions	• Because they improve readers' capacity to forecast their attitude toward a reviewed product, explained actions and reactions differ in their usefulness across product types: - Explained actions increase attitude predictability for utilitarian products - Explained reactions increase attitude predictability for hedonic products • Increases in attitude predictability and review helpfulness increase readers' choice of the product
Mudambi and Schuff (2010)	<i>MIS Quarterly</i>	OCRs helpfulness in consumer decision process	Information economics: search vs. experience goods	CD Cell phone Digital camera Laser printer MP3 player Video game	n = 1587 reviews	Data collection from Amazon • Tobit regression analysis	• Review extremity • Review depth • Product type	• Helpfulness	• Review extremity, review depth and product type affect the perceived helpfulness • Moderate reviews more helpful than extreme reviews for experience goods, but not for search goods • Lengthier reviews generally increase helpfulness of review, but effect greater for search goods
Packard and Berger (2017)	<i>Journal of Marketing Research</i>	Effect of language used in OCR on consumer's decision-making	Endorsement theory Consumer knowledge	Restaurant Wine	n ₃ = 143 students n ₄ = 264 participants n ₅ = 407 participants	Study 3: Experiment with 3 (endorsement style: none, implicit, explicit) between-subjects design • ANOVA Study 4: Experiment with 2 (category knowledge: novice, expert) between-subjects design • Regression analysis Study 5: Experiment with 2 (information set: attributes only vs. attributes + word of mouth) between-subjects design • Chi square test	Study 3: • Endorsement style Study 4: • Category knowledge Study 5: • Category knowledge	Study 3: • Persuasive impact • Perceived expertise • Perceived attitude Study 4: • Product choice • Endorsement choice • Perceived attitude Study 5: • Product choice	• Explicit endorsements (people deliberately advocate something to others) are more persuasive than implicit endorsements (people claim they personally appreciated or loved a product or service) • People getting explicit recommendations are more likely to like and purchase a good • People assumed that explicit endorsements implied not just that the sender loved the goods more, but also that he or she knew more about the category → sometimes they make inferior decisions than they would if they did not have access to eWOM information
Pang and Qiu (2016)	<i>International Journal of Electronic Commerce</i>	Effect of online review chunking on product attitude with the moderating role of involvement	Theory of memory-based judgment vs. online judgment Chunking	Digital voice recorder	n ₁ = 108 students n ₂ = 140 people	Study 1: Experiment with 3 (review chunking: positive-first chunked vs. negative-first chunked vs. unchunked) × 2 (motivation to think: low vs. high) full-factorial between-subjects design • ANCOVA Study 2: Experiment with 3 (review chunking: positive-first chunked vs. negative-first chunked vs. unchunked) × 2 (motivation to think: low vs. high) full-factorial between-subjects design • ANCOVA	Study 1+2: • Review chunking • Motivation to think	Study 1+2: • Review recall • Product attitude	• Review chunking has different effects on product attitude for consumers with different motivation to think - Consumers with low motivation to think: review chunking has negative effect on product attitude - Consumers with high motivation to think: effect of review chunking is determined by whether positive or negative reviews are presented first
Park, Lee and Han (2007)	<i>International Journal of Electronic Commerce</i>	Effect of quantity and quality of OCR on purchasing intention and moderating role of involvement	Dual process theory Elaboration likelihood model (ELM) Interpersonal theory - Conformity theory Source credibility literature	PMP player	n = 352 students	Experiment with 2 (review quality: high vs. low) × 2 (review quantity: few vs. moderate) × 2 (involvement: high vs. low) factorial design. • ANCOVA	• Review quantity • Review quality • Involvement	• Purchasing intention	• Consumers' purchasing intentions are positively influenced by the OCR quality • Purchasing intention grows as number of OCRs increases • Low-involvement consumers are rather affected by quantity than quality of reviews • High-involvement consumers are affected by quantity mainly when quality of reviews is high

Author/s (Year)	Journal	Research Focus	Theoretical Background	Product type	Sample	Method/Analysis	Independent Variable(s)	Dependent Variable(s)	Main Findings
Park and Park (2013)	<i>Psychology & Marketing</i>	Effect of OCRs with different variance level on evaluation of a product about which consumers have favorable or unfavorable prior expectation depending on product type, the argument quality and the number of reviewers	Attribution theory Search vs. experience product	MP3 player Perfume	n _{1,2} = 160 students n ₃ = 144 students	Study 1: Experiment with 2 (review variance: low vs. high) × 2 (prior expectation: low vs. high) × 2 (product type: search vs. experience) between-subjects design • ANOVA Study 2: Experiment with 2 (review variance: low vs. high) × 2 (prior expectation: low vs. high) × 2 (review persuasiveness: less vs. more-persuasive) between-subjects design • ANOVA Study 3: Experiment with 2 (review variance: low vs. high) × 2 (prior expectation: low vs. high) × 2 (the number of reviewers: five vs. nine) between-subjects design • ANOVA	Study 1: • Review variance • Prior expectation • Product type Study 2: • Review variance • Prior expectation • Review persuasiveness Study 3: • Review variance • Prior expectation • Number of reviews	Study 1: • Product evaluation Study 2: • Product evaluation Study 3: • Product evaluation	• When customers have unfavorable previous expectation about a product, high-variance product evaluations are more likely to undermine product evaluation than low-variance product reviews • Depending on the product category, the argument quality of reviews and the number of reviewers, high-variance product evaluations can boost or weaken product evaluation when customers have favorable prior expectations • When causes of variance are attributed to reviewers rather than product, high-variance product reviews can allow consumers to make biased product evaluations consistent with their prior expectation • High-variance product reviews might weaken product evaluation regardless of causes of variance being assigned to the product rather than the reviewers
Purnawirawan, Pelsmacker and Dens (2012)	<i>Journal of Interactive Marketing</i>	Impact of balance and sequence of a set of OCRs on perceived usefulness	Accessibility – diagnosticity theory Sequence bias (primacy–recency and wrap effect)	Hotel	n = 413 participants	Experiment with 3 (balance: positive, neutral, negative) × 4 (sequence: positive/negative, negative/positive, positive/negative/positive, negative/positive/negative) full factorial between-subject design • ANOVA • ModMec macro	ANOVA: • Review balance • Review sequence ModMec macro: • Recall of positive review information • Recall of negative review information • Review impression • Perceived Usefulness	ANOVA: • Perceived Usefulness ModMec macro: • Product attitude • Purchase intention	• Balance of reviews in a set impacts whether or not they are considered useful • Review sequence influences the perceived usefulness of review sets, but only for unbalanced review sets → influenced by primacy–recency reinforcement and wrap effect • Recall of positive and negative review information affects attitude and intention formation through the image it produces about the object only when reviews are seen as relatively useful
Qiu, Pang and Lim (2012)	<i>Decision Support Systems</i>	Effect of conflicting aggregated rating on perceived credibility and diagnosticity of reviews	Attribution theory	Multimedia speaker	n = 168 students	Experiment with 2 (conflicting aggregated rating: without vs. with) × 2 (review valence: positive vs. negative) × 2 (review extremity: low vs. high) full-factorial between-subjects design • MANCOVA • ANCOVA • Regression analysis • Sobel test	• Conflicting aggregated rating • Review valence • Review extremity	• Product-related attribution • Review credibility • Review diagnosticity	• Consumers' product-related attributions have a beneficial impact on the credibility and diagnosticity of reviews • Consumers' product-related attributions of individual reviews are negatively affected by conflicting aggregated ratings (particularly for positive reviews) → decrease in perceived credibility and diagnosticity of review via mediating effect of review attribution
Reich and Maglio (2020)	<i>Journal of Marketing</i>	Effect of review mentioning prior purchase mistake on consumer decision process	Expertise effects	Bubble gum Floral shop Haircare product Headphone	n ₁ = 160 students n ₂ = 80 participants n ₃ = 299 participants n ₄ = 249 students n ₅ = 1,004 reviews n ₆ = 40 products n ₇ = 209 students	Study 1: Experiment with 2 (review type: mistaken vs. successful) design • Mediation analysis Study 2: Experiment with 2 (review type: mistaken vs. successful) design • Mediation analysis Study 3: Experiment with 2 (nonfocal product type: speakers vs. printer) × 2 (nonfocal review type: mistake vs. success) design • Regression analysis Study 4: Experiment with 2 (nonfocal review type: mistake vs. success) design • Chi Square analysis Study 5: Data collection from Sephora • Regression analysis	Study 1: • Review type Study 2: • Review type Study 3: • Product type • Review type Study 4: • Review type Study 5: • Review type	Study 1: • Perceived learning of reviewer • Product choice Study 2: • Perceived knowledge of reviewer • Product choice Study 3: • Product choice Study 4: • Product choice Study 5: • Helpfulness	• People are more likely to assume that a reviewer has more expertise and are more likely to buy the product that the reviewer recommends if the reviewer admits to having made a previous buying mistake in that subject • Significant effect of review length on helpfulness
Rocklage and Fazio (2020)	<i>Journal of Marketing Research</i>	Effect of positive emotion in OCR on perceived helpfulness in consumer decision making process	Emotionality effect	Universal	n ₁ = 44,832 reviews n ₂ = 516 products n ₃ = 200 reviewers n ₄ = 242 readers n ₅ = 200 participants n ₆ = 298 participants n ₇ = 44,832 reviews n ₈ = 516 products n ₉ = 209 students	Study 1: Data collection from Amazon • Regression analysis Study 2: Experiment with 2 (product type: hedonic or utilitarian) × 2 (review emotionality: high or low emotionality) fully between-subjects design • Regression analysis Study 3: Experiment with 2 (motive: hedonic or utilitarian) × 2 (review emotionality: high or low emotionality) fully between-subjects design • Regression analysis Study 4: Experiment with 2 (product type: hedonic or utilitarian) × 2 (review emotionality: high or low emotionality) fully between-subjects design • ANOVA Study 6: Data collection from Amazon • Regression analysis Study 7: Experiment with 2 (product type: hedonic or utilitarian) × 2 (review emotionality: high or low emotionality) fully within-subjects design • ANOVA	Study 1: • Review emotionality • Review extremity • Product type Study 2: • Review emotionality • Review extremity • Product type Study 3: • Motive • Review emotionality Study 4: • Product type • Review emotionality Study 6: • Review emotionality • Review extremity • Presence of explanation in review Study 7: • Product type • Review emotionality	Study 1: • Reviewer's product attitude • Reader's perceived helpfulness Study 2: • Product favorability (reviewers) • Helpfulness (readers) • Product favorability (readers) Study 3: • Helpfulness • Purchase intention Study 4: • Expected level of emotion • Surprise/oddity • Mistrust • Helpfulness • Purchase intention Study 6: • Helpfulness Study 7: • Surprise/oddity • Mistrust • Helpfulness • Purchase intention • Product choice	• Emotion enhances review in expected cases (for hedonic products): emotion is perceived as helpful for purchasing decisions and strengthens actual product choice • Emotion decreases review in unexpected cases (for utilitarian products): emotion perceived as unusual/surprising thus review is considered unhelpful and lowers product choice probability

Author/s (Year)	Journal	Research Focus	Theoretical Background	Product type	Sample	Method/Analysis	Independent Variable(s)	Dependent Variable(s)	Main Findings
Sen and Lerman (2009)	<i>Journal of Interactive Marketing</i>	Investigation in existence of negativity effect in e-WOM consumer reviews for utilitarian versus hedonic products and influence of reader's attributions regarding reviewer's motivations on this	Attribution theory - Correspondent inference bias - Actor observer bias Affect-confirmation hypothesis Negativity effect theory	Books CDs	n ₁ = 100 reviews n ₂ = 137 students n ₃ = 120 students	Study 1: Between-subjects observation study • Contingency Table analysis • Regression analysis Study 2: Experiment with 2 (review valence: positive, negative) x 2 (product type: utilitarian, hedonic) between-subjects design • ANOVA Study 3: Experiment with 2 (review valence: positive, negative) x 2 (product type: utilitarian, hedonic) between-subjects design • MANOVA • ANOVA • Mediation analysis	Study 1: • Contingency table analysis: - Product Type - Review valence • Regression analysis: - Product type - Review valence Study 2: • Product type • Review valence Study 3: • Review conditions (product type x valence)	Study 1: • Contingency table analysis: - Review ratings • Regression analysis: - Probability of helpfulness Study 2: • Attributions about reviewer's external motivations • Attributions regarding reviewer's internal motivations • Review usefulness Study 3: • Attitude toward review • Attributions about reviewer • Attitude toward product	• Product type moderates effect of review valence • Negativity bias for utilitarian product reviews only • Reader's attributions about reviewer's involvement mediate effect of the product type and review valence moderation on their attitude about the review - Negative hedonic reviews: attribution of reviewer's negative opinions to reviewer's internal (or non-product related) motivations → less likely evaluate negative reviews useful - Negative utilitarian reviews: attribution of reviewer's negative opinions to external (or product related) motivations → evaluate negative reviews more useful than positive
Sher and Lee (2009)	<i>Social Behavior and Personality</i>	Effect of consumer skepticism on online consumer	Dual-process theory - Elaboration likelihood model (ELM) Skepticism	Cell phone	n = 278 students	Experiment with 2 (review quality: high vs. low) x 2 (review quantity: large vs. small) x 2 (skepticism: high vs. low) factorial design. • ANOVA	• Review quantity • Review quality • Skepticism	Purchasing intention	• High skepticism consumer's purchasing intention is not influenced by OCR quality • Low skepticism consumer's purchasing intention is more influenced by OCR quantity than quality
Yin, Bond and Zhang (2017)	<i>Journal of Marketing Research</i>	Effect of expressed emotional arousal on perceived helpfulness of a review	Research on written communication Theories of emotion	Mobile App	n ₁ = 418,415 reviews n ₂ = 128 students n ₂ = 400 reviews n ₃ = 81 students n ₄ = 157 students	Study 1: Data collection from Apple's App Store • Regression analysis Study 2: Survey on perceived helpfulness / arousal / valence and effort of reviews Study 3+4: Experiment with 3 (expressed arousal: low, moderate, high) x 2 (product type: utilitarian, hedonic) between-subjects design • ANCOVA	Study 1: • Emotional arousal • Product Type Study 2: N/A Study 3+4: • Expressed arousal • Product Type	Study 1: • Perceived Helpfulness Study 2: N/A Study 3+4: • Perceived Helpfulness • Perceived Effort	• Influence of expressed emotional arousal on perceived helpfulness • Marginal impact of arousal on perceived helpfulness is high at low levels but decreases at greater levels, resulting in a pattern of diminishing returns • Perceptions of reviewer's effort explain some of the effect • Effect is stronger for goods with a utilitarian purpose
Yin, Mitra and Zhang (2016)	<i>Information Systems Research</i>	Effect of review valence on perceived helpfulness incorporating initial beliefs	Confirmation bias	Mobile App	n ₁ = 95,926 reviews n ₂ = 8,006 votes	Study 1+2: Data collection from Apple's App Store • Cross-sectional analysis	Study 1+2: • Review rating • Review deviation • Average rating • Dispersion of ratings	Study 1+2: • Perceived Helpfulness	• Individual reviews that differ from product average ratings are regarded as less helpful • When the trust in the initial belief is low, confirmation bias is reduced • Average product rating is high: positive reviews are viewed as more helpful than negative ones (positivity effect) • Average product rating is low: negative reviews are viewed as more helpful than positive ones (negativity effect)
Zhang, Craciun and Shin (2010)	<i>Journal of Business Research</i>	Effect of review valence on persuasiveness depending on the consumption context	Regulatory focus theory	Software	n ₁ = 150 students n ₂ = 27,985 reviews	Study 1: Experiment with 2 (consumption goals: promotion vs. prevention) x 2 (review valence: positive vs. negative) between-subject design • ANOVA Study 2: Data collection from Amazon	Study 1: • Consumption goal • Review valence Study 2: • Consumption goal • Star rating (valence)	Study 1: • Review persuasiveness Study 2: • Review helpfulness	• Influence of review valence on persuasiveness is moderated by the consumption goals • For promotion consumption goals: positive evaluations are more persuasive than negative ones (positivity bias) • For prevention consumption goals: negative evaluations are more persuasive than positive ones (negativity bias)

Note: Only studies which assess the effect of OCRs on e-commerce platforms are included. Ignored are pretest studies.

Appendix B: Comparative Literature Review Table

Comparative Literature Table														
Empirical Studies Including Effect of OCR on Consumer's Decision-Making Process														
Citation	Responses				Stimuli									
	Perceived Helpfulness	Review Credibility	Product Attitude	Purchase Intention	Valence	Volume	Variance	Review Quality	Depth	Extremity	Sequence	Balance	Review Content	Posting Date
This study	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Allard, Dunn and White (2020)			x	x	x									
Cheung and Thadani (2012)	x	x	x	x	x	x		x						
Dai, Chan and Mogilner (2020)	x			x										
Forman, Ghose and Wiesenfeld (2008)	x													
Gupta and Harris (2010)				x		x								
Huang and Chen (2006)				x	x									
Jensen et al. (2013)			x	x									x	
Jin, Hu and He (2014)			x	x	x									x
Kronrod and Danziger (2013)			x	x									x	
Langan, Besharat and Varki (2017)				x	x		x							
Lee, Park and Han (2008)			x		x		x							
Moore (2015)	x		x	x				x					x	
Mudambi and Schuff (2010)	x								x	x				
Packard and Berger (2017)	x			x					x				x	
Pang and Qiu (2016)			x								x			
Park, Lee and Han (2007)				x			x							
Park and Park (2013)			x			x	x	x						
Purnawirawan, Pelsmacker and Dens (2012)	x		x	x							x			
Qiu, Pang and Lim (2012)		x								x				
Reich and Maglio (2020)	x			x						x				
Rocklage and Fazio (2020)	x		x	x									x	
Sen and Lerman (2007)	x		x											
Sher and Lee (2009)				x				x						
Yin, Bond and Zhang (2017)	x												x	
Yin, Mitra and Zhang (2016)	x													
Zhang, Craciun and Shin (2010)	x													

Notes: An "x" indicates that the study empirically assesses the impact of a particular component or the impact of other components on that component.

Comparative Literature Table											
Empirical Studies Including Effect of OCR on Consumer's Decision-Making Process											
Citation	Communicators					Receivers			Contextual Factors		
	Source Credibility	Expertise	Trustworthiness	Attribution	Effort	Involvement	Skepticism	Prior Expectations	Product Type	Purchase Type	Consumption Goal/Timeframe
This study	x	x	x	x	x	x	x	x	x	x	x
Allard, Dunn and White (2020)											
Cheung and Thadani (2012)	x	x	x	x							
Dai, Chan and Mogilner (2020)											
Forman, Ghose and Wiesenfeld (2008)	x										
Gupta and Harris (2010)						x					
Huang and Chen (2006)											
Jensen et al. (2013)	x										
Jin, Hu and He (2014)											
Kronrod and Danziger (2013)									x		x
Langan, Besharat and Varki (2017)	x								x		
Lee, Park and Han (2008)						x					
Moore (2015)									x		
Mudambi and Schuff (2010)									x		
Packard and Berger (2017)		x									
Pang and Qiu (2016)						x					
Park, Lee and Han (2007)						x					
Park and Park (2013)								x			
Purnawirawan, Pelsmacker and Dens (2012)									x		
Qiu, Pang and Lim (2012)											
Reich and Maglio (2020)		x									
Rocklage and Fazio (2020)				x					x		
Sen and Lerman (2007)					x				x		
Sher and Lee (2009)							x				
Yin, Bond and Zhang (2017)									x		
Yin, Mitra and Zhang (2016)								x			
Zhang, Craciun and Shin (2010)											x

Notes: An "x" indicates that the study empirically assesses the impact of a particular component or the impact of other components on that component.

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Affidavit

“I hereby declare that I have developed and written the enclosed master seminar thesis entirely on my own and have not used outside sources without declaration in the text. Any concepts or quotations attributable to outside sources are clearly cited as such. This master seminar thesis has not been submitted in the same or substantially similar version, not even in part, to any other authority for grading and has not been published elsewhere. I am aware of the fact that a misstatement may have serious legal consequences.”

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