Why Read This?: Exploring the Cues Consumers Use to Evaluate Online Reviews in the Context of Deception

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Conflict of Interest Statement

The authors declare that they have no conflict of interest regarding the publication of this article.

Abstract:

We investigate why consumers rely on online reviews despite being aware that some of them are fake. Through 17 in-depth interviews with adults residing in the US and Europe, we explore review browsing behavior using the Elaboration Likelihood Model. Our study shows that consumers prioritize gaining diagnostic information over detecting deception, whilst using overlapping cues, requiring varying levels of elaboration, for both tasks. Research shows that consumers are poor at identifying fake reviews, and that the cues they use to do so are manipulated by fake review writers. This study also reveals that there is a tipping point level for deception (i.e. percentage of fake reviews) after which consumers would no longer rely on review platforms. Our study complements existing research by concentrating on consumer perceptions amid rising online deception, diverging from the predominately quantitative and single-construct approaches in recent studies on fake reviews.

Keywords:
eWOM, fake online reviews, deception

Track: Digital Marketing and Social Media

1. Objectives

Fraudulent or deceptive reviews and endorsements are rampant on online platforms. According to a study produced by the World Economic Forum, based on data from leading platforms such as Trip Advisor, Yelp, TrustPilot, and Amazon, 4% of online reviews are fake, influencing $152 billion consumer spending per year (Marciano, 2021). Consumers are largely aware of the problem, with 66% of consumers stating fake reviews are a "growing" or "major problem" (Uberall, The Transparency Company, 2021). Despite this, usage of online consumer reviews has increased significantly over the last few years. According to a recent industry report, 99.9% of US adults surveyed declared using reviews when shopping online, up from 95% in 2014 (Power Reviews, 2022) which is consistent with academic studies (de Langhe et al., 2016; Ismagilova et al., 2020; Zheng, 2021) showing consumers use them on a regular basis.

Online consumer reviews are a form of electronic Word-of-Mouth (eWOM), defined as "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions" (Hennig-Thurau et al., 2004) on an electronic media platform such as TripAdvisor, Yelp, Google, and Amazon.

The literature covers factors that motivate consumers to seek online reviews (Hennig-Thurau et al., 2003; Rosario et al., 2020) but does not specifically address why they would do so knowing that there are fake reviews. Additionally, studies explore the cues consumers use to identify truthful and credible reviews, but they are predominately quantitative, top-down, and deductive (Walther et al., 2023), focusing on specific constructs and independent of a purchase scenario.

This research aims to address 1) why consumers continue to use reviews despite being aware that some of them are fake, and 2) identify the cues they employ in browsing online reviews in the context of deceptive reviews.

Researchers use the Elaboration Likelihood Model (ELM) to understand how consumers evaluate online reviews (Rosario et al., 2020). The model focuses on the level of mental effort put into evaluating an argument and suggest a range of elaboration, from careful examination of topic-relevant information (the central/systematic persuasion route) to the easier, less cognitively demanding approach which involves using rules of thumb to make judgements (peripheral route / heuristic cues) (Gupta & Harris, 2010).

To determine usefulness and trustworthiness, consumers use a series of cues such as content, quality, and accuracy of review text (M. Y. Cheung et al., 2009; Clare et al., 2018; Filieri, 2015, 2016), and average star rating, variance, volume of reviews, and date of last review (C. M. Cheung & Thadani, 2012; Clare et al., 2018; Rosario et al., 2020).

Some of the characteristics consumers associate as more likely to be deceptive include a low volume of reviews (Román et al., 2019), a high volume of reviews occurring over a short period of time (e.g. just after opening) or with a mismatch with volumes of sales (Filieri, 2016; Peng et al., 2016; Román et al., 2019), a lack of presence or identity of the author (Filieri, 2016; Kusumasondjaja et al., 2012; Luo & Tang, 2019; Munzel, 2016; Peng et al., 2016), an omission of a verified purchase indicator (Román et al., 2019), or no helpfulness votes (Ansari et al., 2018; Filieri, 2016). Additionally, consumers use elements within the text to identify deception including poor text quality (Filieri, 2015; Jensen et al., 2013; Kronrod, A., Lee, J. K., Gordeliy, I., 2017; Luo & Tang, 2019; Racherla et al., 2012; Román et al., 2019); no mention of personal experience (Kronrod, A., Lee, J. K., Gordeliy, I., 2017); a lack of detail, specific content, or incomplete information (Ansari et al., 2018; Filieri, 2016; Kronrod, A., Lee, J. K., Gordeliy, I., 2017; Luo & Tang, 2019); the use of superlatives, non-natural language, or overly emotional text (Filieri, 2016; Jensen et al., 2013); an one-sidedness within the text (i.e. either all positive or all negative) (Ansari et al., 2018; Filieri, 2016; Jensen et al., 2013; Kronrod, A., Lee, J. K., Gordeliy, I., 2017); review lengths that are very short or very long (Filieri, 2016; Kronrod, A., Lee, J. K., Gordeliy, I., 2017; Peng et al., 2016); a lack of consensus with other reviews (Filieri, 2016; Munzel, 2015; Peng et al., 2016; Román et al., 2019); and low homophily (similarity between reviewer and author) (Racherla et al., 2012; Román et al., 2019).

Nevertheless, the literature shows that consumers are poor detectors of deceptive reviews, underperforming AI and machine learning software and performing just above chance (Plotkina et al., 2020; Salminen et al., 2022). Many of the cues that consumers use to identify deception have been found to be incorrect. For instance, studies show that incentivized reviews, in which a company has offered either monetary or non-monetary rewards in return for a five-star rating, are, on average, longer, more complete and receive more helpfulness votes, than non-deceptive reviews (Costa et al., 2019). Consumer inability to identify deceptive reviews is problematic: studies show that deceptive practices ultimately harm consumers and undermine market efficacy (He et al., 2022; Malbon, 2013).

Table 1 Literature Review

				Racherla et al., 2012	Kusumasondjaja et al., 2012	Jensen et al., 2013	Luo & Tang, 2019	Munzel, 2015	Filieri, R., 2016	Munzel, 2016	Peng,ET AL. 2016	Kronrod, ET AL., 2017	Ansari et al. 2018	DeAndrea, et al 2018	Roman,et al 2019	Walther, 2023	Clare et al, 2018
		Method	Qualitative Research						X		X		X		X		X
			Experimental Design	X	X	X		X		X		X		X			
			Survey				X				X		X				
			Systematic Literature Review													X	
Cues consumers use to identify credible / trustworthy / non-deceptive	Qualitative Elements	Content of text	Quality of text	X		X	X		X			X			X		X
			Perceived competence														X
			Perceived honesty														X
			Presence of personal experience									X					
			Detail / complete information				X		X			X	X				
			Superlatives / affect intensity			X			X								
			Balance of text (two-sidedness)			X			X			X	X				X
			Length of review						X	X	X	X					
			Consensus among reviews					X	X	X	X				X		X
			Homophility	X											X		X
			Review Valence (e.g. 1-star reviews)		X				X	X			X				
		Pictures							X						X		
	Quantitative or Binary	Average star rating															
		Variance (percentage breakdown of stars)															
		Volume of reviews													X		
		Recency of Reviews															X
		Presence, Identity Credibility of Author		X		X		X	X	X							
		Verified purchase badge													X		
		High volume of reviews in a brief time period						X			X				X		
		Helpfulness Votes						X					X				
		Platform related												X			
Cues used to obtain diagnostic information																	X
		Theoretical background and frameworks	Elaboration Likelihood Model				X								X		
			Dual Process Theory				X								X		X
			Information manipulation theory								X						
			Commitment trust theory							X							
			Warranting theory										X	X			
			Credibility theory			X			X								
			Deception theory					X									
			Signaling theory					X									
			Attribution					X		X							X
			Language expectancy theory			X											
			Linguistic theory									X					
			Uncertainty reduction theory	X	X												X
			Social identity theory		X												
			Framing theory		X												

To the best of our knowledge, while extant literature either explores or tests specific influencers of helpfulness, credibility, trustworthiness, and veracity independently, no past research explores how consumers simultaneously browse online reviews to both determine trustworthiness, as it pertains to deception, and obtain diagnostic information, in the context of a purchase scenario.

2. Research method

We conducted qualitative, explorative research to provide insights on consumer behavior elements and to help answer the question why consumers continue to consult online reviews despite being aware that some of them are fake.

We interviewed 17 adults (13 women, 4 men, aged between 19-76, mean age 40) based in the USA and Europe using a purposeful sampling strategy, adding additional interviews on an

ad-hoc basis to reach saturation (Creswell & Poth, 2016; Fusch Ph D & Ness, 2015). We conducted one in-depth interview per participant, lasting an average of 40 minutes (min 24 mins, max 79 mins), over Zoom using the video and screen sharing functionalities. We thus obtained 179 pages of interview transcripts and 673 minutes of videos.

The interviews consisted of three parts: 1) an introductory broad-topic section with open-ended questions (McCracken, 1988) about online shopping and attitudes towards reviews, followed by 2) an online purchase decision simulation using a fictitious online review platform where participants were made aware of the presence of fake online reviews, and 3) semi-structured and open-ended questions (McCracken, 1988) around their review browsing behavior in the context of the presence of fake online reviews.

We used a purchase scenario consisting of a restaurant-specific service context, as studies have shown the category to evoke high involvement, and to encourage participants to seek information (Reimer & Benkenstein, 2016). Participants were instructed to book a work-lunch with their direct supervisor and important clients, and that the team assistant had pre-selected two restaurants which neither they nor anybody on their team had prior knowledge of, and that they would be provided with a link to a restaurant review site where they could obtain information. They were also told that a recent study had found that 10% of the reviews on the review platform had been found to be fake. They were informed that they could browse the restaurant review site and, once they were ready, they would have to choose one of the two restaurants.

Participants were then provided with a fictitious online review platform called Food Advisor (https://restaurantadvisors.wordpress.com/) which we developed expressly for this research, in which they could access ratings and reviews on the two restaurants. The platform included quantitative or binary elements such as average star rating, volume, variance, recency of reviews and the presence of the identity of reviewers. It also included qualitative elements such as the text of each review which were adapted from texts found on TripAdvisor and Yelp. We purposefully included only one picture per restaurant to focus solely on the textual elements of the reviews. During the scenario, while they were browsing the review platform, we asked them to "think aloud" explaining what they were doing and observed their browsing behavior taking notes of their actions and comments (Charters, 2003). We did not expressly request them to evaluate review deceptiveness or usefulness at this stage.

3. Major results

Consumer reliance on reviews has never been higher, despite the awareness of the existence of deceptive and fraudulent practices by businesses and review platforms alike (*Power of Reviews*, 2022; Zheng, 2021). Our findings shed some light on why this might be the case. 1) Consumers perceive deriving value from reviews despite being aware that some are deceptive because they can gain diagnostic information. 2) Consumers believe that they can decipher deceptive reviews from non-deceptive ones. 3) Consumers invest more effort in obtaining diagnostic information from the reviews rather than deciphering veracity or deception, leaving them open to fraud. We counted the words they used when "thinking aloud," classifying words as either related to seeking information or related to determining deception. We used the word count for 14 of the 17 participants as 3 did not fully engage in "thinking aloud." On average, participants used 496 words in the thinking aloud stage. Of that total, an average of 467 words they used (94%) were related to obtaining information and 29 (6%) were related to determining deception. Of note, eight of the participants did not mention fake review or deception at all in their "thinking aloud" browsing stage. 4) Consumers use sets of cues requiring varying levels of elaboration to obtain diagnostic information and determine non-deception (truthfulness). We classified low elaboration elements as those that are either quantifiable or binary because they can easily be obtained via a quick glance. We classified high-elaboration elements as

Figure 2 Major Findings

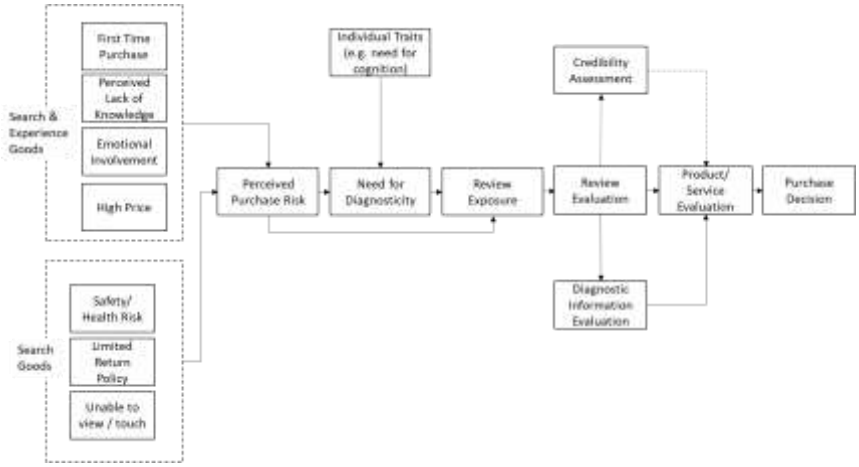
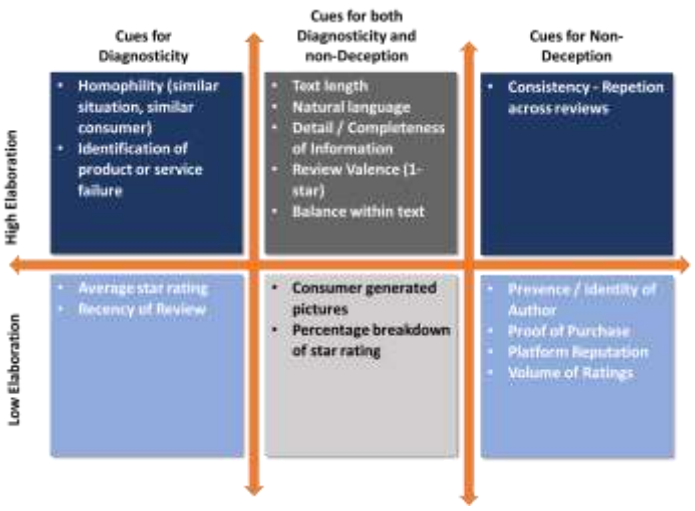


Figure 1 Cues Used by Consumers



those that cannot be quantified and are not binary as they required investing more time in reading. Some of the cues consumers use to assess diagnostic information overlap with the ones they use to determine credibility (see Figure 2), creating a halo effect: making reviews they deem to be more useful also to seem more credible. Research implies that there is a reciprocal mediating relationship between review credibility (i.e. seeming believable, true or factual) and review helpfulness (i.e. providing relevant purchase information) (Clare et al., 2018). In other words, factors that affect review credibility will also affect review helpfulness and vice versa. 5) Studies show that many of the cues they use to determine non-deception are used by fraudulent players to make their reviews appear to be authentic (Costa et al., 2019; He et al., 2022; Kim et al., 2019). 6) Lastly, our research suggests that consumers' tolerance for deceptive or fraudulent reviews has a limit, or tipping point, after which they will abandon the use of reviews altogether.

4. Implications

Our contributions to market research are three-fold. First, we address a call for future qualitative research (Walther et al., 2023) to understand how consumers approach and browse online review platforms in the context of fake reviews from a holistic and consumer-centric perspective looking at how consumers simultaneously obtain diagnostic information whilst also assessing deception while browsing online reviews. Second, we contribute to the literature on the ELM and deceptive reviews. Third, our research has practical implications for consumers, consumer review platforms, and governmental bodies looking at regulating the sector.

Consumers should be made further aware of the relatively high percentage of fake reviews in the marketplace and that many nefarious players compose reviews to masquerade them as non-deceptive using the same cues humans use to determine truthfulness (non-deception).

We encourage businesses to refrain from engaging in deceptive practices. Instead, we encourage them to work on improving their online presence through non-fraudulent means. One way of doing this is by encouraging consumers to provide reviews. Doing so can overcome the self-selection bias which leads to a disproportionate number of negative reviews, thus generating both higher average ratings and higher volumes of ratings (Li & Hitt, 2008), both of which are associated with increased volume of sales (Chevalier & Mayzlin, 2006; Rosario et al., 2016).

We also encourage review platforms (such as Amazon, Trip Advisor, Google, Yelp and AirBnB) to increase their fraud detection practices, weeding out fake and deceptive reviews

using algorithms, artificial intelligence, and machine learning software before they are posted, and removing both individual accounts and businesses who engage in fraudulent practices from their platforms.

We encourage governments to adopt more stringent laws and regulations to punish fraudulent practices, both by businesses and online platforms, to protect consumers.

While we are convinced of the strength of the theoretical contributions of our research, we are also aware of its limitations, which lead to interesting directions for future research. First, the scenario consisted of a restaurant booking scenario, or service good. We recommend also exploring search goods as consumer behavior might differ.

Lastly, our research implied that consumers invest more effort in gaining diagnostic information at the expense of determining veracity. We encourage further research to test this hypothesized consumer behavioral variable.

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