# **Unraveling the Paradox: Consumer Reliance Amidst Fake Reviews and Deception**

#### **Conflict of Interest Statement**

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

#### **Abstract:**

**Purpose**: Consumers continue to rely on online consumer reviews despite being aware of deception. Why is this the case?

**Design:** We conducted exploratory research consisting of 17 in-depth interviews with adults residing in the US and Europe. We observed their review browsing behavior in a simulated purchase scenario and explored their purchase behavior via open-ended questions, adopting the elaboration likelihood model for our study.

Findings: We found that consumers believe that they can 1) gain diagnostic information from reading reviews, while simultaneously 2) being able to decipher deceptive reviews from truthful ones, using cues that require varying levels of elaboration. 3) Nevertheless, they invest more effort in seeking diagnostic information rather than determining deception. We also discovered that the 4) cues they use to obtain diagnostic information overlap with those they use to determine deception, creating a potential halo effect. 5) Additionally, research shows the cues they use to determine truthfulness are manipulated by authors of deceptive reviews. Lastly, 6) the consumers in our study state their motivation to consider online reviews for their decision-making process would drop considerably if the level of deception (i.e., the estimated percentage of fake reviews on the website) were above a threshold. Contribution: While most recent research adopts quantitative approaches in studying the effects of deceptive online reviews, our study compliments the current state of research as it focuses on consumer perceptions and associations in a world where individuals must deal with increasing levels of online deception.

Keywords:

eWOM, fake online reviews, deception, Elaboration Likelihood Model, reliance

Track: Digital Marketing

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#### 1. Introduction, Objectives and Research Questions

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.

#### 2. Literature Review

Risk and uncertainty reduction (Hennig-Thurau et al., 2003), and need for knowledge (Adjei et al., 2010; Gupta & Harris, 2010) drive consumers to search for and gain exposure to online reviews. Nevertheless, with the prevalence of deceptive consumer reviews, despite the introduction of recent guidelines and regulations, consumers find themselves deploying their own strategies when reading reviews, in an aim to make better informed purchase decisions (Filieri, 2016).

Researchers have explored the area of trust (Filieri, 2016; Racherla et al., 2012), credibility (M. Y. Cheung et al., 2009; Clare et al., 2018; Kusumasondjaja et al., 2012) and veracity (Ansari & Gupta, 2021, 2021; Kronrod, A., Lee, J. K., Gordeliy, I., 2017; Román et al., 2019) in the context of reviews, as well as how consumers employ tactics to identify deceptive reviews (Munzel, 2016; Pyle et al., 2021; Wu et al., 2020), but few recent studies cover how consumers navigate review platforms holistically in a purchase scenario in the context of simultaneously attempting to gain diagnostic information that will aid in their purchase decision and determining which reviews are less likely to be deceptive. Many studies are quantitative looking at specific, pre-selected, factors that affect the construct they are testing. Other studies, using qualitative or mixed-method approaches, request participants to determine trust, credibility, or veracity in a vacuum independent from gaining diagnostic

information for a purchase decision. For instance, Filieri and colleagues (2016) explore trustworthiness in the context of fake reviews but independently from review helpfulness and based on consumer recall as opposed to within a purchase scenario. One qualitative and inductive study by Clare and colleagues (2018) does explore both helpfulness (defined as "facilitate[ing] a consumer purchase decision") and credibility (defined as "perceived truthfulness of an online customer review") within a purchase context, asking participants to think of a past or future purchase decision. Nevertheless, their study uses a broad notion of credibility encompassing reviewer rationality and competence as opposed to focusing specifically on deception.

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, nonnatural language, or overly emotional text (Filieri, 2016; Jensen et al., 2013); a 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).

#### Insert Appendix 1 here

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).

Numerous studies both explore and test constructs that motivate consumers to seek online reviews (Hennig-Thurau et al., 2003; Rosario et al., 2020) but they do not do so in the context of fake reviews. Additionally, 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.

#### 3. 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 (UK, France, Malta, Spain) using a snowball sampling strategy, adding additional interviews on an ad-hoc basis to reach saturation (Creswell & Poth, 2016; Fusch Ph D & Ness, 2015). The criteria for selection consisted of using online review platforms at least on an occasional basis and visiting restaurants. 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.

#### Insert Appendix 2 here

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 worklunch with their direct supervisor and important clients, and that the team assistant had preselected 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.

Insert Appendix 3 here

Participants were then provided with a fictitious online review platform called Food Advisor (<a href="https://restaurantadvisors.wordpress.com/">https://restaurantadvisors.wordpress.com/</a>) 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.

#### Insert Appendix 4 here

#### 4. Findings, Discussion and Conclusion

Consumer reliance on reviews has never been higher, despite the awareness 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.

Our research showed that purchase risk was a key driver for seeking online review exposure among our participants, consistent with previous research by Hennig-Thurau (2003), despite the awareness of the presence of fake reviews. Additionally, we found that perceived purchase risk increased the perceived need for diagnosticity, defined as knowledge-building, in line with research conducted by Pavlou, Liang & Xue (2007) and Siering and colleagues (2018). We also found that the need for diagnosticity, in turn, drove a need for review exposure, compatible with findings by both Hennig-Thurau (2003) and Filieri (2015). Additionally, we found that the need for cognition, depended on the personal traits of the participants, consistent with previous findings (Clare et al., 2018; Fong & Burton, 2008; Gupta & Harris, 2010).

#### Insert Appendix 5 here

Participants stated using and relying on online reviews despite the awareness of deception as they were 1) able to obtain diagnostic information from the reviews and 2) felt that they were able to identify credible reviews from fraudulent ones implying engaging in two tasks when seeking information from online reviews.

Through the purchase scenario stage, we found that 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 reviews or deception at all in their "thinking aloud" browsing stage.

The research also found that 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 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, creating a halo effect: making reviews they deem to be more useful also to seem more credible. This is problematic. 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.

### Insert Appendix 6 here

Studies show that 5) many of the cues consumers use to determine truthfulness (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). Lastly, 6) 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.

#### 5. Implications, Limitations and Further Research

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 implies 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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# **Appendix - Tables**

# Appendix 1

Table 1 Literature Review

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## Table 2 Participants

Name	Year of Birth	Sex	Place of Residence	Civil Status	Profession
Carolina	2001	Female	Winter Park, Florida USA	Married, no kids	Retail assistant
Raquel	1996	Female	Orange, California USA	Single	Student
Sara	1975	Female	Malta	Single	Manager, Financial Services
Miriam	1973	Female	UK	Widow, 3 kids	Manager, Financial Services
Fabien	1980	Male	France	Married, 3 kids	Business owner
Michele	1980	Female	France	Married, 3 kids	Yoga instructor
Ilona	1974	Female	Spain	Married, 3 kids	Stay-at-home-mother, Freelance
Susana	1981	Female	France	Married, 4 kids	Stay-at-home-mother
Paul	1946	Male	Spain	Single	Retiree
Alexis	1978	Female	France	Married, 2 kids	Student
Siobhan	1970	Female	France	Married, 2 kids	Graphic Designer
Josmar	1982	Female	France	Married, no kids	Child Care
Connor	2001	Female	Winter Park, Florida USA	Married, no kids	Retail Manager
Nadine	1997	Female	Rockville, Maryland, USA	Single	Student
Sophia	2003	Female	Orlando, Florida USA	Single	Student
Ally	1972	Female	Sterling, VA USA	Married, two kids	Manager
Martin	1974	Male	Rockville, MD USA	Married, 3 kids	Director, construction

## Appendix - Figures

## Appendix 3

Figure 1 Stimulus Material, purchase scenario

You are asked to book a restaurant for a work-lunch with your direct supervisor and important clients which will take place one month from now. The company is paying for the meal. The team assistant pre-selected two restaurants, which are both equidistant from your office. Neither you nor the assistant has been to either of them so cannot provide recommendations. Both restaurants have similar menu options, including a selection of vegetarian and vegan items. You want to make sure to pick a good restaurant to set the tone for the working lunch and impress your supervisor and clients.

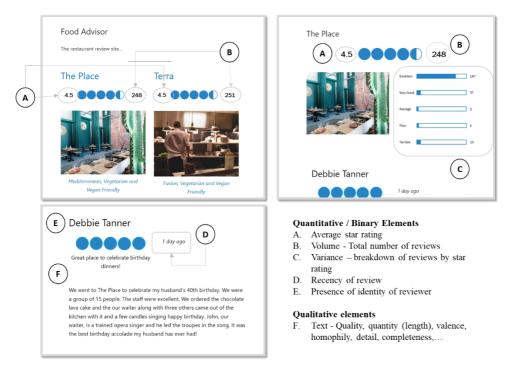
The assistant has given you a link to a site called Food Advisor to read customer reviews on the two restaurants to help you make your final decision.

You MUST choose one, and only one restaurant for the working lunch. You want to make a good impression by picking a good restaurant.

Additional Note:

A recent study found that 10% of online customer reviews on Food Advisor were fake.

Figure 2 Stimulus Material, fictitious review platform



https://restaurantadvisors.wordpress.com/

Figure 3 Major Findings

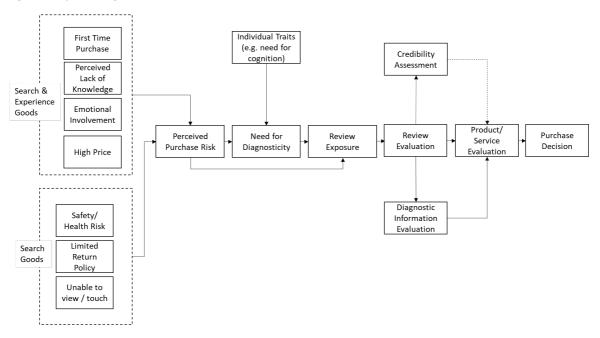


Figure 4 Cues Used by Consumers to Determine Truthfulness (non-deception)

