

Trust in Online Reviews: Effects of Valence and Exposure to Information on Deceiver's Distrust
and Financial Incentives

by

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Abstract

Online deception is prevalent and may have consequences for trust in online reviews. The present research considers the manipulated effects of information exposure and valence on participants' accuracy in lie detection and trust in online reviews. Undergraduate university students ($N = 166$) completed an online study where they were exposed to information about deceiver's distrust, financial incentives, or general information about online reviews (control). Participants were also exposed to the valence manipulation where they were presented with either positive or negative reviews and were asked to identify whether each review was deceptive or truthful. Their trust in online reviews was also assessed through measures of trust and authenticity. Evidence was found for the effect of valence on lie detection accuracy because those in the positively-valenced conditions were better able to detect deceptive reviews than those in the negatively-valenced conditions. Results also demonstrated a high self-reported frequency of leaving deceptive online reviews. This finding establishes the pervasiveness of deception in online reviews. There was no significant main effect of information exposure, nor was there an interaction effect. Results suggest that online deception is commonplace and that positive deceptive reviews may be easier to detect than negative ones. Implications for consumers and businesses are discussed.

Keywords: Online deception, valence, deceiver's distrust, lie detection, trust, online reviews

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Trust in Online Reviews: Effects of Valence and Exposure to Information on Deceiver's Distrust and Financial Incentives

Online and digital activities may be more pervasive than ever, especially given recent worldwide lockdowns. Correspondingly, online deception may be more widespread, and scientific research on online deception and its implications are particularly timely (Islam et al., 2020). Research has supported and demonstrated the influences of online deception and financial incentives for online reviews (Anderson, & Simester, 2014).

There is evidence that negative and positive emotions can predict deceptive behaviour, as well as deceiver's distrust. Although the literature appears to be saturated in these domains, there is a scarcity of information on the influence of valence on lie detection accuracy and deceiver's distrust in an online context, or even in general. Understanding the potential impacts of online deception is important since people are becoming more and more reliant on the internet for information. It is particularly timely to further develop our understanding of the effects of deception, valence, and financial incentives in online reviews. The current research examined the manipulated effects of information and valence on participants trust and lie detection accuracy.

Online Reviews

If customers are not satisfied with their experience, or service, they may choose to make a complaint directly to the service provider (Bradley, Sparks, & Weber, 2014). In contrast, the use of electronic word of mouth has expanded immensely within the last decade (Bradley et al., 2014). Increasingly, consumers, professionals, and bloggers are using social media platforms and user-generated review sites to post their positive or negative opinions, stories, ratings, etc., of their service experience. Most people rely on online reviews because they offer opinions from other consumers regarding a particular business, which may ultimately influence their purchasing decision (Vidanagama et al., 2019).

Considering the COVID-19 pandemic, there has been a marked shift in online shopping behaviour. In the time leading up to the lockdown, online shopping retailers became significantly more prominent. For instance, researchers studied panic buying during COVID-19 and found that during this time, prior to lockdown, there was a 25% increase from the previous year in online shopping at retailers (Hall et al., 2020). It is evident that online shopping has increased. In this respect, online reviews aid consumers in making purchasing decisions by providing more detailed product information written by other consumers; who provide indirect experiences of products. Research indicates that when consumers left reviews on websites, the perceived usefulness of these online retail websites increased (Baek et al., 2012).

With consideration of online reviews, the terms fake review and deceptive review should be elucidated. There is variability in the literature when defining fake and deceptive online reviews which highlights that there are no universally accepted definitions. For instance, Hu and colleagues (2012), defined fake reviews as non-authentic reviews to boost product sales and increase the profit that may be posted by online merchants like third-party vendors, retailers, etc.

Other researchers have defined fake reviews in the context of tourism to be based on the individual's imagination for example, writing a review without any real experience of staying at a particular destination (Banerjee & Chua, 2017). In response to the variation in the definitions, Wu and colleagues (2020) defined fake reviews as reviews that are inconsistent with real evaluations of products or services. In sum, fake reviews include false, bogus, and deceptive reviews (either positive or negative) which can be posted by consumers, online merchants, and review platforms. The most critical factor of fake reviews is whether or not they mislead consumers (Wu et al., 2020). In the present research, deceptive reviews will refer to online reviews that are counter to consumers' experiences. With online reviews becoming increasingly popular, it is of concern when they are falsified, which draws attention to online deception

Online Deception

Deception involves consciously transmitting messages to someone else while intentionally promoting a false belief (Caspi & Gorsky, 2006). In comparison to face-to-face deception, online deception is more prevalent because of the possibility of anonymity, which makes it easier to deceive compared to speech-based communication (Caspi & Gorsky, 2006). The trustworthiness of online reviews affects the company's reputation and profitability. In this regard, certain business owners and professionals will pay people to generate deceptive reviews for other businesses (Vidanagama et al., 2019). This suggests that online deception exists and can be intentional. Although paid deceptive reviews can impact the profit for businesses by either slamming their competitors or writing deceptive reviews that tout their own products, they can also manipulate the purchasing decisions of consumers (Vidanagama et al., 2019). Previous research has shown that this can cause more damage by deliberately misleading them

(Vidanagama et al, 2019). Similarly, the internet is a relatively anonymous platform where self-interested behaviour from the sellers could reduce the credibility and informativeness of electronic word of mouth (eWOM), and suggests the potential for deception (King et al., 2014). Notably, research shows that if a consumer encounters a user-generated review site where they are being deceived, they are less likely to use that site again for future purchases (Vidanagama et al., 2019). Such research highlights the use of deception online and the impact it has on consumers' trust. Considering the impacts of online deception, it's important to analyze whether deceptive online reviews can be detected.

Lie Detection

Due to the increasingly high usage and reliance on online reviews, distinguishing between deceptive and truthful reviews is essential. Unlike other types of deception, deceptive reviews are considerably more challenging to detect (Le et al., 2022). For instance, people who write deceptive online reviews can often pretend to be legitimate reviewers (Le et al., 2022). Additionally, due to the openness of product review sites, spammers can post numerous online reviews as different users under fake accounts, thereby complicating the detectability of truthful and deceptive reviews (Le et al., 2022). Distinguishing between deceptive and truthful online reviews is extremely challenging because deceptive reviewers can outsmart genuine users by copying their behaviour (Le et al., 2022). This supports the need and importance of effectively detecting these reviews, as there can be significant implications for consumers' decision-making.

Previous research has examined spam detection using several different methods like through linguistic analysis, which evaluates factors like semantics, phonology, morphology, and syntax (Chiranjeevi et al., 2018). For instance, researchers used the Linguistic Inquiry and Word

Count (LIWC) dictionary and a decision tree classifier to detect deceptive spam reviews (Chiranjeevi et al., 2018). Comparably, Shojaee and colleagues (2013) investigated different methods in detecting deceptive reviews such as, using lexical features (e.g., character count and special characters) and syntactic features (e.g., punctuation and occurrences of function words). Other research has examined the influence of both linguistic and behavioural aspects of fake review detection. For instance, Hussain and colleagues (2020) examined spam review detection using the spammer behavioural method which finds unusual patterns and relationships between different spammers. They relied on thirteen spammer behavioural features (e.g., content similarity, the ratio of negative/positive reviews, extreme ratings etc.,) to identify spammers and spam reviewers (Hussain et al., 2020). They also used a linguistic method to identify spam reviewers by focusing on the content and text of the reviews (Hussain et al., 2020).

However, little research has focused on lie detection accuracy from an average consumer's perspective. This is important because not all consumers will spend the time to thoroughly evaluate whether each review is deceptive or truthful based on the word count or grammar etc. One variable that could influence trust and lie detection accuracy is the valence, positivity or negativity, of the reviews.

Valence

Valence & Online Reviews

Valence is one of the most important features of consumer-created information (Zablocki et al., 2018). Review valence is expressed as a positive, negative, or neutral tone or preference from a consumer (Karabaset al., 2021). It is widely believed to influence purchasing decisions and attitudes towards a product. Previous research has focused on the effect of review valence on

sales, trust, perception of products, and purchasing decisions. Generally, the literature suggests that positive comments can lead to positive attitudes and high purchase intentions, and negative comments can lead to negative attitudes and low purchase intentions (Zablocki et al., 2018). However, valence is so widely studied that research on the effects of positive and negative reviews are inconsistent. For instance, some studies have shown that 1-star reviews can negatively affect sales on Amazon (Chevalier & Mayzlin, 2006), whereas other studies found that negative ratings do not predict poor sales (Clemons, Gao & Hitt, 2006). Contrastingly, research by Maslowska et al. (2017) used data from three different sites (women's athletic shoes, natural hair care products, and herbal vitamins) to examine the effect of valence on the volume of sales across categories. Their research demonstrated that products with a highly positive rating (4.5/5 - 5/5 stars) were less likely to be purchased compared to those that were generally positive (4/5 - 4.5/5 stars). They believed that highly positive reviews may be perceived as 'too good to be true, which in turn discourages consumers (Maslowska et al., 2017). Additionally, , Maslowska and colleagues (2017) agreed that negative reviews should not be censored as they maintain credibility. Other research also highlights the benefits of negative reviews in that negative information tends to be more diagnostic, useful, and informative, which many consumers rely on for their decision-making and judgment (Chakravarty et al., 2010). Taken together, these findings establish the importance and value of both positive and negative reviews. Considering the influence of valence and potential distrust for the product or company, valence was included in the current study of online lie detection.

Valence & Deception

Valence has also been used in past research when studying emotions (Brendl & Higgins, 1996). It can be categorized positively (e.g., happiness), or negatively (e.g., anger); (Brendl et al., 1996). Studying the relationship between valence and deception is of importance since previous experimental research has supported that feelings are an underlying antecedent of making deceptive decisions (Gaspar, & Schweitzer, 2013). In line with the research explained above, researchers found that negatively-valenced emotions like guilt, shame, or fear may promote the use of deception (Gaspar et al., 2013). Correspondingly, research conducted by Yip and Schweitzer (2016), found that incidental anger (a negatively-valenced emotion) promoted self-serving deception. Taken together, these findings suggest that the valence of emotional states can have an impact on the frequency and type of deception that occurs. Given the relevance of valence to the domain of deception, the current research evaluated the influence of review valence on lie detection accuracy and trust in online reviews. Further, the effects of valence were investigated in response to information about deceiver's distrust.

Deceiver's Distrust

Deceiver's distrust occurs when someone who lies infers dishonesty in others, based on their own behaviour (Sagarin et al., 1998). This phenomenon has been supported in previous experimental research that showed that engaging in deception made people less trusting of others. Sagarin and colleagues (1998) demonstrated in an experimental study that participants who were in the deception condition perceived their partner as less honest relative to those in the truthful condition. Participants in Sagarin's (1998) study were asked to complete a puzzle for extra credit. Those placed in the experimental condition were induced to lie to a confederate partner about the strategy that they used in solving the puzzle. Their strategic lie could damage

their partner's receipt of extra credit by not providing them with the correct strategy to answer the problem. Control participants were not induced to lie. After completing the task, participants received feedback indicating that their partner either successfully solved the puzzle and earned the extra credit, or that their partner failed to solve the puzzle and lost the credit. All participants then rated their partner on a variety of traits, including honesty. Participants who were told their partner failed to complete the puzzle rated their partners as less honest compared to those who were told their partner successfully completed the puzzle. The authors demonstrated that deceiver's distrust can occur as an outcome of deception. The phenomenon of deceiver's distrust has been further supported in other research. Schweitzer et al., (2002) conceptualized the strategic use of deception by manipulating visual access in negotiation, and making a distinction between two different types of lies. Participants in this study were randomly assigned to one of two visual access conditions (telephone or videoconference) and to one of two roles in a labor negotiation (city negotiator or union negotiator). Based on the experimental conditions that participants were assigned to, they were asked to tell either a monitoring-independent lie, or a monitoring-dependent lie to their counterparts. Monitoring independent lies are when the deceiver benefits from lying by changing the person's mistaken beliefs (e.g., a person selling a car that is in poor condition benefits by lying about the condition to make a sale). The more extreme the independent lie is, the more likely the parties are to reach an agreement in the deceiver's favor. Monitoring-dependent lies are when the liar misrepresents alternatives, interests, or intentions as a tactic to benefit themselves (e.g., a deceiver attempting to convince the target that a certain relationship cannot be salvaged). This type of lie involves the deceiver to be able to closely observe the target's reaction to manage the risk as the person might have stronger beliefs about the topic and may be less likely to be influenced. The researchers

examined this distinction and the strategic use of deception by manipulating visual access in a negotiation experiment with teleconference and videoconference media. Participants were given two opportunities to use deception; city negotiators could tell a monitoring-independent lie about the budget, and union negotiators could tell a monitoring-dependent lie about their preference for tougher teacher certification. Participants received role information (city or union representative) before negotiating, and all participants were given one hour to negotiate an agreement. After participants completed the negotiation, they filled out an agreement which described components of their deal and filled out a post-negotiation questionnaire, which included questions about how much they trusted their counterpart. Schweitzer and colleagues (2002) found differences between the deceiver's use of lies as a function of visual access. They found that the use of monitoring-dependent lies was significantly greater with visual access than without it. They also found that participants who lied trusted their counterparts less than participants who did not lie, providing evidence for deceiver's distrust. In other research, Haji (2013) investigated deceivers' distrust and online deception related to intimate relationships. Participants in this study were asked to tell the truth or to lie about their dating status to an online chat partner. Results indicated an effect of deceiver's distrust for the estimates of sexual and emotional infidelity. Specifically, participants who were in the deception condition reported higher estimates of sexual and emotional infidelity in the population, thereby demonstrating deceiver's distrust. A novel aspect of this study was its demonstration that deceiver's distrust can occur following online deception (Haji, 2013).

Recent research has examined the effects of online deception and valence in online restaurant reviews on deceiver's distrust (Barriault, 2020). Participants were placed in one of four experimental conditions; positive-valence deception, negative-valence deception,

positive-valence no deception, or negative-valence no deception. Participants in the deception conditions were asked to write an online restaurant review that was counter to their experience (a negative review of a restaurant they liked, or a positive review of a restaurant they did not like), whereas participants in the no-deception conditions were asked to write an online review that was consistent with their experience (negative review of a restaurant they did not like or positive review of a restaurant they did like) Participants level of trust was then assessed through measures of skepticism, trustworthiness, and reliance on online reviews. Those in the deception conditions indicated that they relied less on online reviews compared to those in the no-deception conditions. This comprised evidence of deceiver's distrust because the deceivers had less trust in the use of online reviews. Although research on deceiver's distrust is limited, these studies suggest that deceiver's distrust can occur in different contexts, and there is preliminary evidence that it can occur in online contexts. The current research predicted that participants exposed to the deceiver's distrust condition will have less trust in online reviews relative to the control condition. Considering the effects of deceiver's distrust, where the deceiver lost trust in others, it's also important to consider if financial incentives will have a similar effect.

Financial Incentives

Many online platforms, such as websites requiring reviews for products, rely on consumers' voluntary contributions in posting reviews. Past research has estimated that 97 percent of consumers read and are influenced by reviews (Ahmad, & Laroche, 2017). However, some platforms offer financial incentives to encourage users to contribute (Qiao et al., 2020). The literature has suggested that online retailers and service providers could improve the quality of reviews by providing financial incentives (Marinescu et al., 2018). Incentivized reviews,

however, may reflect negatively on the company's credibility and authenticity, especially when it comes to positive incentivized reviews (Gerrath & Usrey, 2021). Specifically, if the consumer reading the reviews identified the company's attempt to receive a positive review in return for a financial incentive, the consumer may then respond negatively; lower positive attitudes towards the company (Reimer & Birkenstein, 2018).

In addition to incentivized positive reviews, there may be strategic incentives to produce negative reviews about competing companies. For instance, the literature has suggested that a hotel can benefit from deceptively posting positive reviews about its own hotel, and, in turn, posting negative reviews about competing properties on TripAdvisor with the intent of encouraging and directing consumers to its own hotel (Anderson, & Simester, 2014). This suggests that companies do use financial incentives deceptively to increase their advantage over other companies. It also appears that financial incentives may hold a potential risk for review trustworthiness. Reimer and Birkenstein (2018) found that the company's interference in the consumer-to-consumer interaction means that incentivized online reviews were perceived as less credible, in comparison to non-rewarded reviews. Although companies who use monetary incentives increase the likelihood of recommendation, it is notable that monetary incentives simultaneously impair the perceived review trustworthiness, skepticism, and attitudes towards the company and purchasing intentions (Reimer & Birkenstein, 2018). Considering the research on financial incentives, the current research hypothesized that participants exposed to the financial incentive condition will have less trust in online reviews relative to the control condition. Social desirability is an individual difference that is relevant to take into account, as it may relate to motivations to leave and believe certain types of reviews.

Social Desirability

Social desirability bias refers to participants giving socially desirable responses, rather than choosing responses that are reflective of their true feelings (Grimm, 2010). Antin and Shaw (2012) researched social desirability bias in the context of Amazon's Mechanical Turk. Participants in this study were exposed to a survey technique called the list experiment, and the researchers observed profiles of motivation and patterns of social desirability effects among Turkers in the US and India. The results indicated the presence of a strong social desirability effect for monetary motivation (financial incentives). Specifically, US Turkers believed money to be the motivator for completing human intelligence tasks, where they earn small payments; typically, a few cents to a few dollars in return (Antin, & Shaw, 2012). Findings in this study also suggested that reports of online motivation can be subject to social desirability bias (Antin & Shaw, 2012). Another study conducted by Holtgraves (2004), concluded that participants who scored high on self-deception, were more likely to give socially desirable responses, compared to those who scored low on self-deception. Social desirability was measured as a covariate in the current study to control for the influence of this individual difference in responses to information about deception and financial incentives. Online deception was also measured as a covariate in the current study to control for participants' tendency to engage in online deception. Additionally, social desirability and online deception were included to examine if there were any significant correlations with trust or authenticity.

The Current Research

There is currently a scarcity of research on deceiver's distrust in the context of online reviews. Considering the influential nature of online reviews, and the possibly high prevalence of deception in this area, the study of deceiver's distrust in this context is relevant and timely, and has financial implications. The current research examined the manipulated effects of information and valence on participants accuracy in lie detection and trust in online reviews. This has significant implications because it can determine whether reading certain information, along with the positivity or negativity of online reviews, has an impact on people's trust, or ability to detect deception. Participants were informed about the phenomenon of deceiver's distrust and how financial incentives can impact reviews. Participants in the deceiver's distrust condition were informed that online deception is widespread and those who deceive may actually trust others less due to their own deceptive behaviour. Participants in the financial incentives condition were exposed to information about companies paying consumers to generate reviews in an attempt to gain an advantage over other companies, for example, paying users to write positive reviews about their company and negative reviews about their competitors. In contrast, those in the control condition received general factual information about the reliance on online reviews, and people's online purchasing behaviour during the COVID-19 pandemic. The effects of both experimental conditions; deceiver's distrust and financial incentives, along with the effects of valence (positive or negative reviews), were examined with respect to their influence on trust, authenticity, and lie detection in the context of online reviews. In sum, this study examined if being informed about deceiver's distrust or financial incentives influenced participants' trust in online reviews or had an effect on participants' abilities to detect deceptive reviews at the first glance.

Hypotheses

- 1) Participants exposed to the deceiver's distrust condition will have less trust in online reviews relative to control.
- 2) Participants exposed to the financial incentive condition will have less trust in online reviews relative to control.
- 3) Participants in the negatively-valenced deceiver's distrust condition will have less trust in online reviews compared to participants in the positively-valenced deceiver's distrust condition.
- 4) Participants in the positively-valenced financial incentives condition will have less trust in online reviews compared to those in the negatively-valenced financial incentives condition.
- 5) Participants in the deceiver's distrust and financial incentives conditions will have a greater awareness of potential deception in online reviews and may be more accurate at detecting deceptive reviews than those in the control condition.

The rationale behind the main and interaction hypotheses follows from previous research on deception and valence. As previously described, negatively-valenced emotions may promote the use of deception and if a customer encounters a user-generated review site where they are being deceived, they are less likely to use that site again for future purchases (Gaspar et al., 2013; Vidanagama et al., 2019). Furthermore, the provision of financial incentives reflects negatively on the company's credibility and authenticity, especially with positive reviews (Reimer, & Birkenstein, 2018; Vidanagama et al., 2019). Positive reviews are typically what drives the consumer in purchasing the product, and if they knew that the review was incentivized or possibly unauthentic, then they may have greater distrust for the company. Contrastingly,

negative reviews often discourage consumers from purchasing the product. Thus, if the consumers did not purchase the product, they likely wouldn't have felt as great of distrust for the company. Therefore, participants in the positively-valenced financial incentive condition are hypothesized to have less trust in online reviews compared to those in the negatively-valenced financial incentives condition.

Method

Participants

A total of 194 undergraduate students from Laurentian University were recruited through the Laurentian SONA research participant pool. A brief recruitment script was displayed on SONA where potential participants had the opportunity to read it over. All participants in this study participated on SONA and were given the opportunity to obtain partial course credit (0.5%) for participating, provided that the course instructor gave permission. The Qualtrics randomization function was used to randomly assign participants to one of six experimental conditions.

Measures & Materials

Social Desirability Scale-17 (SDS-17). The Social Desirability Scale (Stober, J. 2001), is a 17-item questionnaire measuring participants' responses to statements that are rated as true or false. A sample item is "There has been an occasion when I took advantage of someone else." The Cronbach's alpha for this scale is .80, yielding satisfactory internal consistency. Social desirability was measured as a covariate in the present study (See Appendix C).

Information Manipulation. Participants were exposed to one of three information conditions; exposure to information on deceiver's distrust, exposure to information on financial incentives, or exposure to control information, where participants were exposed to general information about the reliance on online reviews and purchasing behaviour through COVID-19 (See Appendix A). With consideration of ethics, to avoid conveying false information to participants, the information presented in each condition contained factual information retrieved from published research articles. After participants were randomly assigned to a condition, they were exposed to reviews generated by the participants in Barriault's (2020) study, as described below.

Valence Manipulation. Participants were also exposed to the manipulation of valence; positive or negative reviews. Specifically, a total of 8 positive and negative reviews were chosen by the researcher based on Barriault's (2020) study. Reviews were chosen based on predetermined criteria and were of prototypical readability (length, clarity, and structure). Specifically, all reviews were between 50-70 words, they had clarity in both the appearance and style, they were easy to read and engaging, along with an organized structure to improve flow and comprehension. The reviews were also similar in nature, which helped to ensure that any potential effects were not attributed to other characteristics. Additionally, the valence of the reviews were chosen with comparable levels and strengths of positivity and negativity, for example, all chosen reviews were clearly negative and clearly positive. Moreover, all restaurants in the reviews were anonymized and avoided repetition by ensuring that the same review was not presented twice (See Appendix B). The order of the reviews was randomized. Participants in the positively-valence conditions were exposed to 4 positive reviews, and participants in the

negatively-valenced conditions were exposed to 4 negative reviews. The task of participants was to evaluate each review as either deceptive or truthful.

Manipulation-checks. Manipulation-check questions were used to assess participants' true opinions regarding the online reviews that they evaluated. These questions were issued in the demographic's questionnaire, at the end of the study. The manipulation-check questions for the first independent variable (information manipulation) asked "To what extent do the following factors influence deception in online reviews?". The two factors were, 'financial incentives' or 'beliefs that others are lying in their reviews. Participants were asked to rate both factors on a semantic differential scale from (1 = *not at all* to 5 = *A great deal*). The manipulation check for the second independent variable (valence; positive or negative) asked participants to rate the reviews that they read on a semantic differential scale from (1 = *extremely negative* to 5 = *extremely positive*).

Attention-Check. To assess the relative attentiveness of participants, they were asked "What was the topic of the article you read?" and participants had the option to choose from "deceiver's distrust/deception in online reviews, financial incentives in online reviews, or general information about online reviews". This was asked at the end of the study to avoid influencing responses on other measures.

Online Deception. Online Deception is a 3-item questionnaire measuring participants' tendency to engage in online deception using a 5-point rating scale (1 = *Never*; 5 = *Always*). Online deception was measured as a covariate in the present study. The alpha reliability is .73. (See Appendix C).

Generalized Trust Scale. The Generalized Trust Scale (Couch et al. 1996), is a 20-item questionnaire that measures participants' responses using a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). The alpha reliability of this scale is high at .91. (See Appendix C).

Authenticity Scale. The brand authenticity scale (Bruhn et al., 2012), is a 15-item questionnaire that measures participants' responses using a 7-point-Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). This scale was used to evaluate subscales of continuity, originality, reliability, and naturalness. The Cronbach's alpha is in line with the required minimum value regarding all items of the four factors: continuity (.90), originality (.90), reliability (.96), and naturalness (.95). Some items in this scale were reworded slightly, for example, using "review" instead of "brand". (See Appendix C).

Electronic-Word of Mouth Skepticism Scale (eWOM). The eWOM (Zhang, Ko, and Carpenter, 2016) is a 19-item questionnaire measuring participants' responses using a 7-point Likert scale (1, *strongly disagree* to 7, *strongly agree*). This scale was used to evaluate the subscales of truthfulness, motivation, and identity. The Cronbach's alpha is .77 for the truthfulness-oriented subscale, .71 for the motivation subscale, and .79 for the identity subscale, respectively yielding acceptable consistency (Zhang et al., 2016). (See Appendix C).

Reliance on Online Reviews. The reliance on online reviews (Cheng and Loi, 2014) is a 2-item questionnaire measuring participants' responses on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). Items in this scale were reworded slightly by changing the present tense to future to examine if any of the independent variables affected future intention or reliance on online reviews. (See Appendix C).

Demographic Questionnaire. At the end of the study, participants responded to various demographic questions. Some of these questions assessed age, gender, and program of study. There was a suspicion probe that asked participants about their opinions regarding the purpose of the study. Participants were also asked open-ended questions about their opinions regarding online deception and financial incentives, and their experience with online reviews. For instance, they were asked, “In your opinion, have you ever been exposed to instances of online deception?” “What has your experience been like with online reviews? “Do you tend to use reviews in your decision-making? Do you tend to write reviews for services or products that you buy? “Have you ever had any negative experiences with online reviews?”, “What are your thoughts about financial incentives for people who leave reviews for products or services”, and “What are your opinions regarding online deception?” Participants were also asked if they had any additional comments about the study. This brought additional value to the current research by acknowledging those who have been exposed to past instances of incentives or online deception.

Procedure

Study sign-ups were available for participants on SONA where they were provided with a link to the study on Qualtrics. Participants began by reading over the informed consent, where they could select electronically whether or not they wished to participate. For the participants who did not wish to participate, they were directed to the end of the study.

Participants completed the measure of social desirability. Then they were exposed to the information manipulation. Based on random assignment by the software program, they were exposed to one of three types of information; information about the phenomenon of deceiver’s

distrust (deceiver's distrust condition), information about financial incentives behind some reviews (financial incentives condition), or general/factual information about the reliance on online reviews and online purchasing behaviour through COVID-19 (control condition). Then, participants in this study were exposed to some of the reviews about restaurants from Barriault's (2020) study. Participants were exposed to 4 positive or 4 negative reviews, depending on the valence condition (positive or negative) to which they were randomly assigned. They were instructed to evaluate whether each review was deceptive or truthful. The researcher later evaluated how many truthful or deceptive reviews the participants got correct and participants obtained an accuracy score of lie detection (dependent variable). This allowed for the comparison of lie detection accuracy between the experimental conditions (those who were exposed to information about deceiver's distrust, and those exposed to information regarding financial incentives) and the control condition (those given general information). Next, participants were asked to complete brief questionnaires on trust, and authenticity (other dependent variables). Participants were directed towards the end of the study where they were asked open-ended questions related to their experiences with online reviews or incentives from companies. At the end of the study, a demographic questionnaire was presented as well as the manipulation-check questions. Following the demographics section, participants were presented with the debriefing form and were asked to indicate whether or not they wished to give the researcher permission to use their data.

Results

Data Analysis

The current research was conducted as 3x2 between-subjects ANCOVA, as it examined the combined effects of the information exposure (deceiver's distrust, financial incentives, or control), and the valence manipulation (positive or negative) on the dependent variables of trust, authenticity, and lie detection accuracy. Social desirability and participants' self-reported tendency to engage in online deception were included as covariates. The mean level of trust is reflective of participant questionnaire responses on various measures of trust e.g., eWOM, generalized trust, authenticity, and reliance on online reviews. Accuracy in lie detection was scored based on the number of reviews correctly identified as truthful or deceptive. The 3x2 between-subjects ANCOVA allowed for main effects, interaction effects, and the influences of the covariates (social desirability, and online deception) to be measured. All statistical analyses were conducted using SPSS Statistics 19.

Data Cleaning

During the pre-analysis stage, the data was screened and cleaned to check for errors and large proportions of missing values. Data from 7 participants were deleted due to requests for data to be destroyed and data from 21 participants were deleted due to large amounts of missing data on the dependent measures, leaving a total sample of 166 participants for analyses

Demographics

Within the total sample, the majority of participants (71.7%) were between 18-24 years old. Participants were from a variety of different post-secondary programs, but the most common was the field of Psychology (33.7%). The total sample size consisted of 22 males, 137 females, 3 non-binary, and 1 who preferred not to say.

Frequency of Past Online Deception

Scale statistics demonstrated a high self-reported frequency of leaving deceptive reviews ($M = 3.75$, $SD = 1.67$). Specifically, 17.5% reported leaving reviews that were partially inconsistent with their experience, 11.8% reported leaving reviews that were totally inconsistent with their experience, and 18.7% wrote positive reviews when they had a negative experience. A total of 48% of participants indicated that they had previously written deceptive online reviews. Interestingly, 90% of participants believed that they were exposed to instances of online deception. Additionally, 96% of participants believed that people intentionally deceive others on the internet. Based on the sample who reported leaving deceptive online reviews, the frequency distribution in Table 1 demonstrates the frequency and reason for leaving deceptive/inaccurate reviews.

Table 1

Reason for Leaving Inaccurate Online Reviews	Frequency	Percentage
To promote a close other's (friend or family members) business	15	8.6%
Financial Incentive	9	5.1%
Other	8	4.6%
Retaliation (when someone left me a negative review)	7	4.0%
Reciprocity (when someone left me a positive review)	5	2.9%
To promote my business	3	1.7%

Descriptive Statistics

The descriptive statistics are presented in Table 2 for the dependent measures, as well as the independent variables (information manipulation and valence). The accuracy of lie detection

variable was computed by calculating how many items participants got correct. All participants were exposed to two truthful reviews and two deceptive reviews. A score of 1 was given for each correctly identified review, out of a total accuracy score of 4.

Table 2

<i>Descriptive Statistics</i>										
Information Manipulation and Valence										
	Deceiver's Distrust	Financial Incentives		Control Condition		Negative Valence		Positive Valence		
	<i>n</i> = 58		<i>n</i> = 56		<i>n</i> = 52		<i>n</i> = 86		<i>n</i> = 80	
Measure	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
SD	0.50	1.92	0.50	0.18	0.47	0.20	0.47	0.21	0.51	0.15
OD	1.44	0.77	1.14	0.35	1.14	0.36	1.21	0.54	1.28	0.57
GT	3.61	0.51	3.65	0.61	3.66	0.54	3.63	0.52	3.64	0.58
AS	3.15	0.48	3.26	0.49	3.19	0.45	3.20	0.54	3.19	0.39
EWOM	3.20	0.47	3.16	0.46	3.07	0.41	3.12	0.47	3.18	0.42
RELI	3.66	1.09	3.47	1.18	3.61	1.16	3.41	1.04	3.75	1.22
ACC	2.12	1.07	2.08	1.04	2.07	0.95	1.84*	1.10*	2.36*	0.86*

Note: * Significance is reported at the .05 level. *N* = 162-166 due to a few participants who did not complete some questionnaires. *SD* = Standard Deviation; *M* = Mean; *SD* = Social Desirability; OD = Online Deception; GT = Generalized Trust Scale; AS = Authenticity Scale; EWOM = Electronic Word of Mouth Skepticism Scale; RELI = Characteristics of Respondents on the Reliance of Online Reviews; ACC = Accuracy in Lie Detection.

Correlations

Table 3

Correlations Among Primary Dependent Measures

Measure	Social Desirability	Generalized Trust	Authenticity Scale	E-WOM	Reliance on Online Reviews	Online Deception	Accuracy
Social Desirability	--	.261**	.208**	-.040	.128	0.46	.009
Generalized Trust		-	.268**	-.106	-.096	-.144	.085
Authenticity Scale			--	-.246**	.291**	0.19	.018

E-WOM	--	-.128	.094	.088
Reliance on Online Reviews	--		.007	.088
Online Deception	--			-.040
Accuracy	--			

Note: ** Correlation is significant at the .01 level (2-tailed).

Generalized trust and authenticity both had positive correlations with social desirability.

Participants who were highly trusting of others and in the authenticity of brands and reviews were also high in social desirability. Brand authenticity was also strongly and positively correlated with generalized trust. Participants who believed other brands and reviews to be authentic based on the four subscales in the authenticity scale (e.g., continuity, originality, reliability, and naturalness) were also highly trusting of others. Notably, E-WOM had a strong negative correlation with authenticity. Participants who were highly skeptical of online reviews based on the three subscales in E-WOM (e.g., motivation, identity, and truthfulness) believed online reviews to be less authentic. The reliance on online reviews was positively correlated with authenticity. Participants who relied on online reviews also believed that brands and online reviews were authentic and truthful. No other measures were significantly correlated.

Manipulation Checks

The manipulation checks were assessed using an independent samples *t*-test, and a one-way ANOVA. Results suggested the effectiveness of the valence manipulation $t(161) = -18.64, p = <.001$. Participants rated the positive online reviews that they read as being generally positive ($M = 4.44, SD = .916$) and the negative online reviews as being generally negative ($M = 1.81, SD = .885$). This indicated that the positivity and negativity of the online reviews had

comparable strengths of valence. There were no statistically significant differences between group means for financial incentives, deceiver's distrust, and the control condition as determined by the one-way ANOVA $F(2,165) = .222, p = .801$. Nonetheless, all of the statistical analyses were conducted with the manipulation to examine if there were any significant effects. However, since there were no significant, or even approaching significant results involving the manipulation, this independent variable was excluded from further analyses.

Main Analyses.

Covariates. An ANCOVA revealed a significant influence of social desirability $F(1,158) = 14.626, p = .001 \eta = .085$ and online deception $F(1,158) = 4.306, p = .040 \eta = 0.27$ on generalized trust. There was also a significant influence of social desirability on the authenticity scale $F(1,158) = 8.64, p = <.004 \eta = .052$. Social desirability and online deception were not significant on any of the other dependent variables.

Table 4

ANCOVA Table					
Dependent Variable: Accuracy					
Measure	df	Mean Square	F	p	η
Intercept	1	66.02	65.52	<.001	.292
Online Deception	1	.512	.506	.478	.003
Social Desirability	1	.006	.006	.936	.000
Valence	1	10.385	10.274	<.002**	.061

Note** significance is reported at the .01 level.

Valence. The results from the ANCOVA are presented in Table 4 for the accuracy in detecting deceptive reviews (dependent variable).

Results from the ANCOVA demonstrated a significant effect of valence on the accuracy in detecting deceptive reviews. The positivity or negativity of the reviews influenced participants' ability to detect truthful versus deceptive reviews. Specifically, participants exposed to positively valenced reviews ($M = 2.35$, $SD = 0.86$) were more accurate in detecting truthful versus deceptive reviews compared to those exposed to negatively valenced reviews ($M = 1.85$, $SD = 1.11$).

An ANCOVA revealed no significant main effects of valence on the generalized trust scale $F(1,158) = .024$, $p = .876$, authenticity scale $F(1,158) = .027$, $p = .870$, skepticism of electronic-word of mouth $F(1,158) = .767$, $p = .382$, or on the reliance of online reviews $F(1,158) = 3.06$, $p = .082$.

Discussion

The present study looked at the manipulated effects of information exposure and valence on participants' accuracy in lie detection and trust in online reviews. It was hypothesized that participants exposed to the deceiver's distrust and financial incentive conditions would have less trust in online reviews relative to the control condition. This hypothesis was not supported. Likewise, there was no support for the interaction hypothesis that participants in the negatively-valenced deceiver's distrust condition will have less trust in online reviews compared

to participants in the positively-valenced deceiver's distrust condition. Similarly, there was no support for the hypothesis that participants in the positively-valenced financial incentives condition will have less trust in online reviews compared to those in the negatively-valenced financial incentives conditions. Lastly, the prediction that participants in the deceiver's distrust and financial incentives conditions will have a greater awareness of potential deception in online reviews, and may be more accurate at detecting deceptive reviews (vs. truthful ones) than those in the control condition was rejected.

Importantly, unexpected and significant findings were observed in terms of the effect of valence on accuracy in detecting deceptive reviews. Additionally, the demographic questions revealed a strikingly high base rate of 48% of participants, nearly half the sample, self-reporting that they have left deceptive reviews.

Valence was included in this study to contribute to our understanding of how positive and negative online experiences contribute to trust in online reviews and accuracy in lie detection. The significant effect of valence in detecting deceptive reviews revealed that participants exposed to positive and negative reviews were accurately able to detect truthful versus deceptive reviews. Specifically, the results showed that participants exposed to positive reviews had a fifty percent chance of correctly identifying deceptive and truthful online reviews. In accordance with this finding, previous literature states that people's ability to distinguish between truths and lies tends to be significant, but only slightly better than chance levels (Levine, Park, & McCormack, 1999).

The significant finding of valence in the current study contributes new knowledge to the existing literature. Previous research on identifying online deceptive spam supports this finding (Li & Ott et al., 2014). For instance, researchers studied ways to identify deceptive opinion spam

which consisted of data from three domains (e.g., hotel, restaurant, doctor). Each of these domains contained three types of reviews (e.g., consumer-generated truthful reviews, Turker-generated deceptive reviews, and employee-generated deceptive reviews); (Li & Ott et al., 2014). Results from this study found that sentiment is a cue to deceptive spam. Specifically, they found that employees and Turkers from hotels, restaurants, and doctors who were asked to write positive deceptive reviews tended to exaggerate sentiment and included more sentiment-related vocabulary in their lies (Li & Ott et al., 2014). They concluded that positive deceptive reviews were generally more positive and exaggerated compared to the truthful reviews, making them easier to identify (Li & Ott et al., 2014). This may explain why participants in positively-valenced conditions in the present study were better able to detect deceptive reviews.

Results from the current research also demonstrated a high frequency of leaving deceptive reviews. Specifically, the top two reasons that participants left deceptive reviews was to promote a close other's (friend or family members) business, and for financial incentives. Considering that participants tended to write a deceptive review to promote their friend or family member or a monetary reward for a business, the results suggest that the deceptive/inaccurate reviews have likely been positive. Thus, participants who were exposed to positive and negative reviews were not only able to effectively detect deceptive reviews but could be experienced in writing them. It may be that participants who had previously written positive deceptive reviews are more aware or suspicious of the occurrence of online deception, and are therefore better able to identify it.

Previous literature suggests that people who are too trusting of others can perform poorly on lie detection tasks (Brinke & Vohs et al., 2014). Generally, people who are more trusting in

the fairness of life's outcomes are worse at detecting lies compared to others because they exhibit a higher rate of truth bias (Brinke et al., 2014). This finding suggests that more trusting people have a lower ability to detect lies. Another study examined how suspicion affects deception detection accuracy (Kim & Levine, 2011). There were three levels of suspicion (low, moderate, and high) and participants were asked to make veracity judgments of videotaped interviews involving denials of cheating (Kim & Levine, 2011). Results showed that there was an increase in lie accuracy with increased suspicion (Kim & Levine, 2011). Specifically, the effect of suspicion involved a decline in truth accuracy across all three conditions, but there was a progressive increase in lie accuracy across all conditions (Kim & Levine, 2011). The results suggest that suspicion led to a higher lie detection accuracy. This may offer some explanation as to why some participants with a previous history of writing deceptive reviews may have been better able to identify them.

Although the main hypothesis for deceiver's distrust was not supported in the current research, the phenomenon of deceiver's distrust supports this interpretation. As previously mentioned, research by Haji (2013), found evidence for deceiver's distrust in an online context. Likewise, Sagarin (1998) found that participants who lied to their partners perceived them as less honest, again demonstrating the effect of deceiver's distrust. This phenomenon was also found in Barriault's (2020) study, since those in the deception condition had less trust in online reviews. Previous research on deceiver's distrust is in line with research on suspicion and lie detection accuracy because those who are suspicious or aware of deception, may trust others less, which could account for a higher ability to detect deception.

Information exposure was included in this study to examine if being informed about financial incentives or deceiver's distrust would decrease participants' trust in online reviews, or

if being exposed to one of these conditions would have an effect on lie detection accuracy. There were no significant main effects and interaction hypotheses involving information manipulation. These null results may be due to the familiarity of the information given. For instance, previous research looked at review valence and awareness of deceptive practices on consumers' attitudes and purchase intentions and found that after learning or being reminded of deceptive online review practices, participants reacted less favorably to highly positive reviews (Karabas et al., 2021). This finding may explain why the main effect and interaction effect involving deceiver's distrust (predicting that participants exposed to negative online reviews would have less trust), were not significant. Another study found that the impact of negative reviews on the perceived reliability of the retailer and purchase intentions were determined by the consumer's familiarity with the retailer (Kumar, 2013). A similar phenomenon may have occurred with participants in the current study where they had prior knowledge or familiarity with deceiver's distrust/online deception and financial incentives which therefore did not further reduce their trust or reliability for online reviews. Additionally, another potential reason why the information manipulation was not significant, specifically for financial incentives, may be due the influence of the incentive source. For instance, previous research found that the source of the incentive had a significant influence on consumers' trust. For instance, when the incentive was offered by a third party, the level of trust was higher compared to a business that offered incentives for posting reviews about its own products or services (Ai et al., 2022). This suggests that consumers may have more concern about the objectivity and authenticity of the reviews when they are posted directly from the business itself, and not a third party site. Considering that the incentive source has an influence on consumers' trust, the lack of significant findings in the current research may be due to the fact that the incentive source was not specified or identified. Therefore, due to the

generality of the information regarding financial incentives, it may not have had a large enough influence on participants' trust in incentivized online reviews. This previous research may help to explain the lack of significant results in the current study, specifically for the interaction hypothesis for financial incentives (participants exposed to positive reviews will have less trust in online reviews). Another potential reason why the information manipulation did not produce significant results may be because the information presented was factual and relatively general. Although non-significant, the descriptive statistics on this manipulation check indicate that all three conditions (financial incentives, deceiver's distrust, and the control condition) were similarly impacted by the information exposure. The information did not influence participants' perceptions of either financial incentives or deceiver's distrust and it did not have a strong enough impact on participants' trust, or on their ability to distinguish between truthful and deceptive reviews.

Limitations and Future Directions

The absence of a significant effect on the information manipulation suggests some directions for future research. For instance, making the information for all conditions less general or familiar might have produced significant results. One alteration that could be made to strengthen the manipulation is to provide participants with examples of online reviews that were deceptive or written for a financial incentive, along with a brief excerpt of the implications of such reviews. Seeing examples of these types of reviews could have elicited more concern over the occurrences and accessibility of paid and deceptive reviews, potentially influencing their trust.

Another potential limitation of this study is that participants may not have fully read or retained the information from the manipulation paragraphs. This may provide some explanation as to why there were no significant main effects for deceiver's distrust or financial incentives. Therefore, including a timer on the information manipulation may have prevented participants from moving to the next page so quickly, and could have encouraged them to read the full paragraph more thoroughly.

In addition to the above limitations surrounding the information manipulation, there are a few other shortcomings to acknowledge. A larger sample size may have also garnered more significant results. Additionally, a possible factor why there was a significant effect on only one dependent measure could be due to the generality of the other measures. Considering the significant results were related to lie detection accuracy, including more specific measures such as, truth bias or truth accuracy may have produced more significant results.

Considering the significant findings in the current study, future qualitative research may examine participants' impressions or opinions of online deception and financial incentives. Additionally, it may be important to explore participants' motives behind leaving deceptive reviews in different contexts. Since deceptive online reviews are not always easily identified, it is important to develop a deeper understanding of what other factors contribute to this type of deception and if these factors are different depending on the product or service. Future research may also examine the influence of other potential differences in leaving deceptive reviews, like gender and personality.

The reviews that participants were asked to evaluate were limited to restaurant reviews. Therefore, it is important to test the generality of the current findings to online reviews in other domains or other forms of online communication in which deception may be present.

Implications

With the increased popularity and perceived usefulness of online reviews (Baek et al., 2012), along with the high prevalence rates of online deception (Gaspi & Gorsky, 2006), research on lie detection in an online context is highly relevant. The current research demonstrated that there is a high frequency of leaving deceptive reviews, and that participants were better at detecting deceptive versus truthful reviews when the reviews were positive. Typically, positive reviews help to facilitate customer engagement and can encourage consumers to purchase the company's products. Positive reviews can also have a great influence on sales. In this respect, deceptive reviews can negatively impact all of these factors. It is relevant to know that participants were able to identify positive deceptive reviews because it could help to reduce potential negative outcomes, such as purchasing poor quality products or services.

The current research also examined participants' awareness of online deception. It is important for people to understand and be aware of how frequent online deception is as it can help to classify or develop techniques for prevention or detection. For instance, it may encourage more companies to use verified reviews, where the consumer confirms their email address through a verification system, to reduce deception. The results from the current research may promote awareness of the pervasiveness of online deception in reviews, which could encourage others to further evaluate online information when making decisions about a product, service, or experience.

The findings from the current study establish that online deception is common considering nearly half of the participants reported leaving online deceptive reviews. Nearly all participants also believed that people intentionally deceive others on the internet. Moreover,

leaving deceptive online reviews was correlated with the belief that others were lying in their reviews $r(159) = .164$, $p = .038$. This is consistent with deceiver's distrust.

As more aspects of our lives are moving online, it is increasingly important to understand how online deception can impact our social worlds. Predominantly, there are generations of people who are growing up in a world where most socializing occurs on the internet, so understanding more about online deception is crucial. If deception in online reviews is widespread as this research suggests, it should be concerning and worth further examining how this relates to other domains where online deception can occur. Lying in online reviews could not only lead to a greater mismatch between customer expectations and reality, but it could also lead to less honest and less reliable social interactions, or have an adverse effect on social cohesion and social networks. Therefore, developing a better understanding of dishonesty and deception online may help to mitigate potential negative social influences and better protect consumers.

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Appendix A: Manipulation Paragraphs

Deceiver's distrust/deception condition:

Deceiver's distrust is a phenomenon in which someone who lies believes others to be dishonest. Online deception is widespread and those who deceive may actually trust others less due to their own deceptive behaviour. Online deception is concerning and more prevalent than face-to-face deception due to the possibility for anonymity, making it easier to deceive. Additionally, previous research has shown that if a consumer encounters a user-generated review site where they are being deceived, they are less likely to use that site again for future purchases.

Financial Incentives condition:

Many online platforms, such as websites requiring reviews for products, rely on consumers' voluntary contributions in posting reviews. Past research has estimated that 97 percent of consumers read and are influenced by reviews. However, some platforms offer financial incentives to encourage users to contribute. Research suggests that retailers and service providers could improve the quality of reviews by providing financial incentives. For instance, a hotel can benefit from deceptively posting positive reviews about its own company/hotel, and in-turn posting negative reviews about competing properties with the intent of encouraging and directing consumers to its own hotel.

Control Condition:

Increasingly, consumers, professionals, and bloggers are using social media platforms and user-generated review sites to post their positive or negative opinions, stories, ratings etc., of their service experience. Most people rely on online reviews since they offer opinions of other consumers regarding a particular business, which could influence their purchasing decision. In 2020, online shopping retailers became significantly more prominent. For instance, researchers studied consumer buying behaviour, and found that during this time, there was a 25% increase from the previous year in online shopping at retailers.

Appendix B: Online Reviews

Positive Reviews

I enjoy going to restaurant W, for dinner. The atmosphere is always inviting and positive when walking in. The upkeep of the restaurant is always perfect. The service is also great, every waiter/waitress I have ever got has always been attending but not over barring, along with keeping positive conversation flow so it is a wonderful social experience.

Restaurant X exceeds all of my expectations every time I attend. Whether it be for a light lunch, a family dinner, birthday celebration, or late night drinks; they always satisfy. The food is amazing and made with love and quality. It is always a welcoming environment and I recommend it to everyone.

Restaurant Y always has great service. Everything on the menu is 10/10 and the food is always made fast and is the perfect temperature. The staff is super friendly. There are never any mistakes, but if there was, the management would be understanding of the situation. For the quality of the food, everything on the menu is perfectly priced.

Restaurant Z has a very warm environment, filled with many people! These families fill the restaurant with plenty of smiles and laughs, making it a pleasant environment to bring loved ones! The portions are generous and very filling. Well worth the wait, with kind and hard-working staff! A great way to start the weekend with family and friends!

Negative Reviews

Restaurant W provided awful service, it took them a hour and a half to get our food. They brought in the steak that was over cooked. They took it back, then took another hour. Finally once it got here, everyone was done eating and had to wait till I was done. Never going there again.

I dislike restaurant X because when I went for the first time, I had horrible service, the item that i wanted to order they ran out, it took a very long time for my new order to arrive and it wasn't as good as it seemed. Also, as a student, it was quite pricy for what I got.

Restaurant Y has been deemed the "high school hangout," and that is very evident. During their busy hours (for half priced apps after 9pm), the food decreases in value, and seems almost thrown together. The service can be described as decent, but it takes a long time to be seated and to grab the attention of the waiters/waitresses.

Restaurant Z truly make unhealthy, and untasteful food. They are frequently understaffed, and the staff is typically more focused on taking a higher quantity of tables than the service they provide. The food is simple, and overpriced for the quality.

Appendix C: Measures and Scales

The Social Desirability Scale (SDS-17) (Stober, 2001)

1. I sometimes litter.
2. I always admit my mistakes openly and face the potential negative consequences.
3. In traffic I am always polite and considerate of others.
4. I have tried illegal drugs (for example, marijuana, cocaine, etc.).
5. I always accept others' opinions, even when they don't agree with my own.
6. I take out my bad moods on others now and then.
7. There has been an occasion when I took advantage of someone else.
8. In conversations I always listen attentively and let others finish their sentences.
9. I never hesitate to help someone in case of emergency.

10. When I have made a promise, I keep it – no ifs, ands or buts.
11. I occasionally speak badly of others behind their back.
12. I would never live off other people.
13. I always stay friendly and courteous with other people, even when I am stressed out.
14. During arguments I always stay objective and matter-of-fact.
15. There has been at least one occasion when I failed to return an item that I borrowed.
16. I always eat a healthy diet.
17. Sometimes I only help because I expect something in return.

Online Deception

1. I have left reviews that were partially inconsistent with my experience
2. I have left reviews that were totally inconsistent with my experience
3. I have left positive reviews when I had a negative experience

eWOM Skepticism Scale (Zhang et al., 2016)

Truthfulness

1. Online reviews are not generally truthful.
2. We can hardly depend on getting the truth from most online reviews.
3. Only few online reviews are inaccurate.
4. In general, online reviews don't reflect the true picture of a subject ---
5. You cannot always believe what is said in online reviews.
6. I am not skeptical about the truthfulness of online reviews.

Motivation

7. I often notice tricks that online reviewers use to get me to buy something
8. Most online reviews are not intended to manipulate people.
9. Product reviews are written to increase sales.
10. Most online reviews are intended to mislead.
11. Lots of online reviews are paid reviews.
12. People writing online reviews are always up to something.

Identity

13. The identities of the online reviewers are often deceptive.
14. Online reviewers care more about getting you to buy things.
15. I don't think that most online reviewers are the people who they claim to be.
16. People rarely write customer reviews for their own business.
17. People writing online product reviews are not necessarily the real customers.
18. People write online reviews pretending they are someone else.
19. Different reviews are often posted by the same person under different names.

Generalized Trust Scale (Couch, 1996)

1. I tend to be accepting of others.
2. My relationships with others are characterized by trust and acceptance.
3. Basically, I am a trusting person.

4. It is better to trust people until they prove otherwise than to be suspicious of others until they prove otherwise.
5. I accept others at “face value.”
6. Most people are trustworthy.
7. It is better to be suspicious of people you have just met, until you know them better.
8. I make friends easily.
9. Only a fool would trust most people.
10. I find it better to accept others for what they say and what they appear to be.
11. I would admit to being more than a little paranoid about people I meet.
12. I have few difficulties trusting people.
13. Basically, I tend to be distrustful of others.
14. Experience has taught me to be doubtful of others until I know they can be trusted.
15. I have a lot of faith in the people I know.
16. Even during the “bad times,” I tend to think that things will work out in the end.
17. I tend to take others at their word.
18. When it comes to people I know. I am believing and accepting.
19. I feel I can depend on most people I know.
20. I almost always believe what people tell me

Brand Authenticity Scale (Bruhn et al., 2012)

1. I think brand is consistent over time.
2. I think the brand stays true to itself.
3. Brand offers continuity.
4. The brand has a clear concept that it pursues.
5. The brand is different from all other brands.
6. Brand stands out from other brands.
7. I think the brand is unique.
8. The brand clearly distinguishes itself from other brands.
9. My experience of the brand has shown me that it keeps its promises.
10. The brand delivers what it promises.
11. Brand's promises are credible.
12. The brand makes reliable promises.
13. The brand does not seem artificial.
14. The brand makes a genuine impression.
15. The brand gives the impression of being natural.

The Reliance on Online Reviews (Cheng and Loi, 2014)

1. I spend a lot of time surfing the internet for online reviews before I decide upon a purchasing a product.
2. Other people's comments are very important for me to make purchase decisions.

Appendix D: Informed Consent Form

INFORMED CONSENT

Study Title: Trust in Online Reviews

Principal Investigator: Jenna Barriault

Supervisor: Dr. Reeshma Haji

The current research is being conducted by Jenna Barriault and Dr. Reeshma Haji.

The purpose of this research is to develop a deeper understanding of trust in an online context.

Participating in this study, it will involve me reading online reviews and rating them as either truthful or deceptive. It will also involve completing a series of short questionnaires on trust and authenticity, along with a short demographics survey related to behaviours associated with online reviews.

The study takes approximately 30 minutes to complete. **If I am participating through the Laurentian Psychology Research Participant Pool (RPP) on SONA**, I will receive 0.5% course credit toward my final grade, even if I do not complete the survey **or choose to withdraw my responses**. **If I am participating outside of the SONA system**, I can submit a request to be entered in a draw to win a gift card, even if I do not complete the survey **or choose to withdraw my responses**.

Personal identifying information will remain confidential and will not be linked to my responses. My information will not be used for any other purpose than that which is indicated above.

Data will be collected on Qualtrics software. Data will be stored securely on the Qualtrics software server, located in Europe; and as such will not be subject to the US Patriot Act. The Qualtrics software policies are compliant with the stringent guidelines of the European Union via Safe Harbor Agreement, including secure data encryption and safekeeping. Data will be destroyed after 10 years.

I am aware that my participation is strictly voluntary. I do not have to provide responses to any questions that I feel uncomfortable answering. I can withdraw my consent and exit the online questionnaire at any time, without penalty. This is a low-risk study, but should I feel any discomfort, I can contact the Laurentian University Health Services at 705-673-6546, or 705-675-1151 ext. 1067.

If I am concerned about my participation in the study, I can contact Jenna Barriault at jbarriault@laurentian.ca, Dr. Reeshma Haji at rhaji@laurentian.ca, or by phone at 705-675-1151 ext. 6709 (toll-free: 1-800-461-4030 ext. 6709). If I have concerns about the ethical aspects of the study, I can contact the Ethics Officer at 1-800-461-4030 ext. 2436 or 3681, or by e-mail at ethics@laurentian.ca.

By selecting “I have read and agree to the above terms and conditions,” I am consenting to participate in this study now. If I wish, I can print a copy of this consent form for myself.

Optional: To request a summary of the eventual results of the study, please send an email to: jbarriault@laurentian.ca.

Appendix E: Debriefing Form

DEBRIEFING FORM

Thank you for participating in this study on deceiver's distrust, financial incentives, and valence of online reviews.

The purpose of this study is to examine if being informed about financial incentives, or

deceiver's distrust affects participants' trust in online reviews and their ability to detect which (positive or negative) online reviews are truthful or deceptive. Deceiver's distrust is when the liar will expect others to be dishonest, due to their own behaviour.

All participants were asked to complete a brief questionnaire on social desirability.

Participants were exposed to a brief blurb about deceiver's distrust, financial incentives, or general information about online reviews (control condition).

Additionally, participants were exposed to online reviews that were positive or negative and they were asked to rate these reviews as either truthful or deceptive. Participants were also asked to complete some general measures of trust and authenticity.

We hypothesize that participants in the deceiver's distrust and financial incentives conditions will have less trust in online reviews relative to control. More specifically, we predict that participants exposed to negative reviews in the deceiver's distrust condition and participants exposed to positive reviews in the financial incentives condition will have less trust in online reviews. Additionally, we predict that participants in the deceiver's distrust and financial incentive conditions will be better able to detect truthful versus deceptive reviews, compared to the control group (those given general information about online reviews).

Please note: All of the information presented in each paragraph/blurb (deceiver's distrust, financial incentives, and the control group) were retrieved from published research articles. Although the information presented in this study on deceivers' distrust/deception and financial incentives questions the trustworthiness and authenticity of online reviews, this does not mean that all online reviews should not be trusted and are not authentic. Not all online reviews are deceptive, nor does it mean that all online reviews are truthful/authentic.

I apologize for not telling you the details of what was being studied at the beginning. Often, when individuals are asked to share their opinions and attitudes about sensitive topics, they tend to give more socially desirable responses (Grimm, 2010). This is known as social desirability bias. To reduce the effects of this bias, we withheld certain details at the beginning of the study. You might have responded differently to some items had you known the full purpose of the study from the beginning. Now that I have told you everything, I want to remind you that you are free to withdraw your consent.

Finally, please, please do not tell others about what we are studying as it may cause problems with our future data.

If you experienced discomfort while completing the study, you may wish to contact any of the following resources:

Laurentian University Counselling Services
R.D. Parker Building, 2nd Floor
Phone: (705) 673-6506 E-mail: counselling@laurentian.ca

Canadian Mental Health Association (Sudbury/Manitoulin Branch)
111 Elm Street, Suite 100
Phone: (705)-675-7252 E-mail: info@cmha-sm.on.ca

Good2Talk Confidential Helpline
Phone: 1-866-925-5454

24-hour Crisis Intervention Services line (Sudbury/Manitoulin)
Phone: (705) 675-4760*

If you have any questions or concerns about the study or about being a participant, you can contact Jenna Barriault at jbarriault@laurentian.ca, Dr. Reeshma Haji at rhaji@laurentian.ca, or by phone at 705-675-1151 ext. 6709 (toll-free: 1-800-461-4030 ext. 6709). If you have concerns about the ethical aspects of the study, you can contact the Ethics Officer at 1-800-461-4030 ext. 2436 or 3681, or by e-mail at ethics@laurentian.ca.

Thank you very much for your participation!

Now that you are fully aware of the real purpose(s) of the study, you have the right to remove your consent to participate. In which case, your data will be destroyed and will not be used in the study. Your decision will not impact your participation credits.

Optional: To request a summary of the eventual results of the study, please send an email to: jbarriault@laurentian.ca.

References

Grimm, P. (2010). Social desirability bias. Wiley international encyclopedia of marketing. <https://doi.org/10.1002/9781444316568.wiem02057>