

A taste of the influence of online reviews on restaurants

The roles of review valence, platform, and credibility

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A taste of the influence of online reviews on restaurants: The roles of review valence, platform, and credibility

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Preface

This thesis is written for the master Management, Economics and Consumer studies at the Marketing and Consumer Behaviour group at Wageningen University. It is an interesting read for students who want to know more about the effect of online reviews, as well as for marketers or managers in search for some academic guidance related to this topic.

The choice for the subject online reviews was relatively easy. Personally I am interested in the influence and functioning of social media, especially with its growing importance in society. My bachelor thesis was a more general literature study about the effects of social media, and it triggered me to translate my personal interest into a master thesis topic including an experiment. This personal interest is one of the reasons that motivated me to keep this project running rather smoothly.

The other reason is the guidance from Andres Trujillo Barrera from the Marketing and Consumer Behaviour group, who I would hereby like to thank for his supportive guidance through the project. I would also like to thank Arnout Fischer as a second supervisor, for the clear feedback he provided.

I hope you will read this thesis with pleasure, and that you acquire a taste for online review management.

Kind regards,

Anne-Wil van Lohuizen

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Abstract

Online reviews are an important influencer in consumer decision making. For companies, online reviews are a good way to retrieve valuable information from consumers about their product or service. To develop effective eWOM management strategies so both consumers and companies can benefit, some knowledge gaps need to be filled. First, there is an inconclusive area about the asymmetric effect of review valence. Second, the moderating role of platform type needs more research, including the influence of perceived review credibility. Finally, little research has been done to study the effect of online reviews in the service industry, especially in the restaurant sector. The goal of this study is to contribute to the knowledge of the effects of online reviews about restaurants on the consumer's attitude toward the restaurant and intention to visit the restaurant, and how these effects are influenced by review valence, perceived review credibility, and review platform. This research focusses on the restaurant context, using an experimental 2x4 between-subjects factorial design with two type of platforms (company websites and independent websites) and four types of review valences (positive, neutral, negative and balanced). Data of 256 respondents has been analysed. The results show that purchase intentions in the restaurant sector are influenced by review valence, and that this effect is mediated by the attitude toward the restaurant and partly moderated by perceived review credibility. The type of review platform has no moderating effect on the influence of review valence. The results of this study provide interesting input for further research on online reviews and practical information for marketers or managers in the service industry.

Keywords: online reviews, electronic word of mouth (eWOM), review valence, review credibility, platform, attitude, purchase intention, restaurant sector

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1. Introduction

A while ago, I became a member of one of the leading online review websites for hotels, flights, and restaurants, by registering at TripAdvisor. Now I am one of the 375 million unique monthly visitors, which means I have access to more than 250 million consumer recommendations and opinions about more than 5.2 million accommodations, restaurants and attractions (TripAdvisor, 2015). Because of my membership at TripAdvisor, an email appeared in my inbox:

Everyone's got a go-to restaurant, what is yours? Your review helps guide others to the hometown faves you want to support, so share now. Plus, every review gets you closer to your next level or badge with TripCollective. Add a review and help others know what to expect about these places near you.

This well-known international online review website asked me to write an online review. But what exactly is a review? An online review is a certain type of online or electronic word of mouth (eWOM): “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 via the Internet” (Hennig-Thurau et al., 2004, p.39). Before the existence of the Internet, the impact of word of mouth was restricted because of its limited diffusion (Mayzlin, 2006), but now it can be transformed into enduring messages visible to the entire world. The email asking me to write a review about restaurants I have been to shows the great importance of online reviews in the consumer decision making process nowadays. Recommendations that consumers provide in online reviews are considered even more important in making a purchase decision than traditional marketing messages like advertisements or promotions (Breazeale, 2009; Chiou & Cheng, 2003; Podnar & Javavernik, 2012).

Besides the importance of online reviews to consumers in their decision making process, eWOM is also very important for companies. Companies can profit from online reviews, since it is the best channel through which information about service quality and customer demands can be obtained (Schuckert et al., 2015). In other words, companies can learn directly from their customers. Especially negative reviews seem to be useful, since they may reflect problems within the company that need to be solved. Retrieving this valuable information from consumers can help managers to improve the company or the provided service (Pantelidis, 2010). Since eWOM influences sales revenues and company reputations (Babic et al., 2015; Pentina et al., 2015), companies start including eWOM into their business strategies to manage and take advantage of its effects. Inducing, collecting, and displaying eWOM have become important activities for marketers.

Still, several companies seem to struggle with incorporating the right eWOM strategy (Babic et al., 2015). For example, some companies offer consumers cash or coupons for writing positive online reviews. These paid reviews however, will on the long term reduce the availability of objective information, damage the credibility of eWOM, and may ultimately lead to litigations (Pentina et al., 2015). When eWOM is not understood and managed correctly, this is a considerably waste of money for companies. Not only because of the effect of online reviews on sales, but also because managing eWOM can be quite expensive. Early adopters like Dell and Starbucks invest tens of millions of dollars in eWOM management (Barry et al., 2011). Developing efficient and effective approaches to deal with eWOM is therefore essential. It is important that a company's own review platform and independent platforms are managed (as far as possible) in such a way that it benefits both consumers and companies. To develop these approaches, a better understanding of the factors influencing the effects of eWOM is necessary.

Despite the fact that many research has been done about eWOM, several knowledge gaps need further research. The first knowledge gap is related to eWOM valence (i.e. whether eWOM is positive or negative). Valence received a lot of attention in the eWOM context, but the literature is fragmented. Most studies indicate that eWOM valence influences purchase intentions and attitudes, but the findings about the effect differences between positive and negative reviews are inconsistent. While some studies have indicated that negative eWOM has a stronger impact on consumers' attitudes and purchase intentions than positive eWOM (e.g. Chevalier & Mayzlin, 2006; Chiou & Cheng, 2003), other studies indicate the opposite (Pentina et al., 2015; Wu, 2013). A suggested moderator that may explain these different findings is product type, whereas negative reviews could be more influential for utilitarian products and positive for hedonic products (Sen & Lerman, 2007). Most of the studies focussed on tangible utilitarian products, but not much is known on what is going on in the service industry. For efficient management it needs to be known which type of eWOM valence has the most impact. The inconsistent findings imply further research is needed (Lee & Koo, 2012).

A second knowledge gap consists of a lack of research about the moderating role of platform type on the effect of eWOM on attitude and purchase intention. This is problematic, since not knowing the different effects between online reviews on different types of platforms impedes efficient eWOM management. Should all eWOM be managed equally, or are reviews on certain platforms more important than others? Previous studies have mostly researched single samples, and therefore one platform, so they have not been able to investigate the effect of this factor (Babic et al., 2015).

Most studies focus on reviews displayed on one well-known platform such as Amazon or eBay (Pentina et al., 2015). Besides these online retail websites, consumers can also share their reviews through personal channels, such as Facebook, Twitter, blogs or other social media platforms. Other channels can be the brand official website, or more independent platforms such as online forums or review websites (Kiecker & Cowles, 2002). These different types of platforms operate with different mechanisms that can show in the terms of use, administrator privileges, and/or reviewer restrictions (Tsao & Hsieh, 2015). For example, on a brand official website the administrator is allowed to edit the website content (including reviews), while on an independent forum the administrator has no such right. This may affect the perceived credibility of the online reviews presented on the online platforms (Lee & Youn, 2009; Tsao & Hsieh, 2015). As a result, the influence of eWOM can vary with the platform on which it is presented (Tsao & Hsieh, 2015). So, whether a website is marketer-generated or not seems to be important to consumers in forming their attitude and purchase intention (Lee & Youn, 2009). Despite its importance, little research has discussed the role of platforms (Tsao & Hsieh, 2015).

A third knowledge gap is related to the fact that most existing studies focus on reviews of tangible products (Pentina et al., 2015). This is problematic, since dealing appropriately with the effects of eWOM is very important for companies selling service and experience goods (intangible products). Service based marketing is different from product based marketing, since the service or experience provided is all the service provider can offer, whereas for product based marketing service is only a piece of the bundle of benefits provided to the consumer. Another important difference is that goods are produced, and services are performed (Rushton & Carson, 1985). Whereas tangible products are dominated by standardized search attributes that can be determined before purchasing a product, services mainly consist out of varying experience attributes that can only be perceived during or after consumption, and credence attributes that are impossible to evaluate even after consumption (Zeithaml, 1981). So, services are unstandardized and difficult to evaluate without experiencing them first (Pentina et al., 2015). Therefore, purchasing these services brings a higher risk, so consumers often depend heavily on online reviews written by consumers who have already used the service (Hu et al., 2008; Park & Lee, 2009).

Not surprisingly, the impact of eWOM in the hospitality and tourism industry is substantial (Jeong & Jang, 2011). eWOM is ranked as the most important information source when making a purchase decision in the hospitality industry (Litvin et al., 2008; Shaw et al., 2011). It is indicated that positive word of mouth can increase sales in both the hotel sector and the restaurant sector (Anderson &

Magruder, 2012; Lu et al., 2013; Ye et al., 2009; Ye et al., 2011). Within the hospitality industry, the hotel sector receives most attention in eWOM studies (about 60% of the 50 papers), while the restaurant sector is of less concern (about 18% of the papers) (Schuckert et al., 2015). However, eWOM has a great importance in the restaurant sector as well (Boo & Kim, 2013; Jeong & Jang, 2011; Lu et al., 2013). Also, restaurant services are a widely used service and it is a well-known area for consumers to write and read reviews about (Meuter et al., 2013). Despite the significant impact of eWOM in hospitality-related industries, especially in the restaurant segment, little research has been done to investigate the effects of eWOM in this field. Previous research has focussed on restaurant experiences that trigger consumers to write positive or negative eWOM (Boo & Kim, 2013; Jeong & Jang, 2011; Zhang et al., 2014), on the effects of eWOM on firm value (Kim et al., 2015), and on the impact of eWOM on online popularity of restaurants (Zhang et al., 2010). Still, there is not much known about the effects of online reviews on attitude and purchase intention.

The knowledge gaps hamper the development of insight that can help marketers and managers make informed decisions about eWOM management for hospitality service. Hence, it is not only important for science to generate knowledge about the effects of online reviews, but also for marketing practitioners to manage eWOM effectively. Therefore, the overall goal of this study is to contribute to the knowledge of the effect of online reviews on consumers' purchase intention and attitude toward the restaurant, and how this effect is influenced by review valence, review credibility and the type of eWOM platform. The research question deducted from the overall goal is as follows: 'What are the effects of online reviews about restaurants on the consumer's attitude and purchase intention, and how are these effects influenced by review valence, credibility and platform?'.

This study makes several contributions to the eWOM literature. First, further research about the influence of valence is conducted to contribute to the inconclusive area about the different effects of positive and negative online reviews on attitude and purchase intention. The influence of review valence is combined with the effect of platform type, comparing the effect of different types of valence on two types of platforms: company websites and independent websites. So, the second contribution is providing further insight into the moderating effect of platform type. It is expected that credibility plays an important role in the influence of review valence and platform on attitude and purchase intention. The possible differences in perceived review credibility between different types of review valence and platforms may have an impact on the effect of eWOM on attitude and purchase intention. Therefore, this study examines how review valence and platform affect

perceived credibility, attitude, and purchase intentions. The third contribution is that this study conducts experiments to obtain primary data. Schuckert et al. (2015) and Wu (2013) both indicated that most studies use secondary data, gathering reviews from platforms in order to run an analysis. Despite the downsides of conducting an experiment¹, Wu (2013) states that more experimental studies are necessary since these will lead to more solid theoretic accounts. Finally, since there is a lack of research within the restaurant context, although this sector is strongly influenced by eWOM and at the same time a popular topic for online reviews, the restaurant sector is selected for this study.

In the remainder of the paper, previous relevant research findings will be presented. By analysing existing literature, a framework and hypotheses are developed. This is presented in the next section. The hypotheses are tested by an experiment using a between-participants factorial design. This methodology will be explained in the third section of this study, followed by the results. Further, a discussion of the results, limitations and directions for future research, and a conclusion are provided.

¹ E.g. small sample size, limited external validity, uncontrollable variables, artificial situation (Reips, 2000).

2. Conceptual background and hypotheses

In section 2.1 the concept purchase intention is explained, followed by the concept attitude, in section 2.2. Also, review valence is discussed in section 2.3, and perceived credibility in section 2.4. In addition, the moderating effects of platform type are discussed in section 2.5, focussing on company websites and independent websites. In the final section of this chapter (section 2.6), the conceptual framework is presented, providing an overview of the relationships between the different variables and the hypotheses.

2.1 Purchase Intention

Behavioural intention is a widely used dependent variable in studies about eWOM (e.g. Casaló et al., 2015; Sparks & Browning, 2011; Vermeulen & Seegers, 2009). Intentions are indications of how hard people are willing to try, how much effort they plan to exert in order to perform the behaviour. According to Sheeran (2002, p. 2), behavioural intentions are “people’s decisions to perform particular actions”. Purchase intention is a specific form of behavioural intention, and refers to the predetermination to buy a certain product or service (Belch & Belch, 2004). It indicates how likely it is that a consumer will buy the product. The stronger the intention, the more likely the intended behaviour will be performed (Ajzen, 1991). In the theory of reasoned action and the theory of planned behaviour, intention is a central factor. According to the theory of reasoned action, intention to perform a behaviour determines the actual performance of a behaviour. This intention is determined by the attitude toward the behaviour and subjective norms. Attitude toward the behaviour refers to how a person evaluates (positively or negatively) the behaviour in question. Subjective norms refer to the perceived social pressure to perform or not perform the behaviour (Ajzen, 1991). An extension to the theory of reasoned action is the theory of planned behaviour. The theory of planned behaviour also indicates that intentions are the most important predictor of actual behaviour, but acknowledges that people cannot always control their behaviour (Ajzen, 1991). Therefore, a factor is added that also determines behaviour, namely perceived behavioural control. This factor relates to the perception of how easy or difficult it is to perform the behaviour, whether the person can decide at will to perform or not perform the behaviour. Perceived behavioural control explains why intentions do not always predict behaviour.

2.1.1 Intention and eWOM

Several studies show that intentions can be influenced by eWOM. Whether the intention increases or decreases depends on the WOM valence. Research has indicated that positive eWOM motivates product or service purchases, while negative eWOM generally reduces purchase intentions. Sparks

and Browning (2011) found that booking intentions were higher when most reviews were framed positively. When the reviews were mainly negative, booking intentions dropped significantly. Chen (2008) found that online reviews are used in making purchasing decisions in an online bookstore. Recommendations of other consumers exerted a greater influence on the decision making outcome than reviews from experts or firm related advisors. Casaló et al. (2015) tested another form of eWOM, namely rating schemes (i.e. top 10 best or worst hotels). Both attitudes and booking intentions were higher for hotels that appear in the best hotels list. The influence of eWOM on intention may be explained by a study of Jalilvand and Samiei (2012) about the effect of eWOM on a tourism destination choice. They found that eWOM has a significant influence on attitude toward the behaviour, subjective norms, and perceived behavioural control. These variables are all determinants of behavioural intentions. Also, a direct effect of eWOM on intention to travel was found. Therefore, the first hypothesis of this study is:

H1: Positive online reviews increase the intention to visit the restaurant, whereas negative online reviews decrease the intention to visit the restaurant

2.2 Attitude

Attitudes help us to determine how we think and feel about things, and influence the decisions we make. An attitude can be described as “a learned, global evaluation of an object (person, place, or issue) that influences thought and action” (Perloff, 2010, p. 43). Or, as the theory of planned behaviour describes it: “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1991, p. 188). These evaluations can be measured by scale items such as good-bad, pleasant-unpleasant, and likeable-dislikable (Ajzen, 2001). People are not born with attitudes, but they are formed by informational influences, for example via mass media or personal communication, or by direct experience (Perloff, 2010). Therefore, it is not unreasonable to assume that attitudes (in this case toward a restaurant) may be influenced by the information provided in online reviews.

2.2.1 Attitude and eWOM

eWOM can have a powerful role in forming an attitude, both positively and negatively. For example, Lee et al. (2009) found that eWOM and its valence can have a strong effect on the attitude toward a product. Positive reviews had a positive impact on the attitude toward a fictitious laptop, while negative reviews had a significant negative impact on the attitude. This coincides with findings of Chiou and Cheng (2003), who also indicated that eWOM can have a strong influence on the evaluations and attitude toward the product. Also in the service industry effects of eWOM on attitude have been found. For the hotel sector, Lee et al. (2008) indicated that a high number of

negative reviews leads to a negative attitude toward the hotel. Vermeulen and Seegers (2009) point out that both positive and negative reviews influence the attitude toward the hotel, and that the influence is stronger for lesser-known hotels. In the restaurant context, Lee and Cranage (2014) state that negative eWOM leads to a higher unfavourable attitude change when there is a higher information consensus than non-consensus. Since there is a growing body of research that states that eWOM can influence the attitude, the second set of hypothesis of this study is:

H2: Positive online reviews have a positive impact on the attitude toward the restaurant, whereas negative online reviews have a negative impact on the attitude toward the restaurant.

2.2.2 Attitude and intention

Attitudes are key components of consumer decision making and guide behaviour. For example, if you have a positive attitude toward a specific restaurant, it is likely that you will decide to go there when you are planning to go out for dinner. A favourable attitude increases intentions to purchase a product or service, and an unfavourable attitude decreases such intentions. Hence, attitudes are useful predictors of consumers' behaviour toward a product or service (Sallam & Wahid, 2012). The Theory of Reasoned Action suggest that a person's intention depends (partly) on his or her attitude (Ajzen & Fishbein, 1975; Pradhan et al., 2014). Several studies showed that attitude toward a product, service, or brand can influence the purchase intention of a consumer. For example, it has been found that attitude toward a brand can have a strong influence on the consumer's purchase intention (Goldsmith et al., 2000; Lafferty et al., 2002; Pradhan et al., 2014). Also, according to Hartmann and Apaolaza- Ibáñez (2012), positive attitudes toward green energy contribute to a growth in consumers purchasing green electricity. Hence, besides the direct impact of online reviews on attitude and purchase intention, attitude serves as a mediator between online reviews and purchase intention. Therefore, the third hypothesis is:

H3: Consumers' attitudes toward a restaurant have a positive impact on intention to visit the restaurant.

2.3 Review valence

Some products or services may receive mostly positive feedback, while others may receive all negative feedback. Hypotheses 1 and 2 indicate that both types of reviews have an influence on attitudes or purchase intentions. A finding from Floh et al. (2013) though, is that valence seems to have an asymmetric effect. However, there are contradictory findings about whether reviews with a positive or negative valence have a stronger impact on consumer attitudes or purchase intentions.

2.3.1 The asymmetric effect of valence

Several studies indicate that compared to reading no reviews or neutral reviews, negative reviews have a bigger impact on attitude toward the reviewed product than positive reviews (Chevalier & Mayzlin, 2006; Chiou & Cheng, 2003; Floh et al., 2013; Lee et al., 2009; Park & Lee, 2009; Podnar & Javernik, 2012). For example, Podnar and Javernik (2012) showed that the effect of negative reviews was more than twice as large as the effect of positive reviews on attitude. Lee et al. (2009) found similar results. The phenomenon that negative online reviews have a bigger impact is consistent with the negativity effect, an assumption in psychology which states that negative information has a greater weight compared to equally strong positive information in creating judgements (Ahluwalia, 2002; Wu, 2013). Two underlying mechanisms that may explain the negativity effect are uncertainty reduction and loss avoidance. Purchasing services is considered to be associated with high risk. When consumers have very little or no knowledge about a product or the outcomes of consuming the product, they will try to reduce this uncertainty to minimize the risks and maximize the outcome value. This is also called the Uncertainty Reduction Theory (Hu et al., 2008). Consumers can reduce their perceived uncertainty by reading online reviews written by other consumers. When doing this, consumers are more influenced by negative reviews than by positive reviews, also known as the Prospect Theory (Kahneman & Tversky, 1979). This is because most people tend to be risk averse and try to avoid possible losses. Negative reviews provide us with more warnings about possible risks than positive reviews (Yin et al., 2013).

However, the findings in a study of Wu (2013) counter this negativity effect. Wu (2013) stated that the negativity effect documented in the psychology literature may not be fully applicable to the eWOM context. This statement is consistent with the findings of Gershoff et al. (2003), who showed that positive reviews have a stronger impact than negative reviews. Other researchers, like Pentina et al. (2015), also found that the impact of positive eWOM is greater than negative eWOM. Khammash and Griffiths (2011) found that positive eWOM can be a bigger influencer in a later stage of the buying process. Still, there seems to be more theoretical support for the statement that negative eWOM has a stronger effect compared to positive eWOM. Also, studies found that the negativity effect is even more important when it is about experience goods, compared to search goods (Park & Lee, 2009; Siering & Muntermann, 2013). Therefore, the following hypothesis is tested in this study:

H4a: A set of negative reviews will have a bigger influence on purchase intention and attitude toward a restaurant than a set of positive reviews.

2.3.2 Balanced review sets

Besides positive and negative review sets, there are also balanced review sets: sets that combine both positive and negative information. So, when consumers look for online reviews they can encounter a review page where all or most reviewers agree that a restaurant is either good or bad (i.e. a positive or negative review set), or a review page where the reviews are conflicting, displaying both positive and negative reviews (i.e. a balanced set of reviews). Several studies state that balanced review sets have little impact on consumers' product evaluations and behaviour, since consensus information (when reviewers agree) about a product or service is more persuasive than conflicting information (Chiou & Cheng, 2003; Doh & Hwang, 2009; Lee & Cranage, 2014). Purnawirawan et al. (2012) found that balanced review sets are perceived as less informative, compared to consistent positive or negative information. Positive or negative reviews provide implications for consumers' purchase decisions, so it is more clear for consumers whether to buy the product or not. The contradictory information in balanced review sets leaves the reader at a loss (Langner et al., 2012; Purnawirawan et al., 2012).

Also, consumers may wonder why reviewers wrote positive or negative reviews. The inferred reason may be different when consumers read reviews that have the same type of valence, or read reviews with different types of valence (balanced set). The attribution theory addresses "how people make causal inferences, what sort of inferences they make, and what the consequences are" (Folkes, 1988, p. 548). The theory states that people try to determine why people do what they do. Especially in consumer research, the attribution theory has been used to explain how consumers determine a communicator's motivation to recommend a product (Dou et al., 2012). When the reader infers that the review can be attributed to personal or situational causes, the review will have little influence in the decision making process. This is also called the discounting principle (Kelley, 1973). Lee and Cranage (2014) found that when all the reviews in a review set are negative, consumers tend to put the blame more on the company and form a negative attitude toward the restaurant, compared to when the review set is balanced. When a review set is balanced, consumers may attribute the satisfaction or dissatisfaction more to the reviewer or to circumstances beyond the companies control. As a result, the reviews are not likely to influence the attitude of the consumer toward the company. This leads to the following hypothesis:

H4b: A balanced set of reviews will have less influence on purchase intention and attitude toward a restaurant than both positive and negative review sets.

2.4 Perceived credibility

The phenomenon that negative reviews have a larger impact on the consumer can be explained by more than just the negativity effect. Credibility plays a very important role here as well. Credibility can be defined as the extent to which one perceives information provided as unbiased, believable, true, or factual (Qiu et al., 2012). Note that credibility in this study is defined as a perceptual variable, not an objective measure. It is a characteristic of the review judged by the receiver of the information (Flanagin & Metzger, 2007).

2.4.1 Perceived credibility and valence

Previous studies have shown that there is a difference in perceived review credibility between positive, negative, and balanced reviews. Though Lee and Cranage (2014) state that eWOM consensus increases perceived credibility, Doh and Hwang (2009) indicate that the credibility of websites and online reviews can be damaged if all reviews are positively framed. Reichelt et al. (2014) also state that consumers might doubt the credibility of information if it is mostly positive. Several studies confirm these statements, and found that negative reviews are perceived as more credible than positive reviews (Ballantine & Yeung, 2015; Kusumasondjaja et al., 2012). Negative review sets are perceived as more accurate than positive review sets, due to their apparent independence from the firm (Cheung et al., 2009). The lack of credibility in positive reviews may impair the effect of positive online reviews on attitude and purchase intention. The following hypothesis is presented:

H5a: A set of negative reviews is perceived as more credible than a set of positive reviews.

Though a balanced review has a positive impact on the perceived credibility (Ballantine & Yeung, 2015; Doh & Hwang, 2009), a balanced review set is expected to have a negative effect on the perceived credibility. Review consistency can be an important cue to assess the credibility of the reviews (Cheung et al., 2012). Agreement increases the believability of information, while opposing information decreases the believability (Moran & Muzellec, 2014). So, if all or most reviewers have the same opinion about a product or a brand (either positive or negative), the review set will be perceived as more credible than a review set containing both positive and negative reviews (Gershoff et al., 2007). The negative impact of balanced review sets on perceived credibility may explain the expected little impact of balanced review sets on consumers' product evaluations and behaviour (see H4b). The following hypothesis is posed:

H5b: A balanced set of reviews has a negative impact on the perceived review credibility.

2.4.2 Moderating effect of perceived credibility

The influence of review valence on attitude and purchase intention seems to be moderated by perceived review credibility. Most studies indicate that highly credible reviews are more likely to persuade the consumer and change their attitude and behaviour in the direction of the valence than less credible reviews (Chu & Kamal, 2008; Hovland et al., 1953; Lee & Koo, 2012; Pentina et al., 2015; Wathen & Burkell, 2002). Also in a recent study about online blogs, credibility was a significant and positive predictor of both product attitude and purchase intention (Hayes & Carr, 2015). However, when consumers perceive that the credibility of a message is too low, they resist the persuasive intent of the review, and it will not influence attitude or behaviour (Lee & Koo, 2012; Wathen & Burkell, 2002). So, the strength of the relationship between review valence and consumers' attitude and purchase intention depends on the perceived credibility of the review set. The higher the perceived credibility, the stronger the influence of review valence on attitude and purchase intention. Thus, perceived credibility is considered as an important element and is therefore added to the model of this study. The hypothesis is the following:

H6: The impact of online reviews on attitude and purchase intention is stronger when online reviews are perceived as credible.

2.5 eWOM platform

Platforms used by consumers to share their word of mouth are becoming increasingly diverse. Kiecker and Cowles (2002) classified eWOM communication into four types, based on the initiator, sender, and internet environment. In terms of platform openness and the degree to which information is circulated, this study focusses on the platforms related to quasi-spontaneous communication and independent communication, and refers to them as company websites and independent websites respectively. Also, previous studies found that third party review websites and company websites are the most preferred sources of eWOM (Meuter et al., 2013; Senecal & Nantel, 2004). A number of companies provide a review platform on their website to stimulate consumer-to-consumer interaction. A small, but growing body of research suggest that companies can enhance their reputation by facilitating the writing and posting of online reviews (Grabner-Kraeuter, 2002). Companies can benefit from providing consumers with the opportunity to interact online, since this opportunity may increase trust in the company website (Xue & Phelps, 2004).

However, most literature states that reviews on independent websites are more influential than reviews on company websites. In a study of Meuter et al. (2013) about the influence of positive eWOM on restaurants, it was found that online reviews on the company website had less impact

on purchase intention, attitude, and trust in the review, compared to reviews on Facebook or on yelp.com (an independent review website). The key difference that was pointed out is the trait of independence. “The website testimonials are clearly under control of and influenced by the restaurant and thus can be viewed as less independent and impartial. Alternatively, both the Facebook recommendations and yelp.com recommendations appear to be unbiased sources of information with no agenda” (Meuter et al., 2013, p. 252).

2.5.1 Moderating role of platform type

Several studies indicated that a certain platform type can strengthen or weaken the relationship between review valence and perceived credibility, review valence and attitude, and review valence and purchase intention. Tsao & Hsieh (2015) indicate that positive reviews on independent websites are perceived as more credible than positive reviews on company websites, due to the lack of control by companies. Not only are they perceived as more credible, but they also have more influence on attitude and purchase intention. Bickart and Schindler (2001) for example, found that product information on independent websites is more likely to increase people’s interest in the product and the intention to buy it than information on a company website.

This is supported by the discounting principle of the attribution theory. In the case of positive reviews on a company website, consumers attribute the review to personal, non-product related motivations (i.e. increasing sales), and are less likely to follow the recommendations compared to reviews on more independent websites (Senecal & Nantel, 2004). Positive reviews on an independent website that has no affiliation with the company, are likely to have a stronger persuasive effect (Sussan et al., 2006). Independent websites, established by independent parties and groups with a specific interest or professionalism, are generally more likely to attract reviews of experts than company websites (Tsao & Hsieh, 2015). Therefore, on these independent websites, consumers perceive the reviews as credible evaluations, and find them helpful in assessing the product attributes and their functionality. This enhances the likelihood that consumers will adopt the information (Bickart & Schindler, 2001; Truong & Simmons, 2010).

Trust may also explain why reviews on independent websites are more influential. Sussan et al. (2006) indicate that when a company has positive reviews on its website, the effect on attitude and purchase intention decreases. This is because consumers will perceive the positive reviews as a deliberate part of manipulated marketing communications, and therefore the review(er) will not be trusted. According to Jeacle & Carter (2011), the question related to trust is: does the user of the

site believes that the reviews reflect the honest opinion of fellow consumers or are they the biased untruths of restaurant owners? Are reviewers committing fraud because of their egocentric profit motive? According to Babic et al. (2015) and Mayzlin et al. (2014), committing fraud is more likely to happen on company websites than on independent websites, because for independent websites very often posting hurdles are present. For example, when writing a review on TripAdvisor, you need to be registered as a member, and reviews are screened to check if they meet posting guidelines. Also, before posting your review, you have to tick a box that states you have no personal or business relationship with the establishment whatsoever. They refer to their zero-tolerance policy toward fake reviews, and state that review fraud is a breach of conditions, unethical and above all in many cases forbidden by law. Previous research has shown that such hurdles decrease the presence of fake reviews and increases the value and perceived credibility of eWOM on independent websites (Ott et al., 2012).

This prevention of fake reviews may also improve the reputation of the website. Chich et al. (2013) found that a good website reputation has a positive effect on the perceived credibility of the information on the website. Consumers are more likely to trust reviews posted on websites with established reputations than those without established reputations. As a result, reviews on a website with a well-established reputation have more impact on consumers' attitudes and purchase intentions in the direction of the valence of the reviews (Chich et al., 2013; Park & Lee, 2009). It is assumed that an independent review website such as TripAdvisor has a more established reputation than a restaurant website for obtaining credible reviews. The following hypotheses are posed:

H7: Reviews on an independent website are perceived as more credible than reviews on a company website.

H8: Reviews on an independent website have greater influence on attitude and purchase intention than reviews on a company website.

2.6 Conceptual framework

The variables and hypotheses derived from the literature study are presented in the conceptual framework of this study (Figure 1). This framework provides an overview of the relationships between the different variables that are tested by conducting an experiment. The variables review valence and review platform are the manipulated variables in this study. Review credibility, attitude, and purchase intention are variables that are measured. The methods are described in the following chapter.

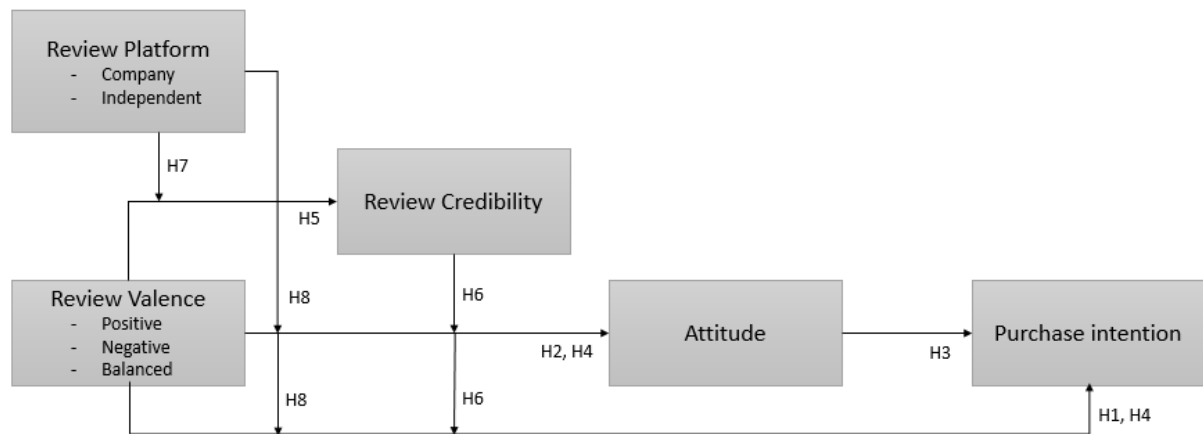


Figure 1: Conceptual framework

3. Method

3.1 Experimental design and participants

The hypotheses were tested by an experimental 2 x4 between-subjects factorial design with two review platforms (company website and independent website), and four review sets with different valences (positive, neutral, negative, and balanced sets). Participants were randomly assigned to one scenario (Table 1). The participants in the groups 1 to 4 read a scenario in which online reviews about a restaurant are posted on a company website, while the participants in the groups 5 to 8 read a scenario with the same set of reviews posted on an independent review website. The platform manipulation is needed to examine the moderating role of platform type. In both platform scenario's four different type of review sets were presented: positive, neutral (control group), negative, and balanced review sets. In this way the different types of review valence and their influences on credibility, purchase intention and attitude toward the restaurant can be measured and compared. The experiment is conducted online, which fits with the online context of this study.

Table 1: 2x4 factorial design

	Company website	Independent website
Positive review set	Group 1	Group 5
Neutral review set (control group)	Group 2	Group 6
Negative review set	Group 3	Group 7
Balanced review set	Group 4	Group 8

The sample population consisted of 256 students from the Wageningen University. Students are desirable participants for this study since most students are familiar with various forms of eWOM (Meuter et al., 2013). The number of participating women (79.7%) was almost four times as large as the number of participating men (20.3%), but the distribution of men and women across conditions is balanced (Figure 2). The majority of the respondents were aged between 17 and 25 (93.4%). As many students as possible were informed and requested to participate in the online experiment, by sending personal emails and social media messages. In order to motivate the students to respond, a gift-card of the Dutch webshop Bol.com was randomly awarded to one of the respondents that gave permission to enter the prize draw. The requirement to participate in the study is that the participants are registered as a student at the Wageningen University. Also, to prevent unintended cultural influences on the results, only students with a Dutch nationality were allowed to participate in the experiment. Therefore, the survey was entirely in Dutch.

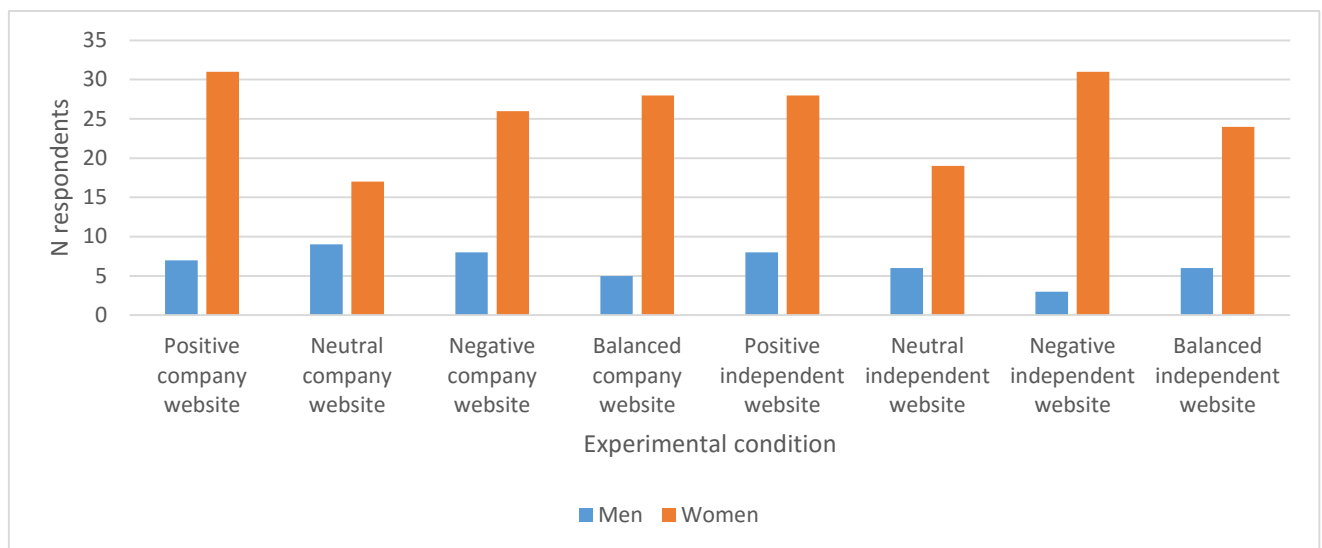


Figure 2: Gender descriptives per experimental condition

3.2 Procedure

The online experiment was created with Qualtrics, an online tool that facilitates designing online surveys. The online survey was programmed so that participants would be assigned randomly to one of the eight conditions in the experiment, while taking into account that each group should have about the same number of subjects. It is explained that the study is about restaurant reviews, and that the survey is anonymous (except that if participants want to take part in the lottery for the gift-card they need to fill in their e-mail address). Participants were asked to imagine that they were planning an important dinner with their (future) colleagues and they had to pick a restaurant. Since it is important that it would be a pleasant experience, they solicited the help of online reviewers to get feedback on the restaurant. First, the participants were exposed to a set of reviews (either positive, neutral, negative, or balanced) displayed on a company website or an independent website. Second, questions about the attitude toward the restaurant, the intention to visit the restaurant, and the perceived review credibility are asked. The third phase of the experiment contained a manipulation check to test the restaurant and website familiarity, review valence, and platform independency. The fourth step was filling out questions related to some demographics. Finally, the participants were thanked, and the opportunity to sign in for the lottery was provided. The questionnaire can be found in Appendix A.

3.3 Pretesting and manipulation check

Pre-tests were done to obtain feedback on the clarity of the questions, wording, and the manipulations. A ‘think aloud’ strategy was adopted from Sparks and Browning (2011), where 15

participants of the pre-test are requested to talk through what they think about the experiment, in front of the researcher. Resulting from this pre-test, some minor changes were made regarding the displayed websites, and some questions related to intention were deleted since they seemed to be redundant.

Besides the pre-testing, manipulation checks in the main study were done to assess the positive, negative, neutral, or balanced framing of the manipulated review sets. The participants are asked to rate the set of reviews based on the extent to which they thought the set of reviews were positive, negative, neutral, or balanced. This is done using a five-point scale, where 1 is extremely negative and 5 is extremely positive, adopted from Wu (2013). Also, the manipulated platforms need to be tested to measure the level of (in)dependence of the two type of platforms. This is measured using a five-point Likert scale, containing the item ‘the website is independent from the restaurant’ (1=strongly disagree and 5=strongly agree). The context of the survey scenario is a fictitious restaurant, so that participants cannot be influenced by previous formed attitudes towards the restaurant when filling out the questionnaire. The restaurant is called ‘Restaurant Max’, adopted from Meuter et al. (2013) who used the fictitious restaurant ‘Café Max’ in their experiment. To confirm that participants were unfamiliar with the restaurant so there would be no influence of prior attitudes when answering survey questions, it was asked in the main study whether they knew the restaurant or not with a yes-no question. All the respondents answered no to this question, so none of them had to be removed from the dataset. Finally, it was asked whether participants knew the website they just saw with a yes-no question. 36% of the respondents who saw the independent website (n=125) were familiar with the website.

3.4 Manipulations

The two variables that are manipulated in this study are review valence and platform type. Two simulated websites are designed to show a review set about the fictitious restaurant: a review website and the company website. For the independent website, an edited version of the most popular restaurant review website in the Netherlands (IENS) is used (Oosterveer, 2012). The layout of the independent website in the experiment looked as much as possible like the existing IENS website to enhance realism. The layout of the company website is based on an existing restaurant website to increase the degree of realism. The company website included the fictitious name and logo of the restaurant, and also an inactive navigational menu bar. On both websites the set of reviews were placed in a central position.

In order to ensure consistency across the two different platform types, the same positive, negative, neutral, and balanced review sets were used. Thus, in total four review sets were designed, used on both type of platforms. The review sets contain 6 reviews so that the webpage looks full (like in most real situations), discussing relevant information about the restaurant. Researchers active in the restaurant context agreed that food quality, physical environment, employee service, and price are the most important aspects of the dining experience (Namkung & Jang, 2007; Pantelidis, 2010; Wall & Berry, 2007). Therefore, these aspects are included in the review sets, except for the neutral set. The neutral set contains only one review, with a request if someone has an opinion about the restaurant. Since neutral reviews do not provide useful information that can influence the consumer in making a decision, the scenarios with the neutral review are the control groups. From the pre-test it was clear that showing one neutral review is the best option for the control condition. A variety of websites that post reviews about restaurants were visited to see how reviews are written. Besides this online research, some reviews designed in previous studies are selected (and adapted) for this study. The four review sets that are used in the experiment can be found in Appendix B.

3.5 Measures

Attitude toward the restaurant is measured using a reliable seven-point semantic differential scale with five items (Cronbach's $\alpha=.984$), used by Spears and Singh (2004) (Appendix C). The items consist out of 'unappealing/appealing', 'bad/good', 'unpleasant/pleasant', 'unfavourable/favourable', and 'unlikable/likable', with the question to describe your overall feeling about the object (in this case the restaurant). Purchase intention is measured using a two-item seven-point semantic differential scale (Cronbach's $\alpha=.964$), based on Spears and Singh (2004). The two items of purchase intention are 'definitely not/definitely', and 'probably not/probably' (Pan & Siemens, 2011). Review credibility is measured with a seven-point Likert scale adopted from Cheung et al. (2009), containing the statement 'I think this review is credible'.

3.6 Analyses

First, manipulation checks were done to check the review valence level and the independency level of the platforms. An ANOVA was conducted to test the differences on perceived review valence between the four types of valences. An independent sample t-test was done to compare the groups who visited the company website and the independent website.

The first hypothesis tests whether positive reviews increase the intention to visit the restaurant, and negative reviews decrease the intention to visit the restaurant. This is tested for two different situations, namely for an independent platform and a company platform. This is also the case when

testing hypotheses 2 and 5, but instead of measuring purchase intention, the variables attitude and review credibility are measured respectively. ANOVA tests are conducted to determine the main effects of review valence per platform on credibility, attitude, and purchase intention. When Levene's test is significant, Welch's F is reported and a Games-Howell post-hoc test is conducted. When Levene's is significant, the 'classical' F is reported, followed by a Gabriel's post-hoc test. A Gabriel's post-hoc test is chosen because of the slightly different sample sizes (Field, 2009). Conducting ANOVA tests including the post-hoc tests, it can be seen if the effects are significant, and mean values can be compared to test hypotheses 1, 2, 4, and 5.

Hypothesis 3 tests the relationship between attitude and intention, with attitude as a possible mediator. A simple mediation analysis was conducted, using ordinary least square path analysis. This is done by using a SPSS macro called 'PROCESS' written by Andrew F. Hayes (Hayes, 2013). Since the independent variable review valence is multicategorical, indicator coding with the control group as the reference group is conducted before testing for mediation (Hayes & Preacher, 2014). It is checked with a regression model whether the independent variables (review valences) predicts the mediator (attitude) or not, and if the mediator is significantly related to the dependent variable (purchase intention). If these relationships are confirmed, the bootstrapping method is conducted to determine the indirect effect (mediation) of review valence and purchase intention via attitude (Preacher & Hayes, 2004; Shrout & Bolger, 2002). According to Field (2013), bootstrapping is preferred over Baron and Kenny's method and Sobel test, since it is the best way to report the degree of mediation observed in the data. Whether the indirect effect is significant can be checked by looking at the 95% confidence interval. If the value zero is included in the confidence interval, the indirect effect is not significant. The significance of the indirect effect can also be checked by looking at the p values.

Hypotheses 6, 7 and 8 can be tested by checking for a significant interaction effect between review valence and perceived review credibility, and review valence and review platform. Also here the SPSS macro PROCESS is used. PROCESS is a helpful tool, since it centres the variables and create the interaction variables automatically. A simple slopes analysis is done to find out the nature of the moderation.

4. Results

4.1 Manipulation checks

To check the manipulation for review valence, an ANOVA was conducted to look for differences on perceived review valence between the four groups of valences. There were statistically significant differences in the perceived review valences between the four valence groups, $F(3,125.17)=665.34$, $p < 0.001$ (Welch's F)². A Games-Howell post-hoc test revealed that the perceived review valence was significantly different between the groups exposed to positive ($M=4.80$), negative ($M=1.10$) and neutral review sets ($M=3.12$) ($p<0.001$). Groups who read balanced review sets ($M=2.87$) scored perceived valence significantly different than groups who read positive and negative review sets ($p<0.001$). However, no significant differences in perceived valences were found between groups who were exposed to neutral and balanced review sets ($p=0.28$). To conduct a manipulation check for platform independency, a t-test is done to compare the groups who visited the company website and the independent website. On average, participants rated the company website less independent ($M=3.00$, $SE=0.11$) than the independent review website ($M=3.65$, $SE=0.11$), $t(254)= -4.11$, $p< 0.001$. These results suggest that the manipulations were successful.

4.2 Hypotheses testing

An ANOVA was conducted to test hypothesis one, which states that review valence influences purchase intention. The main effect of review valence showed significant differences in the intention to visit the restaurant ($F(3,128.82)=332.38$, $p<0.001$) (Welch's F)³. The results of the Games-Howell post-hoc test showed that both neutral and positive, and neutral and negative differed significantly from each other. Positive reviews increased the intention to visit the restaurant ($M_{\text{positive}}=5.84 > M_{\text{neutral}}=4.00$, $p<0.001$), whereas negative reviews decreased the intention to visit the restaurant ($M_{\text{negative}}=1.45 < M_{\text{neutral}}=4.00$, $p<0.001$). Therefore H1 is supported.

Hypothesis 2 is also tested, to determine the effect of review valence on attitude. It showed that review valence caused significant differences in attitude toward the restaurant ($F(3,252)=314.99$, $p<0.001$). The mean values and the results of the Gabriel's post-hoc test indicated that compared to the control group, positive reviews increased the attitude toward the restaurant ($M_{\text{positive}}=6.11 > M_{\text{neutral}}=4.25$, $p<0.001$), while negative reviews decreased the attitude toward the restaurant significantly ($M_{\text{negative}}=1.69 < M_{\text{neutral}}=4.25$, $p<0.001$). As a result, H2 is supported. When comparing the effect of valence on the mean values of intention and attitude per platform, the same results

² Levene's test $F(3,252)=5.04$, $p < 0.001$

³ Levene's test $F(3,252)=10.40$, $p<0.001$.

showed up: for both the company and the independent website positive reviews increased the purchase intention and attitude toward the restaurant, while negative reviews decreased the purchase intention and attitude toward the restaurant significantly (Table 2).

Table 2: Mean values of intention, attitude, and credibility per experimental condition

Review Valence	Review Platform	Purchase intention		Attitude restaurant		Review Credibility	
		Mean	SD	Mean	SD	Mean	SD
Positive	Company	5.95	0.78	6.15	0.73	4.82	1.47
	Independent	5.72	1.20	6.06	1.11	4.69	1.51
Neutral	Company	4.04	0.85	4.36	0.58	4.31	1.62
	Independent	3.96	1.24	4.13	1.04	4.20	1.12
Negative	Company	1.38	0.60	1.64	0.67	5.50	1.05
	Independent	1.51	0.73	1.75	0.71	5.12	1.39
Balanced	Company	3.50	1.40	4.07	0.99	3.58	1.52
	Independent	3.57	1.35	4.15	0.89	3.83	1.40

To test hypothesis 3, the relation between attitude and purchase intention is analysed. An ordinary least square path analysis showed that attitude has a significant positive influence on purchase intention ($b=0.90$, $t(251)=17.29$, $p<0.001$). Therefore, hypothesis 3 is supported. In addition, a simple mediation analysis was conducted to test whether attitude mediates the effect of review valence on purchase intention. The control group functions as the reference category, and parameters in the model are quantifications relative to this reference group (Hayes & Preacher, 2014). A relatively small (or non-significant) direct effect (c') and a large indirect effect (id) of positive and negative review sets indicates mediation (Figure 3). Also, the bootstrap confidence interval does not contain a value of 0 for positive and negative reviews (based on 1000 bootstrap samples), so the indirect effect is significant at a 0.05 level for positive and negative review sets ($b=1.67$, BCa CI [1.37, 2.02]; $b=-2.29$, BCa CI [-2.66, -1.95] respectively). For balanced reviews however, there is no significant indirect effect ($b=0.13$, BCa CI [-0.41, 0.19]). There is also no relationship between balanced review sets and attitude ($p=0.39$). So, attitude seems to be mediating the effect of positive and negative review sets on purchase intention, where positive review sets increase the intention and negative review sets decrease the purchase intention compared to the neutral review sets.

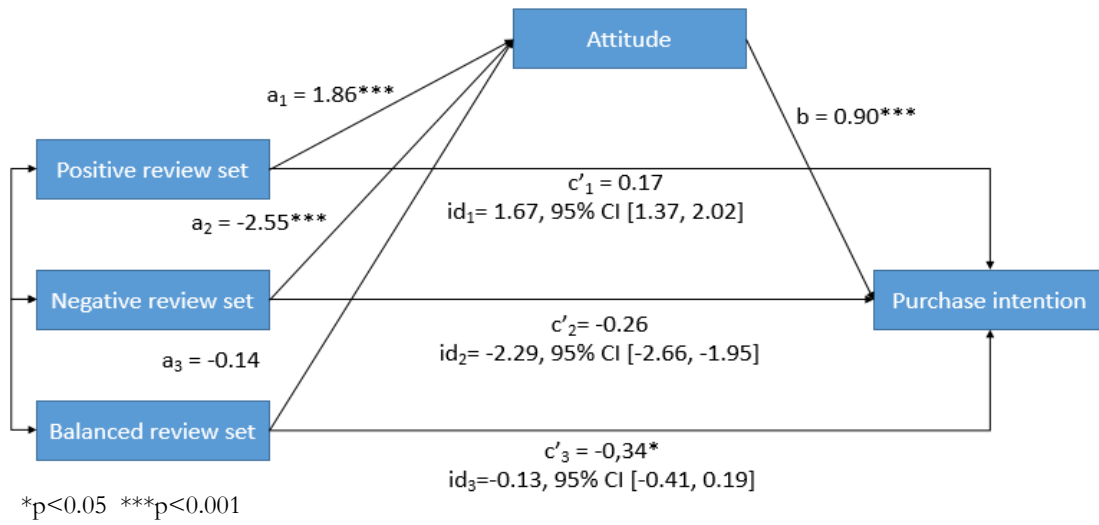


Figure 3: Mediation model

Hypothesis 4 needs to be tested to check for an asymmetric effect of review valence on attitude and purchase intention. Comparing the impact of positive and negative reviews on purchase intention, it can be concluded that negative reviews have a significant bigger influence than positive reviews ($t(140)=4.93, p<0.05$). Both positive and negative reviews differed significantly from the neutral reviews: groups exposed to positive reviews scored 1.84 ($p<0.001$) higher on purchase intention than groups confronted with neutral reviews, while groups exposed to negative reviews scored -2.55 ($p<0.001$) lower on purchase intention than groups confronted with neutral reviews. For attitude, negative reviews had a significant bigger influence on attitude than positive reviews ($t(140)=4.93, p<0.05$). Reading positive reviews resulted in an attitude increase of 1.86 ($p<0.001$), while reading negative reviews decreased the attitude with -2.55 ($p<0.001$). Therefore, H4a is supported. There was no significant difference between the groups who read a balanced review set and a neutral review set in attitude ($p=0.947$) or purchase intention ($p=0.168$). So, H4b is also supported.

Hypothesis 5 states that negative reviews are perceived as more credible than positive reviews. The main effect of review valence on perceived credibility is tested with an ANOVA, and it showed a significant relationship ($F(3,252)=15.88, p<0.001$). However, a Gabriel's post hoc test showed that there was no significant difference between the positive and negative review groups in perceived review credibility ($M_{\text{negative-positive}}=0.55, p=0.11$). H5a is therefore not supported. Comparing balanced review groups to the control group, no significant difference is found either ($M_{\text{balanced-neutral}}=0.56, p=0.19$). So balanced review sets do not have a negative impact on perceived credibility. Therefore, H5b is also not supported.

To test whether the impact of online reviews on attitude and purchase intention is stronger when the reviews are perceived as credible (hypothesis 6), interaction analyses are conducted. When incorporating the interaction effect between review valence and credibility into the model, the main effect of credibility on attitude is not significant. The interaction effects between credibility and positive, negative, and balanced review sets are all significant, as can be seen in Table 3.

Table 3: Linear model of interaction effects of review valence and credibility on attitude

	b	SE B	t	p
Constant	4.26 [4.02, 4.50]	0.12	-	-
Credibility	0.04 [-0.11, 0.20]	0.08	0.53	p=0.60
Positive review set	1.78 [1.45, 2.11]	0.17	10.54	p<0.001
Negative review set	-2.37 [-2.73, -2.02]	0.18	-13.25	p<0.001
Balanced review set	0.07 [-0.29, 0.44]	0.19	0.39	p=0.70
Positive review set x Credibility	0.28 [0.00, 0.55]	0.14	1.99	p<0.05
Negative review set x Credibility	-0.29 [-0.53, -0.06]	0.12	-2.46	p<0.05
Balanced review set x Credibility	0.22 [0.01, 0.43]	0.11	2.09	p<0.05

A simple slope analysis is conducted to find out the nature of the moderation. For this analysis, low credibility is one SD below the mean, moderate credibility is the mean value, and high credibility is one SD above the mean. For positive reviews, the higher the perceived review credibility, the more positive the attitude is rated compared to the control group ($b_{\text{low credibility}}=1.36$, CI [0.75, 1.97]; $b_{\text{moderate credibility}}=1.78$, CI [1.45, 2.11]; $b_{\text{high credibility}}=2.20$, CI [1.76, 2.63]). For negative reviews, the higher the perceived review credibility, the more negative the attitude is rated compared to the control group ($b_{\text{low credibility}}=-1.93$, CI [-2.52, -1.34]; $b_{\text{moderate credibility}}=-2.37$, CI [-2.73, -2.02]; $b_{\text{high credibility}}=-2.82$, CI [-3.21, -2.42]) (Figure 4). As can be seen in Figure 4, there is also a

positive relation between attitude and credibility for balanced review sets. The higher the perceived review credibility, the more positive the attitude toward the restaurant. However, this relationship should be interpreted with care, since the simple slope analysis shows non-significant values ($b_{\text{low credibility}} = -0.26$, CI [-0.63, 0.10]; $b_{\text{moderate credibility}} = 0.07$, CI [-0.29, 0.44]; $b_{\text{high credibility}} = 0.41$, CI [-0.17, 0.99]). This means that overall the interaction effect of balanced review sets and credibility on attitude is significant, but that there is no significant difference compared to the baseline (the control group).

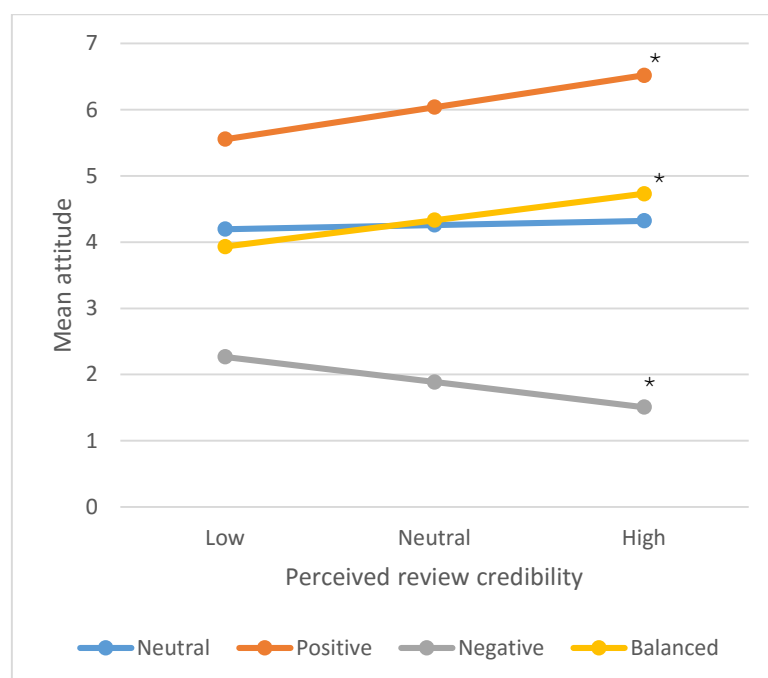


Figure 4: Interaction effect of credibility and valence on attitude

Now that we tested the interaction effect of review valence and credibility on attitude, another interaction analysis is done to test the interaction effect of review valence and credibility on purchase intention. As can be seen in Table 4, the main effect of credibility on purchase intention is not significant. The interaction effect between credibility and positive review valence is also not significant. The interaction effects between credibility and negative and balanced review sets however, are significant.

Table 4: Linear model of interaction effects of review valence and credibility on purchase intention

	b	SE B	t	p
Constant	4.02 [3.73, 4.30]	0.15	-	-
Credibility	0.05 [-0.16, 0.27]	0.11	0.48	p=0.63
Positive review set	1.78 [1.39, 2.16]	0.19	9.09	p<0.001
Negative review set	-2.37 [-2.76, -1.98]	0.20	-11.95	p<0.001
Balanced review set	-0.16 [-0.64, 0.32]	0.25	-0.66	p=0.51
Positive review set x Credibility	0.18 [-0.15, 0.50]	0.16	1.08	p=0.28
Negative review set x Credibility	-0.31 [-0.58, -0.03]	0.14	-2.15	p<0.05
Balanced review set x Credibility	0.33 [0.01, 0.65]	0.16	2.03	p<0.05

A simple slope analysis showed that for negative reviews, the higher the perceived review credibility, the more negative the purchase intention is rated compared to the control group ($b_{\text{low credibility}} = -1.91$, CI [-2.60, -1.22]; $b_{\text{moderate credibility}} = -2.37$, CI [-2.76, -1.98]; $b_{\text{high credibility}} = -2.83$, CI [-3.27, -2.39]) (Figure 5). There is a positive relation between purchase intention and credibility for balanced review sets. The higher the perceived review credibility, the higher the intention to visit the restaurant. However, again the simple slope analysis showed some non-significant values ($b_{\text{low credibility}} = -0.66$, CI [-1.22, -0.10]; $b_{\text{moderate credibility}} = -0.16$, CI [-0.64, 0.32]; $b_{\text{high credibility}} = 0.34$, CI [-0.45, 1.12]). Still, the overall interaction effect of balanced review sets and credibility on purchase intention is significant. Since there is no significant interaction effect between positive review sets and credibility on purchase intention, hypothesis 6 is partially supported.

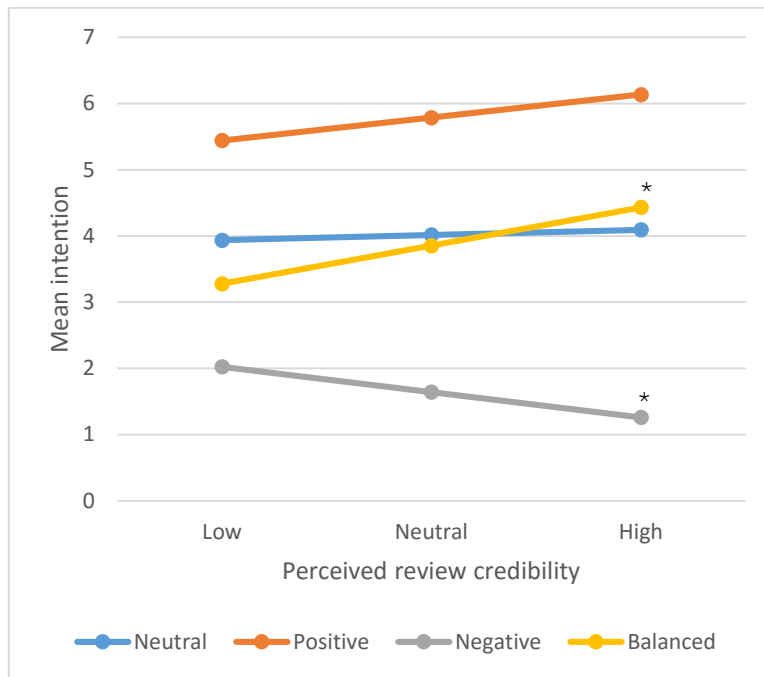


Figure 5: Interaction effect of credibility and valence on intention

Next, the moderating role of platform type on the relationship between review valence and review credibility is tested. Hypothesis 7 states that reviews on an independent website are perceived as more credible than reviews on a company website. Results of a Games-Howell⁴ post hoc procedure indicated that there are no significant differences in perceived credibility between reviews on the independent website and reviews on the company website (Appendix D). No interaction effect was found between valence and type of platform on review credibility (Table 5). Therefore, H7 is not supported.

⁴ Levene's test $F(7,248)=2.47$, $p<0.05$

Table 5: Linear model of interaction effects of review valence and platform on review credibility

	b	SE B	t	p
Constant	4.20 [3.75, 4.65]	0.23	18.40	p<0.001
Platform	0.11 [-0.67, 0.88]	0.40	0.27	p=0.79
Positive review set	0.49 [-0.18, 1.17]	0.34	1.50	p=0.15
Negative review set	0.92 [0.26, 1.57]	0.33	2.76	p<0.05
Balanced review set	-0.37 [-1.05, 0.31]	0.34	-1.06	p=0.29
Positive review set x Platform	0.01 [-1.03, 1.06]	0.53	0.03	p=0.98
Negative review set x Platform	0.27 [-0.71, 1.26]	0.50	0.55	p=0.58
Balanced review set x Platform	-0.37 [-1.44, 0.71]	0.54	-0.67	p=0.50

Finally, the moderating role of platform type on the relationship between review valence and attitude, and on the relationship between review valence and intention is tested. A Gabriel's post-hoc test for attitude and a Games-Howell post-hoc test⁵ for intention showed there were no significant differences in scores on attitude and purchase intention scales between positive reviews on the independent and company website (Appendix D). No interaction effects were found between review valence and type of platform on attitude or purchase intention (Appendix E). Therefore, H8 is also not supported. A summary of the findings can be found in Appendix F.

⁵ Levene's test $F(7,248)=5.59$, $p<0.001$

5. Discussion

This study was set out to explore the effect of online reviews on consumers' purchase intention and attitude toward restaurants, and how this effect is influenced by review valence, perceived review credibility, and review platform. The focus is on the restaurant context, using an experimental 2x4 between-subjects factorial design with two type of platforms and four types of review valences. The research question that this study sought to answer is: 'What are the effects of online reviews about restaurants on the consumer's attitude and purchase intention, and how are these effects influenced by review valence, credibility and platform?'.

5.1 General discussion and theoretical contributions

In line with many previous studies, the findings from this study confirm that positive review sets have a positive impact on attitude and purchase intention, while negative review sets have a negative impact on attitude and purchase intention (H1 and H2 are supported). This study found that attitude is positively related to intention which supports hypothesis 3, and that the effect of positive and negative review valence on the intention to visit the restaurant is mediated by attitude. So, review valence exerts an indirect influence on the intention to visit the restaurant through the attitude toward the restaurant. That intention depends (partly) on attitude is consistent with the indications of the Theory of Reasoned Action (Ajzen & Fishbein, 1975; Pradhan et al., 2014).

Though both positive and negative review sets have an impact on attitude and the intention to visit a restaurant, the negative review sets have a bigger influence than both the positive and balanced review sets on both attitude and intention to visit the restaurant (H4a is supported). These findings contribute to the inconclusive literature about the asymmetric effect of review valence on consumer attitude and intention, and provides support for the negativity effect found in the eWOM literature (e.g. Chevalier & Mayzlin, 2006; Floh et al., 2013; Lee et al., 2009). With regard to the balanced set of reviews, the findings are consistent with previous research (e.g. Langner et al., 2012; Lee & Cranage, 2014; Purnawirawan et al., 2012). Balanced review sets have no impact on intention or attitude toward the restaurant (H4b is supported).

Different from the effect of review valence on intention and attitude, review valence has no impact on the perceived review credibility (H5a and H5b not supported). This finding coincides with the findings of Cheung et al. (2009), who indicate that positive or negative reviews have no influence on the perceived credibility of the message. A reason might be that other cues of the review sets are more salient than valence when evaluating review credibility. Cheung et al. (2009) found that

for example argument strength and source credibility are more important determinants of review credibility than valence. When style of writing is more important, it would make sense that there is no difference in perceived review credibility in this study, since all the review sets are written in the same style. The only difference is the use of positive or negative wording. Other cues like usernames and anonymous profile pictures are also similar across conditions, which may explain the absence of differences in perceived review credibility as well.

The hypothesis that the impact of online reviews on attitude and purchase intention is stronger when online reviews are perceived as credible is supported for the effect of positive, negative and balanced review sets on attitude, and for the effect of negative and balanced review sets on purchase intention (H6). Interesting is that the more credible a balanced review set is perceived, the higher the score on attitude and purchase intention. When reading balanced reviews with a low perceived credibility, consumers probably do not take into account the reviews when forming an attitude, or they may form a somewhat negative attitude toward the company because of the untrustworthy reviews. When credibility increases, the attitude toward the restaurant and the purchase intention also increase. A slightly positive score on attitude and purchase intention when perceived credibility is high may be explained by the fact that the last review in the balanced review set was positive. A recency effect could have occurred when thinking about the reviews when forming the attitude or purchase intention, which means that people have the tendency to mainly take into account the last item of a sequence because this is the easiest part of the information to bring to mind (Purnawirawan et al., 2012). So for balanced reviews, sets with low credibility results in a lower attitude and purchase intention than a review set with high credibility.

What is peculiar, is that the effect of positive review sets on purchase intention is not moderated by perceived credibility, while the effect of positive review sets on attitude is. Why does the perceived review credibility of the positive review sets matter when forming an attitude about the restaurant, but plays no role in deciding whether to visit the restaurant or not? This may be explained by the mediator attitude, through which the moderation of credibility affects the relationship between valence and purchase intention in an indirect way. It is possible then that the direct effect of credibility on the relationship between valence and intention is fully mediated by attitude.

This study speculated that reviews on an independent website are perceived as more credible than reviews on a company website (H7), and that reviews on an independent website therefore have

greater influence on attitude and purchase intention (H8). These expectations are not supported by the results of the experiment. This may be explained by the fact that in an online environment, it is difficult to determine the identity and real motives of the posters, no matter on which type of platform you are. Though this study indicated that in general independent websites take more measures to make this determination a bit easier and to prevent the posting of false reviews, it may not be enough to convince the reader that the reviews on the independent website are more credible. Also, as Xue and Phelps (2004) indicated, companies that facilitate electronic word of mouth may increase consumers' trust in the company (website). As a result, there is no difference in the persuasiveness of the review sets on the different type of platforms, so no difference in attitude and purchase intention is found.

This study was conducted to fill three knowledge gaps in the eWOM literature. The first knowledge gap relates to the inconclusive literature about the asymmetric effect of eWOM valence on attitude and purchase intention. This study found that there is an asymmetric effect of online review valence, and that negative online reviews have a bigger influence on attitude and purchase intention compared to positive reviews. So, this study provides support for the negativity effect in the eWOM context. The second knowledge gap that this study aims to fill is the lack of research about the moderating role of platform type. The findings of this study suggest that platform type does not moderate the relationship between review valence and attitude or purchase intention, when comparing a company website with an independent website. Reviews on an independent website are not perceived as more credible than reviews on a company website, and there was no difference in the influence on attitude and purchase intention. It needs to be taken into account however, that non-existence of evidence is no evidence of non-existence. Finally, the focus of this study on the restaurant sector contributes to filling the knowledge gap related to the lack of research in the service industry.

5.2 Practical implications

The results of this study rejected the expectation that company websites are at a disadvantage when they provide consumers the opportunity to write reviews about the products or services. This study indicates that online reviews about a restaurant on an independent website are not necessarily more credible and persuasive than online reviews on a company website, even not when all reviews are positive. Combining the results of this study with the findings that companies can enhance their reputation and increase trust in the company website by facilitating the writing and posting of online reviews (Grabner-Kraeuter, 2002; Xue & Phelps, 2004), it is recommended for marketers in

the service industry to designate a part of their website for consumer reviews. Online communities within company websites offer consumers the ability to directly exchange product information and experiences with people who have similar interests may have the potential to generate product interest in large numbers of people (Bickart & Schindler, 2001).

However, when incorporating such a discussion board on a company website, it is important that these discussion boards will be left in control of the consumers and not by the company. This probably means also allowing some negative reviews on the website, despite the feared negativity effect. Of course it is advised to reduce negative online reviews as much as possible and stimulate positive reviews by increasing customer satisfaction. However, it is not a good idea to control the website content or offer (economic) benefits to consumers who write positive online reviews. Affecting the website by removing or editing online reviews, or rewarding consumers who write positive reviews, destroys the perceived review credibility and impairs the effect of the online reviews on the attitude and the purchase intention. This would be a waste of the positive effect of positive reviews, which declines significantly when perceived review credibility is low. When negative reviews appear on the website however, decreasing their credibility is effective in limiting the damage. This may be done by simply waiting for several positive reviews to appear that contradict the negative review. This can result in readers attributing the motives of the person who wrote the negative review to personal or situational circumstances, which decreases the influence of the negative review. Another desirable strategy may be to respond to the negative review and apologize, and try to convince the readers that the negative experience was due to personal or situational circumstances. However, responding strategies to limit the damage of negative reviews are outside the scope of this research.

5.3 Limitations and further research

This study presents some more limitations that could be improved in future research. The first limitation of this research is that this study does not look at characteristics of the reader of the reviews. Individual differences such as personality are not taken into account, since this would be randomized across the respondents. However, the influence of online reviews may be subject to some personal characteristics. It would be interesting to analyse how demographics and personal attributes such as susceptibility to interpersonal influence and risk aversion affect the influence of online reviews. It could be that a certain gender or age group is more influenced by online reviews than other gender or age groups. This may be useful information for marketers so they can develop more specific strategies for certain market segments. So, further research may include personal

characteristics into their model. Another limitation is that this study only focused on a company website and an independent website. Many other platforms exist where consumers can write and read online reviews, like social media platforms or blogs. Further research should be done to compare the effect of online reviews on multiple platform types. Also, though the manipulations were successful, the perceived independence of the company website scored a 3 on a 5-point scale, while the independent review website scored a 3.6. Maybe future research should try to make the difference between these scores bigger by using different platforms or different platform designs, and test for moderation effects of platform types again. In addition, this study adopted an experimental design with only students from Wageningen as a research population. Consequently, the findings may not be fully representative for restaurant visitors. For future studies it is suggested to focus on a larger and more diverse research population in terms of age, education level and place of living. Also, the high rate of female respondents could have biased the results of this study. Females might for example be easier affected by online reviews. For further research it is therefore interesting to get a more balanced male-female ratio and investigate whether gender plays a role in the effect of online reviews on attitude and purchase intention. Finally, it may be interesting to verify the actual restaurant visiting behaviour in real life context, not only the attitude or intention to visit in the pre-purchase phase. This study tested hypotheses by conducting an online experiment, which might lower the external validity of the findings. Real observations or field experiments may be better alternatives for testing whether the findings of this study hold in a real life setting, where people actually make a restaurant reservation.

6. Conclusion

This study offers interesting results concerning the effects of online reviews on the attitude toward the restaurant and intention to visit a restaurant. It demonstrates that purchase intentions in the restaurant sector are influenced by review valence (positive or negative), and that this effect is mediated by the attitude toward the restaurant and partly moderated by perceived review credibility. This study contributed to the inconclusive area about the asymmetric effect of review valence on attitude and purchase intention, and showed that negative online reviews have a bigger effect on both attitude and purchase intention than positive online reviews. It was also found that perceived review credibility can influence the effect of positive and negative reviews on attitude and purchase intention. Another interesting finding is that the type of review platform has no effect on the influence of review valence on credibility, and there is no difference between the effect on attitude and purchase intention of online reviews on an independent website or on a company website.

The goal of this study to contribute to a better understanding of the effects of online reviews on attitude and purchase intention is not only important for science. Marketing practitioners and managers working in the service industry can apply the provided knowledge into practice and develop effective eWOM strategies, which may result in increased sales and satisfied customers. The results of this study provide marketers or managers of restaurants knowledge about the effects of online reviews on attitude and purchase intention, and how credibility and the type of review platform influence these effects (or not). These insights may result in effective and efficient eWOM management, saving both time and money for the company. Finally, the results and limitations of this study provide interesting options for further research.

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Appendix A: Questionnaire



Heel erg bedankt voor het deelnemen aan deze enquête. Het invullen van de vragen zal ongeveer 5 tot 10 minuten duren. Let op, je kunt alleen meedoen als je aan de Wageningen Universiteit studeert. De enquête is ontworpen om onderzoek te doen naar de invloed van recensies op de restaurant sector. Dit onderzoek is voor mijn master-thesis en dus gekoppeld aan de Wageningen Universiteit. De resultaten worden anoniem verwerkt en enkel gebruikt voor dit onderzoek. Voor vragen kun je mailen naar anne-wil.vanlohuizen@wur.nl

Bovendien is er aan het einde van de enquête de mogelijkheid om je emailadres achter te laten en kans te maken op een waardebon van Bol.com ter waarde van €25,-. Dit is natuurlijk niet verplicht.

Door op 'ja' te klikken geef je aan dat je het bovenstaande gelezen hebt en ermee instemt.

☐ Ja, ik doe mee met deze studie

Geef aan in hoeverre je het eens bent met de volgende stellingen:

	Helemaal mee oneens	Oneens	Beetje mee oneens	Neutraal	Beetje mee eens	Eens	Helemaal mee eens
Ik lees regelmatig online recensies geschreven door andere consumenten wanneer ik een restaurant uitzoek (wanneer ik in een onbekende plaats ben).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reviews zijn nuttig voor me wanneer ik een restaurant uitzoek.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reviews maken me zelfverzekerd wanneer ik een restaurant uitzoek.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Als ik geen reviews lees wanneer ik een restaurant uitzoek, maak ik me zorgen over mijn beslissing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Beeld je in dat je een belangrijk etentje moet plannen voor je (toekomstige) collega's en jij degene bent die het restaurant moet uitzoeken. Je hebt al een restaurant in gedachten, alleen je bent er zelf nog nooit geweest. Aangezien het belangrijk is dat het een aangename ervaring wordt, zoek je online recensies over het restaurant. Deze reviews zijn te zien op de volgende pagina, op de reviewsite van IENS (een bedrijf van Tripadvisor). Bekijk de website én lees de review(s) zorgvuldig, aangezien je ze nodig hebt om sommige vragen van dit onderzoek te beantwoorden.

Het laden van de volgende pagina kan even duren, klik niet gelijk door.

Next, the participants were confronted with a picture of a company website (figure a) or an independent website (figure b), displaying positive, negative, neutral, or balanced review sets.

Wat is je mening over Restaurant Max?

	1	2	3	Neutraal 4	5	6	7	
Onaantrekkelijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Aantrekkelijk
Slecht	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Goed
Onplezierig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Plezierig
Negatief	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Positief
Niet leuk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Leuk


Hoe waarschijnlijk is het dat je dit restaurant zal bezoeken met je collega's?

	1	2	3	Neutraal 4	5	6	7	
Absoluut niet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Absoluut
Niet waarschijnlijk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Waarschijnlijk

← → ↻ www.restaurantmax.nl


Reserveren: 0900-Max Schrijf je hier in voor onze nieuwsbrief. [Follo](#)

Welkom op onze website! [Home](#) [Max](#) [Onze restaurants](#) [Dinercheque](#) [3 gangen menu](#) [Acties en arrangementen](#) [Reserveren](#)



Recensies

Lees hier wat onze klanten van ons vinden.




eetbeter2

Star rating: ★★★★★

Het eten was fantastisch! Ik vond de gezellige sfeer en de comfortabele stoelen echt fijn. Het personeel was ook vriendelijk. Een leuke ervaring voor een goede prijs. Ik kom zeker terug!

Gegeten op 13 november 2015




Nickr

Star rating: ★★★★★

Mijn vriend en ik kwamen in dit restaurant bij toeval en hadden een geweldige ervaring. Het was vrij druk rond lunchtijd, maar we konden gelijk een tafeltje krijgen. Onze ober was attent en had kennis van zaken. Het menu was goed gevarieerd met een aantal specialiteiten. Ik bestelde een zeebaars en mijn vriend een biefstuk. Onze lunch was perfect en smaakte heerlijk. Conclusie: echt een aanrader!

Gegeten op 24 oktober 2015




Marco08

Star rating: ★★★★★

Op een donderdagavond hier wezen eten met een vriendin, nadat ik leuke foto's had gezien op de website van het restaurant. Ik was zeer nieuwsgierig en wilde het graag uitproberen. Ons voorgerecht was heerlijk: een salade met gerookte zalm. Het hoofdgerecht was ook goed op smaak en het was een goede portie. De kreeft was heerlijk vers en zoet en de garnalen-noodles maaltijd van mijn vriendin was ook erg lekker. De bediening is heel vriendelijk en gaf een goede uitleg bij elke gang. We hadden een leuke avond en heel lekker gegeten. Kortom, een echte aanrader en ik zal zeker vaker terugkomen.

Gegeten op 5 november 2015




rienne

Star rating: ★★★★★☆

Het was in één woord heerlijk! De fijne gerechtjes waren een smaaksensatie. De porties waren prima voor een heerlijk etentje. Het restaurant is kleinschalig en er is veel persoonlijke aandacht voor de klanten. Daarnaast werd er heerlijke wijn geschonken waarbij een karaf water gratis geserveerd werd. Het restaurant is heel geschikt om lekker een avondje te genieten.

Gegeten op 25 oktober 2015




FFN

Star rating: ★★★★★

Na een gezellig ochtendje winkelen met mijn man waren we toe aan een lekkere lunch. We besloten om bij dit restaurant te eten en ik bestelde een salade met geitenkaas. Een van mijn favoriete lunches, maar ik heb het nog nergens zo lekker gehad! De samenstelling was perfect, met precies de goede hoeveelheid heerlijke compote. Ik proefde de geitenkaas heel goed en de walnoten waren goed terug te vinden in het gerecht. De prijs-kwaliteit verhouding is perfect! Je krijgt misschien nog wel meer dan waar je voor betaald, top!

Gegeten op 3 december 2015



MariscaH

Star rating: ★★★★★

Op een zondag dit leuke restaurant bezocht. Het was gezellig druk met een vlotte bediening. Overigens waren ze niet gehaast, we kregen genoeg persoonlijke aandacht. Het eten was ook heerlijk. Mijn zus en ik hadden gamba's vooraf, wat echt een goed begin was van de avond. Als hoofdgerecht had ik lamsvlees met honing en tijm en mijn zus een rib-eye. Echt heel lekker bereid allemaal. De bijgerechten waren ook goed op smaak en er was genoeg. Het restaurant oogt erg gezellig en de stoelen zitten fantastisch. Toen ik de rekening kreeg was deze zo laag dat ik drie keer heb gekeken of het wel klopte. Een leuk restaurant, ik kan het iedereen aanraden.

Gegeten op 22 november 2015

[Disclaimer](#) [Sitemap](#) [Veel gestelde vragen](#)

Figure a: Positive reviews on the company website

← → ↻ www.iens.nl/restaurant/38249/max

Home DinnerDeals CarteBlanche RestaurantCadeau FoodSpots Toppers Aanmelden Inloggen

Restaurants Schrijf een recensie


iens Restaurant Max

Restaurant Internationaal

Toon telefoonnummer

Recensies Details Contact

Recensies

 **iens** a TripAdvisor company

eetbeter2

Star rating: ★★★★★

Het eten was fantastisch! Ik vond de gezellige sfeer en de comfortabele stoelen echt fijn. Het personeel was ook vriendelijk. Een leuke ervaring voor een goede prijs. Ik kom zeker terug!

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Gegeten op 24 oktober 2015

Marco08

Star rating: ★★★★★

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Gegeten op 5 november 2015

rianne

Star rating: ★★★★★

Het was in één woord heerlijk! De fijne gerechtjes waren een smaaksensatie. De porties waren prima voor een heerlijk etentje. Het restaurant is kleinschalig en er is veel persoonlijke aandacht voor de klanten. Daarnaast werd er heerlijke wijn geschonken waarbij een karaf water gratis geserveerd werd. Het restaurant is heel geschikt om lekker een avondje te genieten.

Gegeten op 25 oktober 2015

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Star rating: ★★★★★

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Gegeten op 22 november 2015

© IENS 1999 - 2015 Alle restaurants in Nederland, met recensies van hun gasten

Figure b: Positive review set on the independent website

Na het lezen van alle reviews,	Helemaal mee oneens	Oneens	Beetje mee oneens	Neutraal	Beetje mee eens	Eens	Helemaal mee eens
Vind ik deze reviews geloofwaardig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Beantwoord de volgende vragen:

Hoe positief of negatief waren de reviews die je hebt gelezen?

	Erg negatief 1	2	Neutraal 3	4	Erg positief 5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ik denk dat de **website** onafhankelijk is van het restaurant

	Helemaal mee oneens 1	2	Neutraal 3	4	Helemaal mee eens 5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ben je bekend met het restaurant waar dit onderzoek over gaat?

☐ Ja

☐ Nee

Ken je de website die je net hebt gezien?

☐ Ja

☐ Nee

Geslacht

☐ Man

☐ Vrouw

Leeftijd

Studie

Hartelijk bedankt voor het deelnemen aan dit onderzoek. Mocht je vragen hebben dan kun je mailen naar anne-wil.vanlohuizen@wur.nl

Als je kans wil maken op een waardebon van bol.com ter waarde van €25,- kun je hier je emailadres invullen.

Let op! Klik verder om je antwoorden te registreren.

Appendix A: Review sets

Positive review set *****	Source
<p>The food was great! I really liked the cosy atmosphere and the comfy chairs. The staff was really friendly as well. A nice experience for a good price. I will definitely come back!</p> <p>Het eten was fantastisch! Ik vond de gezellige sfeer en de comfortabele stoelen echt fijn. Het personeel was ook vriendelijk. Een leuke ervaring voor een goede prijs. Ik kom zeker terug!</p>	Based on a review on IENS.com
<p>My friend and I stopped in this restaurant by chance and had an amazing experience. It was busy lunch time, but we were lucky enough to get a table immediately. Our waiter was attentive and knowledgeable. The menu had a nice variety of selections and specials. I ordered sea bass, while my friend ordered a steak. Our meals were cooked to perfection and tasted delicious. All in all, highly recommended!</p> <p>Mijn vriend en ik kwamen in dit restaurant bij toeval en hadden een geweldige ervaring. Het was vrij druk rond lunchtijd, maar we konden gelijk een tafeltje krijgen. Onze ober was attent en had kennis van zaken. Het menu was goed gevarieerd met een aantal specialiteiten. Ik bestelde een zeebaars en mijn vriend een biefstuk. Onze lunch was perfect en smaakte heerlijk. Conclusie: echt een aanrader!</p>	Adopted from Wu (2013)
<p>On a Thursday night I went here with a friend, after I saw some nice picture's on the restaurant's website. I was very curious and wanted to try. Our starter was delicious: a salad with smoked salmon. Also, our main course had a good taste and had a nice portion size. The lobster was really fresh and sweet, and my friend's shrimp-noodles dish was really good as well. The staff was very friendly and explained every course very clear. We had a nice evening with very good food. In short, highly recommended and I will definitely come back.</p> <p>Op een donderdagavond hier wezen eten met een vriendin, nadat ik leuke foto's had gezien op de website van het restaurant. Ik was zeer nieuwsgierig en wilde het graag uitproberen. Ons voorgerecht was heerlijk: een salade met gerookte zalm. Het hoofdgerecht was ook goed op smaak en het was een goede portie. De kreeft was heerlijk vers en zoet en de garnalen-noodles</p>	Based on a review on IENS.com

<p>maaltijd van mijn vriendin was ook erg lekker. De bediening is heel vriendelijk en gaf een goede uitleg bij elke gang. We hadden een leuke avond en heel lekker gegeten. Kortom, een echte aanrader en ik zal zeker vaker terugkomen.</p>	
<p>In one word, delicious! The fine dishes were an explosion of flavour. The portions were good for a nice diner. The restaurant is quite small, so there is a lot of personal attention for the customers. Also, they have lovely wine and serve a carafe of water for free. This restaurant is very appropriate for a nice enjoyable evening.</p> <p>Het was in één woord heerlijk! De fijne gerechtjes waren een smaaksensatie. De porties waren prima voor een heerlijk etentje. Het restaurant is kleinschalig en er is veel persoonlijke aandacht voor de klanten. Daarnaast werd er heerlijke wijn geschonken waarbij een karaf water gratis geserveerd werd. Het restaurant is heel geschikt om lekker een avondje te genieten.</p>	Based on a review on IENS.com
<p>After a nice morning of shopping with my husband, we felt like having a nice lunch. We decided to visit this restaurant and I ordered a salad with goat cheese. One of my favourite dishes for lunch, but I never had such a good salad before! The composition perfect, with the right amount of delicious compote. I could taste the goat cheese very well, and there was a good amount of walnuts. The price-quality ratio is just perfect! You even get more than what you paid for, great!</p> <p>Na een gezellig ochtendje winkelen met mijn man waren we toe aan een lekkere lunch. We besloten om bij dit restaurant te eten en ik bestelde een salade met geitenkaas. Een van mijn favoriete lunches, maar ik heb het nog nergens zo lekker gehad! De samenstelling was perfect, met precies de goede hoeveelheid heerlijke compote. Ik proefde de geitenkaas heel goed en de walnoten waren goed terug te vinden in het gerecht. De prijs-kwaliteit verhouding is perfect! Je krijgt misschien nog wel meer dan waar je voor betaald, top!</p>	Based on a review on IENS.com
<p>I visited this restaurant on a Sunday evening. It was pleasantly busy, with a fast service. The waitress was not in a hurry, there was plenty of personal attention. The food was amazing. My sister and me had shrimps as appetizers, and for the main course I had lamb with honey and</p>	Based on a review on IENS.com

<p>thyme, and my sister a rib-eye. All prepared really well. The side dishes were also tasteful and there was plenty. The restaurant looks cosy and the chairs are very comfortable. When I got the bill, it was so low that I checked it three times. A nice restaurant that I can recommend to everybody.</p> <p>Op een zondag dit leuke restaurant bezocht. Het was gezellig druk met een vlotte bediening. Overigens waren ze niet gehaast, we kregen genoeg persoonlijke aandacht. Het eten was ook heerlijk. Mijn zus en ik hadden gamba's vooraf, wat echt een goed begin was van de avond. Als hoofdgerecht had ik lamsvlees met honing en tijm en mijn zus een rib-eye. Echt heel lekker bereid allemaal. De bijgerechten waren ook goed op smaak en er was genoeg. Het restaurant oogt erg gezellig en de stoelen zitten fantastisch. Toen ik de rekening kreeg was deze zo laag dat ik drie keer heb gekeken of het wel klopte. Een leuk restaurant, ik kan het iedereen aanraden.</p>	
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Neutral review set	Source
<p>Does anyone know this restaurant? I was wondering if I should go here for a lunch with a friend. Any opinions about this restaurant?</p> <p>Kent iemand dit restaurant? Ik vroeg me af of ik er heen zal gaan voor een lunch met een vriendin. Heeft iemand een mening over dit restaurant?</p>	Based on a review on IENS.com

Negative review set *	Source
<p>The food tasted bland. You do not expect that for such a large sum of money! On top of that, the waitress was quite rude, and the overall decoration of the place was out-dated. I don't recommend this restaurant.</p> <p>Het eten had geen smaak. Dat verwacht je niet voor zo'n prijs! Bovendien was het personeel onbeleefd, en de decoratie was echt ouderwets. Dit restaurant raad ik dus niet aan.</p>	Based on a review on IENS.com
<p>My friend and I stopped in this restaurant by chance. The place looked okay from the outside so we thought it might be worth a try. Huge mistake! The waiter rushed us over to a table and neglected us for a long while. Limited menu with poor selections. My sea bass was dry and tasteless, and my friend had to send his steak back because it was overcooked. I'll never go back!</p>	Adopted from Wu (2013)

<p>Mijn vriend en ik kwamen in dit restaurant bij toeval. Het zag er oké uit van de buitenkant, dus we dachten we geven het een kans. Grote fout! De ober haastte ons naar een tafel en negeerde ons een lange tijd. De menukaart had weinig variatie. Mijn zeebaars was droog en smakeloos, en mijn vriend heeft zijn biefstuk terug moeten sturen, omdat het te gaar was. Ik ga hier nooit meer heen!</p>	
<p>On a Thursday night I went here with a friend, after I saw some nice picture's on the restaurant's website. I was very curious and wanted to try. Our starter was a disappointment: a salad with smoked salmon. There was hardly any smoked salmon in the dish! Also, our main course had a bland taste and a very small portion size. The lobster did not taste fresh and there was no seasoning. My friend's shrimp-noodles dish was really bad as well. The staff was very robotic and explained every course badly. We had a disappointing evening with bad food. In short, not recommended and I will definitely not come back.</p> <p>Op een donderdagavond hier wezen eten met een vriendin, nadat ik leuke foto's had gezien op de website van het restaurant. Ik was zeer nieuwsgierig en wilde het uitproberen. Ons voorgerecht was een teleurstelling: een salade met gerookte zalm. Er was nauwelijks zalm in te vinden! Het hoofdgerecht was smakeloos en het was een erg kleine portie. De kreeft smaakte niet vers en was ongekruid. De garnalen-noodles maaltijd van mijn vriendin was ook erg slecht. De bediening was heel robot-achtig en gaf slechte uitleg bij elke gang. We hadden een teleurstellende avond met slecht eten. Kortom, geen aanrader en ik zal zeker niet terug komen.</p>	<p>Based on a review on IENS.com</p>
<p>In one word, terrible! The dishes tasted way too salty. The portion size was also too small for a proper diner. The restaurant is very big, and there is no personal attention for the customers. Also, the wine was terrible and they serve a carafe of water for which you have to pay extra. The restaurant is not suitable if you want to have an enjoyable evening.</p> <p>In één woord, vreselijk! De gerechten waren veel te zout. De portie grootte was ook te klein voor een fatsoenlijk diner. Het restaurant is erg groot en er is geen persoonlijke aandacht voor de</p>	<p>Based on a review on IENS.com</p>

<p>klanten. Bovendien was de wijn vreselijk en ze serveren een karaf met water waar je extra voor moet betalen. Het restaurant is niet geschikt als je een leuke avond wil hebben.</p>	
<p>After a nice morning of shopping with my husband, we felt like having a nice lunch. We decided to visit this restaurant and I ordered a salad with goat cheese. Normally one of my favourite dishes, but I'm sorry, this time it was no good! The composition wasn't right, there was too much compote. I couldn't taste the goat cheese, and the walnuts where hard to find.. The price-quality ratio is just not right! I am willing to pay a good price, but I want to see that on my plate!</p> <p>Na een gezellig ochtendje winkelen met mijn man waren we toe aan een lekkere lunch. We besloten om bij dit restaurant te eten en ik bestelde een salade met geitenkaas. Een van mijn favoriete lunches, maar het spijt me, deze was echt niet lekker! De samenstelling klopte niet, er was veel te veel compote. Ik proefde de geitenkaas niet meer en de walnoten waren nauwelijks te vinden. De prijs-kwaliteit verhouding klopt niet! Ik wil best meer betalen, maar dan wil ik dat wel terug zien op mijn bord!</p>	<p>Based on a review on IENS.com</p>
<p>I visited this restaurant on a Sunday evening. It was very crowded, with a slow service. The waitress was in a hurry, there was no personal attention at all. The food was boring. My sister and me had shrimps as appetizers, and for the main course I had lamb with honey and thyme, and my sister a rib-eye. All prepared really bad. The side dishes lacked taste and there was very little. The restaurant looks cheerless and the chairs are very uncomfortable. When I got the bill, it was so high that I checked it three times. A terrible restaurant that no one should ever visit.</p> <p>Op een zondag dit restaurant bezocht. Het was erg druk met een slome bediening. Overigens waren ze erg gehaast, de aandacht was niet persoonlijk. Het eten was saai. Mijn zus en ik hadden gamba's vooraf en als hoofdgerecht had ik lamsvlees met honing en tijm en mijn zus een rib-eye. Echt heel slecht bereid allemaal. De bijgerechten waren smakeloos en er was veel te weinig. Het restaurant oogt er ongezellig en de stoelen zitten waardeloos. Toen ik rekening kreeg was deze zo hoog dat ik drie keer heb gekeken of</p>	<p>Based on a review on IENS.com</p>

het wel klopte. Een slecht restaurant, ik kan het iedereen afraden.	
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Balanced review set	Source
<p>The food tasted bland. You do not expect that for such a large sum of money! On top of that, the waitress was quite rude, and the overall decoration of the place was out-dated. I don't recommend this restaurant.</p> <p>Het eten had geen smaak. Dat verwacht je niet voor zo'n prijs! Bovendien was het personeel onbeleefd, en de decoratie was echt ouderwets. Dit restaurant raad ik dus niet aan.</p>	Based on a review on IENS.com
<p>My friend and I stopped in this restaurant by chance and had an amazing experience. It was busy lunch time, but we were lucky enough to get a table immediately. Our waiter was attentive and knowledgeable. The menu had a nice variety of selections and specials. I ordered sea bass, while my friend ordered a steak. Our meals were cooked to perfection and tasted delicious. All in all, highly recommended!</p> <p>Mijn vriend en ik kwamen in dit restaurant bij toeval en hadden een geweldige ervaring. Het was vrij druk rond lunchtijd, maar we konden gelijk een tafeltje krijgen. Onze ober was attent en had kennis van zaken. Het menu was goed gevarieerd met een aantal specialiteiten. Ik bestelde een zeebaars en mijn vriend een biefstuk. Onze lunch was perfect en smaakte heerlijk. Conclusie: echt een aanrader!</p>	Adopted from Wu (2013)
<p>On a Thursday night I went here with a friend, after I saw some nice picture's on the restaurant's website. I was very curious and wanted to try. Our starter was delicious: a salad with smoked salmon. Also, our main course had a good taste and had a nice portion size. The lobster was really fresh and sweet, and my friend's shrimp-noodles dish was really good as well. The staff was very friendly and explained every course very clear. We had a nice evening with very good food. In short, highly recommended and I will definitely come back.</p> <p>Op een donderdagavond hier wezen eten met een vriendin, nadat ik leuke foto's had gezien op de website van het restaurant. Ik was zeer nieuwsgierig en wilde het graag uitproberen. Ons voorgerecht was heerlijk: een salade met gerookte</p>	Based on a review on IENS.com

<p>zalm. Het hoofdgerecht was ook goed op smaak en het was een goede portie. De kreeft was heerlijk vers en zoet en de garnalen-noodles maaltijd van mijn vriendin was ook erg lekker. De bediening is heel vriendelijk en gaf een goede uitleg bij elke gang. We hadden een leuke avond en heel lekker gegeten. Kortom, een echte aanrader en ik zal zeker vaker terugkomen.</p>	
<p>In one word, terrible! The dishes tasted way too salty. The portion size was also too small for a proper diner. The restaurant is very big, and there is no personal attention for the customers. Also, the wine was terrible and they serve a carafe of water for which you have to pay extra. The restaurant is not suitable if you want to have an enjoyable evening.</p> <p>In één woord, vreselijk! De gerechten waren veel te zout. De portie grootte was ook te klein voor een fatsoenlijk diner. Het restaurant is erg groot en er is geen persoonlijke aandacht voor de klanten. Bovendien was de wijn vreselijk en ze serveren een karaf met water waar je extra voor moet betalen. Het restaurant is niet geschikt als je een leuke avond wil hebben.</p>	Based on a review on IENS.com
<p>After a nice morning of shopping with my husband, we felt like having a nice lunch. We decided to visit this restaurant and I ordered a salad with goat cheese. Normally one of my favourite dishes, but I'm sorry, this time it was no good! The composition wasn't right, there was too much compote. I couldn't taste the goat cheese, and the walnuts where hard to find.. The price-quality ratio is just not right! I am willing to pay a good price, but I want to see that on my plate!</p> <p>Na een gezellig ochtendje winkelen met mijn man waren we toe aan een lekkere lunch. We besloten om bij dit restaurant te eten en ik bestelde een salade met geitenkaas. Een van mijn favoriete lunches, maar het spijt me, deze was echt niet lekker! De samenstelling klopte niet, er was veel te veel compote. Ik proefde de geitenkaas niet meer en de walnoten waren nauwelijks te vinden. De prijs-kwaliteit verhouding klopt niet! Ik wil best meer betalen, maar dan wil ik dat wel terug zien op mijn bord!</p>	Based on a review on IENS.com
<p>I visited this restaurant on a Sunday evening. It was pleasantly busy, with a fast service. The waitress was not in a hurry, there was plenty of</p>	Based on a review on IENS.com

personal attention. The food was amazing. My sister and me had shrimps as appetizers, and for the main course I had lamb with honey and thyme, and my sister a rib-eye. All prepared really well. The side dishes were also tasteful and there was plenty. The restaurant looks cosy and the chairs are very comfortable. When I got the bill, it was so low that I checked it three times. A nice restaurant that I can recommend to everybody.

Op een zondag dit leuke restaurant bezocht. Het was gezellig druk met een vlotte bediening. Overigens waren ze niet gehaast, we kregen genoeg persoonlijke aandacht. Het eten was ook heerlijk. Mijn zus en ik hadden gamba's vooraf, wat echt een goed begin was van de avond. Als hoofdgerecht had ik lamsvlees met honing en tijm en mijn zus een rib-eye. Echt heel lekker bereid allemaal. De bijgerechten waren ook goed op smaak en er was genoeg. Het restaurant oogt erg gezellig en de stoelen zitten fantastisch. Toen ik de rekening kreeg was deze zo laag dat ik drie keer heb gekeken of het wel klopte. Een leuk restaurant, ik kan het iedereen aanraden.

Appendix C: Reliability analyses

A principle component analyses (PCA) on the five items measuring attitude showed that all five items are measuring the same construct (attitude), which is consistent with the findings of Spears and Singh (2004). The Kaiser-Meyer-Olkin (KMO) measure verified the sampling adequacy for the analysis, KMO=0.93, and all KMO values for individual items were > 0.91 , which is well above the acceptable limit of 0.5 (Field, 2009). Barlett's test of sphericity $X^2(10) = 2309.51$, $p < 0.001$, indicated that correlations between items were sufficiently large for PCA. Cronbach's α for the items measuring attitude is .98 and could not be increased by deleting one of the items (Table a). So an acceptable scale reliability is assured for attitude. A PCA on the two items measuring intention also resulted in one component, coinciding with Pan and Siemens (2011), with KMO=0.5 and Barlett's test of sphericity $X^2(1) = 541.74$. The intention subscales had a high reliability, Cronbach's $\alpha = .964$.

Table a: reliability analysis of attitude (Cronbach's $\alpha = .984$)

Item	Cronbach's α if item deleted
Onaantrekkelijk - Aantrekkelijk	.984
Slecht - Goed	.980
Onplezierig - Plezierig	.979
Negatief - Positief	.978
Niet leuk - Leuk	.981

Appendix D: Differences between review sets on company website and independent website

Dependent variable: Credibility

Expiremental group (I)	Expiremental group (J)	Mean Difference (I-J)	Std. Error	Sig.
Positive Max	Positive IENS	0.12	0.35	1.00
Neutral Max	Neutral IENS	0.11	0.39	1.00
Negative Max	Negative IENS	0.38	0.30	0.90
Balanced Max	Balanced IENS	-0.26	0.37	1.00

Dependent variable: Attitude

Expiremental group (I)	Expiremental group (J)	Mean Difference (I-J)	Std. Error	Sig.
Positive Max	Positive IENS	0.10	0.20	1.00
Neutral Max	Neutral IENS	0.23	0.24	1.00
Negative Max	Negative IENS	-0.11	0.21	1.00
Balanced Max	Balanced IENS	-0.09	0.21	1.00

Dependent variable: Purchase intention

Expiremental group (I)	Expiremental group (J)	Mean Difference (I-J)	Std. Error	Sig.
Positive Max	Positive IENS	0.23	0.24	0.98
Neutral Max	Neutral IENS	0.08	0.30	1.00
Negative Max	Negative IENS	-0.13	0.16	0.99
Balanced Max	Balanced IENS	-0.07	0.35	1.00

Appendix E: Interaction effects review valence and platform on attitude and purchase intention

Table a: Linear model of interaction effects of review valence and platform on attitude

	b	SE B	t	p
Constant	4.13 [3.71, 4.55]	0.21	19.49	p<0.001
Platform	0.23 [-0.24, 0.71]	0.24	0.97	p=0.33
Positive review set	1.93 [1.37, 2.49]	0.28	6.81	p<0.001
Negative review set	-2.38 [-2.86, -1.90]	0.25	-9.70	p<0.001
Balanced review set	0.03 [-0.50, 0.55]	0.27	0.09	p=0.92
Positive review set x Platform	-0.14 [-0.78, 0.51]	0.33	-0.41	p=0.68
Negative review set x Platform	-0.34 [-0.92, 0.24]	0.30	-1.15	p=0.25
Balanced review set x Platform	-0.32 [-0.99, 0.35]	0.34	-0.94	p=0.35

Table b: Linear model of interaction effects of review valence and platform on purchase intention

	b	SE B	t	p
Constant	3.96 [3.46, 4.46]	0.25	15.63	p<0.001
Platform	0.08 [-0.52, 0.68]	0.30	0.26	p=0.80
Positive review set	1.76 [1.12, 2.40]	0.32	5.43	p<0.001
Negative review set	-2.45 [-3.00, -1.89]	0.28	-8.62	p<0.001
Balanced review set	-0.39 [-1.10, 0.31]	0.36	-1.10	p=0.27
Positive review set x Platform	0.15 [-0.62, 0.91]	0.39	0.38	p=0.71
Negative review set x Platform	-0.21 [-0.89, 0.47]	0.35	-0.61	p=0.54
Balanced review set x Platform	-0.15 [-1.06, 0.77]	0.47	-0.31	p=0.76

Appendix F: Summary results

Hypotheses	Outcome	Method
H1: Positive online reviews increase the intention to visit a restaurant, whereas negative online reviews decrease the intention to visit a restaurant.	Supported	ANOVA Welch's F Games-Howell post-hoc
H2: Positive online reviews have a positive impact on the attitude toward the restaurant, whereas negative online reviews have negative impact on the attitude toward the restaurant.	Supported	ANOVA Gabriel post-hoc
H3: Consumers' attitudes toward a restaurant have a positive impact on intention to visit the restaurant.	Supported	PROCESS macro, model 4 Bootstrapping
H4a: A set of negative reviews will have a bigger influence on purchase intention and attitude toward a restaurant than a set of positive reviews.	Supported	ANOVA tests H1 and H2
H4b: A balanced set of reviews will have less influence on purchase intention and attitude toward a restaurant than both positive and negative review sets.	Supported	ANOVA tests H1 and H2
H5a: A set of negative reviews is perceived as more credible than a set of positive reviews.	Not supported	ANOVA Gabriel's post-hoc

H5b: A balanced set of reviews has a negative impact on the perceived review credibility.	Not supported	ANOVA Gabriel's post-hoc
H6: The impact of online reviews on attitude and purchase intention is stronger when online reviews are perceived as credible.	Partly supported	ANOVA, output sorted per group (valence) PROCESS macro, model 1 (valence*credibility)
H7: Reviews on an independent website are perceived as more credible than reviews on a company website.	Not supported	ANOVA Games-Howell PROCESS macro, model 1 (valence*platform)
H8: Reviews on an independent website have greater influence on attitude and purchase intention than reviews on a company website.	Not supported	ANOVA Gabriel's post-hoc for attitude Games-Howell for intention PROCESS macro, model 1 (valence*platform)

