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## How Culture Influences the Perception of Online Consumer Reviews

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### Abstract

*Online Consumer Reviews (OCRs) developed to an important and influential online-tool over the past years. While previous research focused on OCRs' influence on purchase intention and sales, little attention was paid on how consumers' cultural value orientation might influence the perception of these reviews. Addressing this important research gap this study investigated how consumer's cultural value orientation along Hofstede's dimensions influence the perceived importance of OCRs. Using a cross-sectional online survey, the study finds that cultural value orientation partly moderates the relationship between OCRs' attributes and the perceived importance of OCRs significantly. These results might indicate a shrinking influence of cultural values on consumer behaviour when using online shopping websites, which was suggested by previous studies. These findings have significant implications for the theory and practice of international retail management.*

**Keywords:** Online Consumer Reviews, Cross Cultural Marketing, eCommerce, Buying Behaviour, Word-of-Mouth, User Generated Content, Online Behaviour.

### Introduction

The rising impact of the internet over the past years has ignited a major transformation in one of the largest industries in the world the retail sector (Smith, 2015). The so-called "e-commerce" (the act of buying and selling goods or services online) gained tremendous influence and enabled online retailers such as Amazon and Alibaba to rank in the top 10 of the largest retailers in the world (Gensler, 2017). In 2016 almost 16% of all sales in the UK have been conducted online and nearly one in four online-shoppers ordered a product online at least once a week (Statistica, 2017). However, it almost goes without saying that this new development has changed not only the retail sector but also consumer behaviour considerably (Scarano, 2016).

One of these large and influential transformations was the emergence of online consumer reviews (OCRs). This concept, which is visible in form of rants, raves, reviews or comments about products or services on retailer or third-party websites, has growing impact across the

globe as Olsen, Trimi, & Lee (2012) outlined. OCRs, derived from the concept of word-of-mouth (WOM), are seen as an extremely powerful tool since they can influence all stages of the buying decision process from need recognition to post-purchase behaviour (Elwalda & Lu, 2016). Indeed, a host of researchers over the past years found significant impact of OCRs on both purchase intention and sales (*ibid.*).

Although the relationship between OCR's and purchase intention and sales has been recently investigated extensively, the influence of cultural value orientation has not been studied yet (Elwalda & Lu, 2016; De Maeyer, 2012). However, to truly realize the potential of OCRs within the internationalization of markets, attention must be paid to cultural variations. As Mooji (2011) stressed are most aspects of consumer behaviour culture-bound. Indeed, a substantial body of researchers found evidence on how cultural value orientation significantly influences consumer behaviour offline and online (e.g. Luo et al., 2014; Leng & Botelho, 2010; Pentina et al., 2015; Park & Jun, 2003; Chau et



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al., 2012). Addressing this important research gap, the aim of the present study is to investigate how an individual's cultural value orientation along Hofstede's (1980, 1991) dimensions moderates the relationship OCRs and the perceived importance of OCRs.

Thus, the study firstly, provides a literature review about the emergence of OCR, its impact on sales and purchases intention and its cultural influences on consumer behaviour. Secondly, a research framework and hypotheses are developed indicating how the perceived importance of OCRs may be moderated by each dimension of Hofstede's cultural theory. Thirdly, a quantitative research approach is conducted. To test the hypotheses, data from a conducted survey is analysed, utilizing the structural equation model to observe how cultural value orientation along Hofstede's dimensions influence the perceived importance on OCRs. Finally, results will be discussed in context with the appropriate literature and implications, limitations and possible further research will be pointed out.

### Literature Review

While online-shopping grew explosively in the early 2000s, a new type of Word-of-Mouth (WOM) evolved which is mostly referred to as Online Consumer Reviews (Elwalda & Lu, 2016). Similar to its predecessor WOM, also OCRs contain positive or negative statements about products or services. In contrast to (e)WOM, OCRs are not communicated directly to a recipient but are published on companies' or third-party websites, accessible for everyone (Mudambi & Schuff, 2010). Whereas most OCRs contain brief, written content (like on Amazon or Trip Advisor) they can also appear in form of blogs, videos or podcasts. The versatility of OCRs is likely to offer a desired form for every potential consumer. Various scholars pointed out that OCRs are one of the most popular and influential forms of eWOM (Elwalda & Lu, 2016; Purnawirawan et al., 2012; Sen & Lerman, 2007) and thus, contribute significantly to a modern marketing mix (Chen & Xie, 2008).

### The influence of Online Consumer Review's

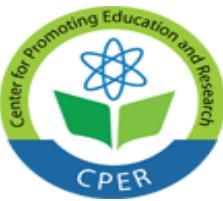
Recently, a host of researchers investigated how OCRs influence purchase intention and sales. Indeed, the majority of studies found significant correlations (e.g. Elwalda & Lu, 2016; Dellarocas & Narayan, 2006; Awad & Ragowsky, 2008; Duan et al., 2008; Zhu & Zhang, 2010; Zhang et al., 2013; Park et al., 2007; Dhanasobhon et al., 2007). However, OCRs are composed of different elements (such

as written content, rankings, pictures etc.). Current research distinguished between three main attributes of OCRs in order to identify how and which characteristics influence the perception, helpfulness and purchase intention the most. These three main attributes of OCRs are: (1) Quality (2) Volume, and (3) Valance (Elwalda & Lu, 2016; Cui et al., 2012; Park et al., 2007; Dellarocas & Narayan, 2006; Chevalier & Mayzlin 2006). Other scholars mentioned the importance of (4) Source Credibility (Lee & Lee, 2009; Filieri, 2013, 2016).

(1) Quality focuses on the usefulness and relevance of reviews that ease the purchase decision (Mudambi & Schuff, 2010). Most scholars outline that Quality includes relevance, understandability, clearness, sufficiency, and objectivity (ibid.). Duan et al. (2008) empirically found that customers do not 'heedlessly' use OCRs but rather carefully read and judge the quality of the provided information. Furthermore, Awad and Ragowsky (2008) found that a high-quality review can even increase the perceived credibility and trust of reviews. This all emphasizes the importance of Quality as a main characteristic of OCRs.

(2) Volume refers to the available number of OCRs (Elwalda & Lu, 2016; Liu, 2006). Since OCRs' main purpose is to inform about products or services, the number of these posts plays an important role. Liu (2006) points out that higher numbers of reviews will, inform customers more efficiently and are able to represent the product's popularity which both can lead to increased purchase intention (Elwalda & Lu, 2016). Accordingly, Zhu and Zhang (2010) found by observing OCRs' influence on video game sales that the volume of reviews has a positive effect especially on unknown games. Similarly, Zhang et al. (2013) found a significant influence of OCRs' Volume on sales by observing camera sales.

Notably, Park et al. (2007) outlined that even if the Quality is low, the volume of reviews can still positively influence purchase intention (Elwalda & Lu, 2016). Furthermore, they found that when buying high-involvement products consumers are more influenced by the Quality, whereas when buying low-involvement products, the Volume is more influential. However, not all studies found a positive link between Volume and purchase intention. Clemons et al. (2006) discovered no significant influence of Volume on sales by observing craft beer sales. Similarly, Dellarocas et al. (2007) observed that OCRs' Volume concerning films do not help to predict its ticket-office sale.



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Despite these mixed outcomes it can be learned that Volume is a valuable tool for awareness. Secondly, Volume can indicate the popularity of products and thirdly, since it provides more information about products, it appears to attract more potential consumers (Elwalda & Lu, 2016). The available literature on Volume's influence on purchase intentions appears to show differing outcomes related to product groups. Most studies focused on high-involvement products explored significant influences, whereas low-involvement studies found less significant influence.

(3) Valence captures the average rating of consumers' opinions of a product. It is framed by negative, positive or neutral evaluations (Cui et al., 2012; Elwalda & Lu, 2016). The common approach of valence is to rate products with stars. Most websites utilizing OCRs, such as Amazon, Yelp, and Ebay, adopted a five-star ranking-approach. This is said to have an utterly persuasive influence on consumer perception and purchase intention (Liu, 2006; Yen et al., 2011). Accordingly, a vast body of researchers found positive correlations between Valence and sales, like Zhu & Zhang (2006) when focusing on video-games, Dellarocas et al. (2007) when focusing on movies, Moe & Trusov (2011) by observing beauty products, and finally, Dhanasobhon et al. (2007) by examining book sales (Elwalda & Lu, 2016). Hence, Valence has showed to be a very influential attribute of OCRs.

(4) Source Credibility is a complex concept which results from an interaction of source characteristics (e.g. expertise, reputation, and reliability) and receiver's characteristics (e.g. cultural background, experience) (Filieri, 2016; Wathen & Burkell, 2002). While past research found Source Credibility to be slightly influential (Park et al., 2007; Filieri, 2013; Schepers, 2016), the current discussion about fake-news and internet-bots might ignite the importance of Credibility again. Dunham & Melnick (2009) discovered that a host of content in online-forums and social-media is done by artificial instruments imitating

humans (internet-bots). It is possible that rising numbers of bots may lead to loss of trust in OCRs. Thus, the main advantage of WOM, which is providing product information by individuals who are not interested in selling a product or service, becomes uncertain.

Astonishingly, Anderson (2011) reported that up to 69% of consumers trust OCRs as much as interpersonal recommendations. This appears to be very surprising since OCRs can potentially be 'bought', faked or are based on very different perceptions and backgrounds of senders (Li et al., 2011). While Duan et al. (2008) found that consumers are aware of this problem, they tend to read and judge reviews very carefully before involving them in their purchase-decision. However, these studies were conducted before the current discussion about Internet-bots which are even said to influence a major election. Hence, it is likely that Source Credibility gained on importance again when observing OCRs. Therefore, Source Credibility might be seen as a fourth important characteristic of OCRs.

### **Cultural influences on consumer behaviour**

Although OCRs significantly influence purchase intentions and sales, researches tend to ignore possible cultural differences and assume that the respondent's cultural background has no effect on the perceived importance of OCRs. According to Mooji (2011), most aspects of consumer behaviour are culture-bound. This underscores the importance to understand the relation between cultural shaped behaviour and buying behaviour.

Although various famous cultural models exist (like Schwartz' (1992) or Kluckhohn & Strodtbeck's (1961)) especially Hofstede's (1980,1991) model of cultural dimensions is due to applicable and easily measurable sets of questions, frequently used in consumer behaviour research (Schoefer et al, 2016; Luo et al., 2014; Pentina et al., 2015; Mooji, 2011).

Hofstede (1991), who defines culture as "training or refining of one's mind from social environments in which one grew up" outlined his five culture-dimensions as:



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Power Distance	Power distance (PD) reflects the degree to which hierarchy and unequal distributions of power are accepted. A high PD score implies a prevailing acceptance of large status differences between superiors and subordinates. Managers tend to be autocratic and paternalistic while employees tend to do as they are told.
Uncertainty Avoidance	Uncertainty avoidance (UA) reflects the degree of comfort with ambiguous situations and the extent to which efforts have been made to minimise or avoid these situations. Managers in high UA cultures tend to depend extensively on systematic rules and regulations. Extensive efforts are made to plan for and even control the future.
Masculinity	Masculinity (MAS) reflects the degree to which tough and assertive behaviour is encouraged. Conversely, femininity (FEM) encourages tender and nurturing behaviour. The belief in equity (rather than equality) and the importance of material success to a group both tend to be related to its MAS score.
Time Orientation	This dimension reflects the degree to which short-term pain is accepted in return for long-term gain. Societies with a short-term orientation (STO) will be more likely to seek out immediate gratification than those with a long term orientation (LTO), but they are less likely to plan or invest for the future.
Individualism	Individualism reflects the degree to which personal independence is valued over group membership. A society scoring high on IND values personal goals, initiative, autonomy and privacy. Conversely, collectivistic (low IND) societies value group goals and objectives over individual preferences. The importance of harmony and consensus tends to encourage collective responsibility and group decision making while discouraging dissent and innovation.

Figure 1: Hofstede's Cultural Dimensions

Source: Hofstede, 1991

Besides the fact that Hofstede's dimensions are well-known and widely used, many scholars critiqued Hofstede's work (Jones, 2007). Firstly, Baskerville (2003) noted shortcomings in the methodological part of Hofstede's study. He outlined that Hofstede's use of only one company (IBM) to gather data for his study might be insufficient. Secondly, some scholars raised concerns about Hofstede's dimensions. Brewer & Venaik (2011) outlined some contradictions in Hofstede's individualism whereas Venaik & Brewer (2010) stressed some anomalies within the dimension uncertainty avoidance. Thus, they propose some changes to both dimensions in order to improve accuracy. Finally, Jones (2007) critiqued Hofstede's model as being outdated and having too few dimensions to capture the complexity of culture by assuming that the domestic population is a homogenous whole. Although these limitations capture some problems of Hofstede's work, it is important to acknowledge that culture is an utterly complex concept, and to date no perfect method of measuring culture exists. Nevertheless, the world is becoming increasingly complex and interconnected. Thus, it is crucial to take other behavioural traits and preferences that are culture-bound into consideration when pursuing international concepts. Consequently, Hofstede's dimensions demonstrate a good starting point realizing differences and have proved their usefulness (Mooji, 2011) but also their validity and robustness (House et al, 2004) in many researches.

### Cultural influence on offline consumer behaviour

Recently, several international marketing studies examined the influence of cultural on (offline) buying behaviour using Hofstede's dimensions (e.g. Moon, Mishra & Kang, 2016; Leng & Botelho, 2010; Kim &

Zhang, 2014; Schoefer, 2010, 2016; Furrer & Sollberger 2011).

Leng and Botelho (2010) conducted a survey with 300 participants from Brazil, Japan and the USA. Utilizing all of Hofstede's dimensions as cultural indicators, the researcher investigated the influence of culture on consumers' decision-making styles. Their findings confirmed that the influence of cultural dimensions significantly determines buying behaviour. For example, a brand conscious decision-making style is a characteristic of high power distance and individualistic cultures (*ibid.*). However, they also found that cultural value orientations do not interact with each other. When focused on the power distance dimension, Brazilians are more quality conscious, but if individualism is focused, Americans tend to be more quality conscious. This might indicate, that one dimension should not be used to make general statements about a whole nation since national culture is shaped by a set of cultural dimensions. Thus, most scholars are aware of directly linking results of one dimension to specific countries since this might be misleading (Furrer & Sollberger 2011; Schoefer, 2010, 2016).

Accordingly, Schoefer, Wappling and Heirati (2016) observed cultural influences along Hofstede's dimensions on consumer behaviour by focusing on service dissatisfaction. Using a cross-sectional survey, their findings suggest that responses to unsatisfying service are significantly moderated by a consumer's individualism, masculinity, uncertainty avoidance, and long-term orientation. Since they were the first in the research-field to observe Hofstede's dimensions, it seems sensible to observe all dimensions instead of just selected ones. Although the study of Schoefer et al. (2016) does only



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show the results at one moment in time, which might be insufficient since service dissatisfaction is significantly shaped by evolving and developing emotions (Tsai, Levenson & McCoy, 2006), their study presented valuable evidence of differing, culture-bound consumer behaviour along Hofstede's dimensions.

### Cultural influence on online consumer behaviour

Some research also investigated cultural influence on online consumer behaviour (e.g. Park & Jun, 2003; Pentina et al., 2015; Chau et al., 2012; Luo et al, 2014; Ma, 2013). Ma (2013) observed the eWOM behaviour of Twitter and Weibo when recommending smart-phones. In a quantitative cross-cultural setting, she investigated all of Hofstede's dimensions. Although she only used participants from two countries for her study (China and America) which probably strongly restrict the generalizability of her study, Ma found some significant moderation effects especially on uncertainty avoidance, power distance, and individualism. Accordingly, Luo et al. (2014) focused on the influence of individualism, which is said to be on the most influential dimensions, on eWOM and found various significant moderating effects.

On the other hand, Pentina et al. (2015) found some differences across cultures but this time using a qualitative approach. By conducting in-depth interviews with Ukrainian and American online consumers they discovered that online reviews exert influence on shopping processes and buying decisions in both countries. More importantly, they found that only some responses in consumer behaviour were significantly different across nations. For instance, Ukrainian participants tended to seek for slightly more functional and performance-related evaluation within eWOMs compared to American participants. Although this

study had a very limited number of participants (24) which may not be enough to find behavioural patterns for a whole country, it indicated that not all observed consumer-behaviour provide significant evidence of the culture's influence.

### Conceptual framework and hypotheses

The literature review demonstrated that, firstly, OCRs significantly influence the purchase intention and sales. Secondly, the attributes Quality, Volume, Valence and Source Credibility are linked to the overall perception of OCRs. Thirdly, significant influence of cultural value orientation on WOM and eWOM has been observed in previous literature, whereas cultural influence on OCR has not been examined yet (Elwalda & Lu, 2016; De Maeyer, 2012). Based on the findings of the literature review the present study aims to observe this research gap. Therefore,

*This study investigates how an individual consumer's cultural value orientation along Hofstede's dimensions moderates the relationship between OCR's Quality, Volume, Valance, and Source Credibility and the perceived importance of OCRs.*

After observing the direct effect of OCR's attributes Quality, Volume, Valence, and Source Credibility on the perceived importance of OCRs, the second part observes the moderating effect of cultural influences as outlined by Hofstede's (1980, 1991) dimensions: individualism, masculinity, uncertainty avoidance, long-term orientation, and power-distance. Thus, the study suggests a research framework consisting of five hypotheses (see figure 2) which will be developed in the following section.

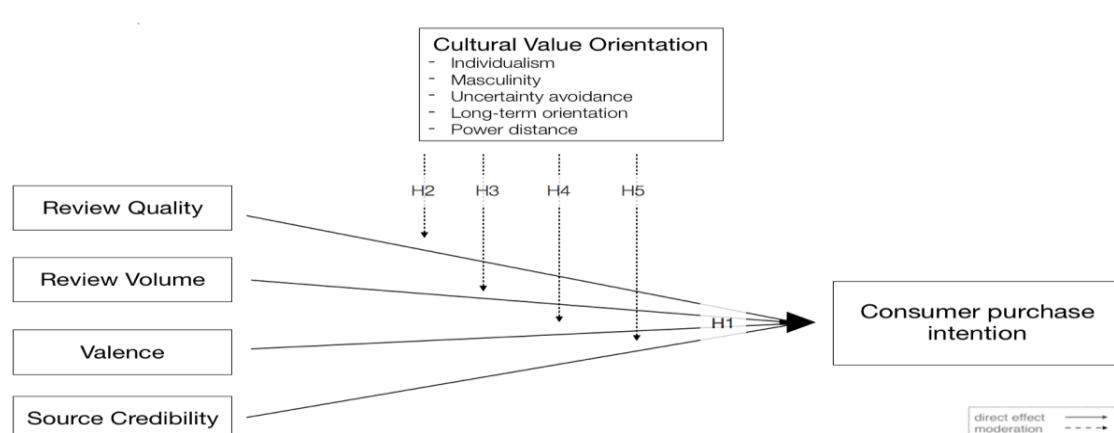


Figure 2: Conceptual Framework of the moderation effect of cultural value orientation on main attributes of OCRs.



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### Main Effect

In line with past research (Cheungs & Thandis, 2012; Mudambi & Schuff, 2010; Elwalda & Lu, 2016; Park et al., 2007) this study investigates the perceived importance of OCRs by distinguishing between Quality, Volume, and Valance. Because the current discussion about Internet-bots is likely to have significant impact on OCRs, this study suggests Source Credibility as a fourth influential characteristic. Thus,

**H1:** Consumer's perceived importance of OCRs is positively correlated with OCRs (1) Quality, (2) Volume, (3) Valance, and (4) Source Credibility.

### Moderating Effects

While the influence of culture on offline and online consumer behaviour has been outlined in various studies (Mooji & Hofstede, 2011; Schoefer et al., 2016; Pentina et al., 2015; Leng & Botelho, 2010) it is likely that cultural value orientation also moderates the relationship between OCRs' Quality, Volume, Valence, and Source Credibility, and the perceived importance of OCRs. To observe cultural differences, Hofstede's (1980, 1991) dimensions are applied to OCRs' attributes Quality, Volume, Valence, and Source Credibility. The literature review has shown that the use of all Hofstede's dimensions appears to be especially useful when a research is the first in its field like the present study. Therefore, all dimensions will be observed in this study.

#### Quality

(a) People from individualistic cultures tend to be more independent and self-reliant (Hofstede, 1980). Hence, their own values, beliefs and judgments are more prominent (Srite & Karahanna, 2006). It is likely that people from these cultures perceive Quality as an opportunity to independently gather more information and opinions about a product that can help to make their own judgement about products. However, since people from individualistic countries are used to make up their own mind from early age (Furrer and Sollberger, 2011) they are also likely to know how important the quality of argumentations are. Thus, it will be hypothesized that Quality is more important for cultures from individualistic cultures.

(b) In masculine societies achievement and success are society's main aims (Hofstede, 1980). Big, fast and successful are perceived as valuable (Hofstede, 2011). Well-written, relevant and clear reviews are likely to be seen as good characteristics, which are also influential

when making a purchase-decision. Thus, Quality may be more important for masculine cultures.

(c) People from cultures with high uncertainty avoidance score tend to feel threatened by uncertainty and ambiguity, and try to avoid these situations (Hofstede, 1985). Furthermore, the 2010 Global TGI indicated a correlation of low uncertainty avoidance and impulse buying in most South American cultures (Mooij, 2011). Hence, it is likely that consumers from cultures with high uncertainty avoidance tend to see Quality as very influential, because it can potentially include details that may help to avoid regrets.

(d) Cai and Shannon (2012) found that long-term orientation emphasizes the importance of value consciousness and money saving (on private consumption products) as socially desirable. Reading and using information from reviews can help to assess the value of the product. Thus, Quality maybe more influential for consumers from long-term orientated cultures.

(e) Cultures with high power distance tend to differentiate between private and public consumption goods, whereas for public goods (like gifts or status products) social norms are very important (Hofstede, 2011). Since this study focused on a high-involvement private product in the survey (Bluetooth speaker), it is likely that saving money is more important than the perceived value. Thus, consumers with high power distance might see Quality as less important. Thus all,

**H2:** The cultural value orientation of individuals moderates the relationship between consumers' perceived importance of OCR and Quality such that the effect of the perceived importance of OCRs on Quality is positively moderated by an individual's (a) individualism, (b) masculinity, (c) uncertainty avoidance, and (d) long-term orientation. The relationship is negatively moderated by an individual's (e) power distance.

#### Volume

(a) Customers from individualistic cultures tend to have greater drive, self-responsibility, and need for autonomy (Hofstede, 2011). The tendency of buying products just because they are liked by others is said to be less distinct compared to collectivistic cultures (Luo et al., 2014). Thus, it is likely that the Volume of available reviews is less important for people from individualistic cultures.

(b) Consumers from highly masculine cultures tend to consider winning and individual decision making as



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very important (Mooij, 2011). This might indicate they are less influenced by the available amount of reviews. Thus, high masculinity may have a negative correlation with the importance of Volume.

(c) Since consumers from high uncertainty avoidance cultures tend to dislike ambiguity and try to avoid it (Hofstede, 2011), a high Volume might give them the feeling of security. They might think it is unlikely that all these reviewers are wrong. Thus, uncertainty avoidance may positively influence the importance of Volume.

(d) While long-term orientation provokes the importance of buying valuable and qualitative products (Hofstede, 2011), it might be possible that long-term oriented consumers are very keen to see how many people assessed a product in order to find indications about its value and quality. Hence, long-term orientation is likely to positively influence the importance of Volume.

(e) People from cultures with low power-distance tend to be more independent from young age (Hofstede, 1980). Therefore, it might be possible that they are less influenced from the volume of reviews because they are used to make decisions independently. Thus,

**H3:** The cultural value orientation of individuals moderates the relationship between consumers' perceived importance of OCR and Volume, such that the effect of the perceived importance of OCRs on volume is positively moderated by an individual's (c) uncertainty avoidance, (d) long-term orientation, and (e) power distance. The relationship is negatively moderated by a consumer's (a) individualism, and (b) masculinity.

### **Valance**

(a) People from collectivistic cultures tend to base their identity on the social network they belong to (Hofstede, 2011). Judgement and opinion outside of these social networks are less important for them (Furrer and Sollberger, 2011). Thus, this research hypothesizes that Valance is not perceived as very relevant to consumers from collectivistic countries because they tend to perceive judgements from outside their social network for less important.

(b) Masculine-orientated cultures highlight price consciousness as part of a culture of ego-goals such as career and money (Hofstede, 2011; Leng & Botelho, 2010). Making the "right" decision when buying a product is, thus, very important. The ranking of products from other consumers can indicate which product is "the best".

Hence, it is likely that masculinity positively correlates with the importance of Valance.

(c) Low-scoring uncertainty avoidance cultures believe more in common sense and less in ritual behaviour or rules (Mooij, 2011:49). They also tend to adopt innovations faster since they are braver to try something new (ibid.) and may tend to see negative Valance as less important when buying a product. Thus, there might be a positive relation between uncertainty avoidance and Valence.

(d) In short-term orientated cultures, there is a stronger need for the one truth compared to long-term orientated cultures (Hofstede, 1991). When comparing and assessing different products, the simple method of rankings (valence) pretends the one truth resulting of the given judgements of other people. A five-star product appears to be objectively better than a three-star product. Thus, there may be a negative correlation between long-term orientation and Valence.

(e) Consumers from high power-distance cultures tend to have stronger preferences for status products (such as a Rolex watch; Oyserman, 2006). Kim & Zhang (2014) empirically found a relation between high power-distance and the preference of these products. However, focusing on status products indicates that the real value or quality is less important than the name or logo especially when focusing on high involvement products. Therefore, it is likely that Valence is perceived as less important for people with high power-distance backgrounds because they rather focus on the high-status than the rating from average consumers. Thus,

**H4:** The cultural value orientation of individuals moderates the relationship between consumers' perceived importance of OCR and Valance such that the effect of the perceived importance of OCRs on Valance is positively moderated by an individual's (a) individualism, (b) masculinity, (c) uncertainty avoidance, and (d) long-term orientation. The relationship is negatively moderated by an individual's (e) power distance.

### **Source Credibility**

(a) Collectivistic cultures tend to emphasize interdependence and rather follow social groups and norms, whereas individualistic cultures are more independent (Hofstede, 2011; Triandis, 2004). It is likely that consumers from strong collectivistic cultures are more affected by Source Credibility, since for them the



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identification of the sender may be very important. Similar findings were also made by Park and Jun (2003). They found that people from collectivistic cultures tend to avoid risks more than people from individualistic cultures. Thus, individualism may be negatively correlated with Source Credibility.

(b) Data from Eurostat (2008) showed a significant correlation between masculinity and the proportion of time spent with shopping activities (Mooji & Hofstede, 2011). Therefore, people with low masculinity spent more time with online shopping. Combined with the fact that masculinity increases the probability of venturesome decisions (Hofstede, 1980), it is likely that masculinity will have negatively influence the importance of Source Credibility since judging a source requires time.

(c) Consumers from cultures with high uncertainty avoidance tend to be more sceptical about the unknown (Hofstede, 2001). When reading OCRs, it can be complicated to decide whether or not to trust the information. Source Credibility can therefore, calm the fear of fake information. Hence, it might be possible that consumers from high uncertainty avoidance cultures tend to see the Credibility as a very important factor.

(d) While short-term orientated cultures have a stronger need for the truth as Hofstede (1991) outlined, it is likely that they perceive the Credibility of the source, as a form of truth, is more important than other cultures.

(e) Power-distance is said to influence how people accept authorities (Hofstede, 2001). Cultures with larger power-distance tend to stick and accept these authorities very naturally. However, one's status should be visible for others in order to show respect (Oyserman, 2006.) Therefore, it is likely that Source Credibility is perceived as very important for these cultures because the value of a persons' opinion is also determined by his hierarchy level. Thus,

**H5:** The cultural value orientation of individuals moderates the relationship between consumers' perceived importance of OCR and Source Credibility such that the effect of the perceived importance of OCRs on Source Credibility is positively moderated by an individual's (b) masculinity, (c) uncertainty avoidance, and (e) power distance. The relationship is negatively moderated by a person's (a) individualism, and (d) long-term orientation.

**Table 1: Summary of developed moderation hypotheses**

**Expected moderation effect**

Hypothesis	Individualism	Masculinity	Uncertainty Avoidance	Long-term Orientation	Power Distance
<b>H2 - Quality</b>	positive	positive	positive	positive	negative
<b>H3 - Volume</b>	negative	negative	positive	positive	positive
<b>H4 - Valence</b>	positive	positive	positive	positive	negative
<b>H5 - Credibility</b>	negative	positive	positive	negative	positive

## Methodology

### Research Design and Strategy

A cross-sectional survey with multi-item scales in form of a questionnaire was used to collect the data, which is in line with most of past research consumer and marketing literature (Zeelenberg & Pieters, 2004; Schoefer, 2010, 2016). Bristol Online Survey was used to design and distribute the online-questionnaire. The survey was sent to more than 150 students from Newcastle University and to more than 150 students from Universities abroad. Within four weeks 84 valid respondents from 15 countries with 65% from Europe, 30% from Asia, and 5% from North

America and Australia were collected. 42% of respondents have achieved a Masters' Degree, 39% a Bachelor's Degree, and 18% a high school diploma. The age ranged from 21 to 69 years (mean=28).

While the research's restriction to students limits the generalizability, this non-probability sampling, however, delivers two advantages as Schoefer (2016) outlines. Firstly, similar demographic background of the participants helps to reduce confounders. Thus, it is more likely that cultural influences are the real reason of different behaviour. Secondly, as Reynolds, Simintiras, and Diamantopoulos (2003) outline, is this kind of



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homogeneous sample desirable when testing theory to explain events beyond the research setting, since it reduces the likelihood of extraneous variables affecting the study.

### Measures

The online questionnaire was divided into three parts, namely a OCRs part, an individual culture part and finally, demographic question. The first part observed consumers' online buying behaviour with several basic questions. The second part observed how important OCRs attributes are perceived. Adapting the questions from Park, Lee & Han (2007), Schepers (2016), and Leng & Botelho (2010), the attributes Quality, Valence, and Source Credibility were prompted. Each attribute comprised between 3-6 questions using 5-point scales to indicate the importance from "1=not important at all" to "5=very important".

The third part aimed to find out the individual culture orientation along Hofstede's dimensions. Addressing the

potential danger of predicting individual behaviour on a pre-existing group-levels as well as the "ecological fallacy" (Patterson et al., 2006), the CVSCALE by Yoo, Lenartowicz & Donthu (2011) was used to measure culture according to Hofstede (1980). This revised set of questions indicates the participant's individual cultural level along Hofstede's dimensions. This approach appears to be the best concept compared to other methods such as artificial manipulation like priming as this would drastically constrain the validity in an international context, because it just mimics culture (Dalsky, 2010). The CVSCALE was applied by providing 4-6 questions for each cultural dimension using Likert-scales from "1=strong disagree" to "5=strongly agree". As Schoefer et al. (2016) point out, has this scale been proven successfully at capturing Hofstede's five dimensions (Yoo et al., 2011) and thus, has been successfully used in marketing research.

**Table 2: Wordings and items of the survey based on literature**

Constructs	Items	References
Online Buying Behaviour and Importance of OCR for purchase intention	<b>OB81:</b> How much time do you spend online each day? <b>OB82:</b> Have you ever ordered a product online? <b>OB83:</b> How often within one year do you order products online? <b>OB84:</b> When ordering a product online did/do you read reviews of other buyers before buying the product? <b>OB85:</b> How important are these reviews for your purchase decision?	Park, Lee & Han, 2007; Schepers, 2016; Leng and Botelho, 2010; Zhu & Zhang, 2006; Elwaldi & Lu, 2016.
Review Quality	<i>When using Online Consumer Reviews for your purchase decision how important would you rank the following attributes concerning the quality of reviews?</i> <b>RQ1:</b> Objectivity of reviews <b>RQ2:</b> Understandability of reviews <b>RQ3:</b> Credibility of reviews <b>RQ4:</b> Clearness of reviews <b>RQ5:</b> Sufficient reasons supporting the opinions <b>RQ6:</b> Well written without many spelling or grammar mistakes	Mudambi & Schuff, 2010; Lee et al., 2007; Schepers, 2016; Leng and Botelho, 2010
Volume	<i>When using Online Consumer Reviews for your purchase decision how important would you rank the following attributes concerning the volume of reviews?</i> <b>RV1:</b> Number of reviews available <b>RV2:</b> Quantity of information in reviews <b>RV3:</b> Quantity of rankings available	Park, Lee & Han, 2007; Schepers, 2016; Leng and Botelho, 2010; Zhu & Zhang, 2006.
Valence	<i>When using Online Consumer Reviews for your purchase decision how important do you think are the following statements concerning the ratings of reviews?</i> <b>RVA1:</b> I would only buy products with an average of 5 stars <b>RVA2:</b> I would only buy products with an average of 4 stars or above <b>RVA3:</b> I would never buy products with an average of 3 stars or below <b>RVA4:</b> The average stars-ranking is more important than written reviews	Park, Lee & Han, 2007; Schepers, 2016; Leng and Botelho, 2010; Zhu & Zhang, 2006.
Source Credibility	<i>When using Online Consumer Reviews for your purchase decision how important would you rank the following attributes concerning the source credibility of reviews?</i> <b>RSC1:</b> Reviewers' credibility <b>RSC2:</b> Reviewers' reliability <b>RSC3:</b> Reviewers' expertise	Watthen & Burkell (2002); Duan et al., 2008; Schepers, 2016.
Power Distance	<b>PD1:</b> People in higher positions should make decisions without consulting people in lower positions. <b>PD2:</b> People in higher positions should not ask for opinions of people in lower positions too frequently. <b>PD3:</b> People in higher positions should avoid social interaction with people in lower positions. <b>PD4:</b> People in lower positions should not disagree with decisions by people in higher positions. <b>PD5:</b> People in higher positions should not delegate important tasks to people in lower positions.	Yoo, Lenartowicz & Donthu, 2011; Schoefer, 2016.
Uncertainty Avoidance	<b>UA1:</b> It is important to have instructions spelled out in detail so that I always know what I'm expected to do. <b>UA2:</b> I always know what I'm expected to do. <b>UA3:</b> It is important to closely follow instructions and procedures. <b>UA4:</b> Rules and regulations are important because they inform me of what is expected of me. <b>UA5:</b> Standardised work procedures are helpful. <b>UA6:</b> Instructions for operations are important.	Yoo, Lenartowicz & Donthu, 2011; Schoefer, 2016.
Individualism	<b>IC1:</b> Individuals should sacrifice self-interest for the group. <b>IC2:</b> Individuals should stick with the group even through difficulties. <b>IC3:</b> Group welfare is more important than individual rewards. <b>IC4:</b> Group success is more important than individual success. <b>IC5:</b> Individuals should only pursue their goals after considering the welfare of the group. <b>IC6:</b> Group loyalty should be encouraged even if individual goals suffer.	Yoo, Lenartowicz & Donthu, 2011; Schoefer, 2016.
Masculinity	<b>MA1:</b> It is more important for men to have a professional career than it is for women. <b>MA2:</b> Men usually solve problems with logical analysis; women usually solve problems with intuition. <b>MA3:</b> Solving difficult problems usually requires an active, forcible approach, which is typical of men. <b>MA4:</b> There are some jobs that a man can always do better than a woman.	Yoo, Lenartowicz & Donthu, 2011; Schoefer, 2016.
Long-term orientation	<b>LO1:</b> Careful management of money (thrift). <b>LO2:</b> Going on resolutely in spite of opposition (persistence). <b>LO3:</b> Personal steadiness and stability. <b>LO4:</b> Long-term planning <b>LO5:</b> Giving up today's fun for success in the future. <b>LO6:</b> Working hard for success in the future.	Yoo, Lenartowicz & Donthu, 2011; Schoefer, 2016.
Demographic	<b>D1:</b> My age is <b>D2:</b> My gender is <b>D3:</b> My nationality is <b>D4:</b> I am or was a student at a University in Great Britain <b>D5:</b> I am an English native speaker or I speak English fluently <b>D6:</b> Please indicate your highest level of educational achievement	



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### Results

Before testing the hypotheses, the robustness of measurement scales has been tested. Principal Component Analysis (PCA) indicated good loadings, ranking from 0.59-0.83. Composite Reliability (CR) of constructs ranged from 0.685-0.843 whereas only the construct "Quality" reached a value slightly under the guideline of 0.7 (Janssens et al., 2010). Average variance extracted (AVE) showed acceptable results ranking from 0.487-0.628. Because one of the nine constructs, namely "Quality" was slightly below the recommended value of 0.5, a second validity test, the so-called Discriminant Validity (DV), was conducted and showed sufficient results for all items.

#### Common Method Variance

A problem which concerns many behavioural studies is called the Common Method Variance (CMV) (Podsakoff, MacKenzie & Podsakoff, 2003). Since this research used a single informant for both independent and dependent variables, a threat of CMV is given (*ibid.*). To avoid and observe this problem several provisions have been made. Firstly, in the ex-ante design stage, several arrangements were made (e.g. avoidance of academic terms, or too complicated sentences) as suggested by Chang, Witteloostuijn & Eden (2010). Secondly, statistical tests have been conducted to preclude problems resulting from CMV but neither Harman's single factor test nor a more sophisticated Common Latent Factor test showed suspicious results.

#### Multicollinearity

Results for multicollinearity showed good values for VIF (between 1.09-1.38) which should be below 4 (Wooldridge, 2016). However, the Condition Index (CI) for

the main effects ranked up to 21.77, and for the moderation variables up to 29.01. According to Janssens (2010) a CI above 30 indicate the presence of strong multicollinearity, whereas a value under 10 is seen as good value. Therefore, the study proceeds by using the factor scores from the PCA as recommended by Janssens (2010) to reduce the influence of the multicollinearity.

#### Results for hypotheses

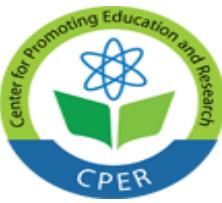
After testing the measurement model and a possible common method bias, finally the research moved on to test hypotheses. Therefore, the Structural Equation Modelling (SEM) on IBM SPSS AMOS has been applied.

#### Main effects

The results for model 1, which observed the main effect between Quality, Volume, Valence, and Source Credibility and the perceived importance of OCRs, showed that hypotheses H1 was mostly supported. Consistent with the literature, the results support H1a, b, and c because the perceived importance of OCRs is significantly influenced by Quality, Volume, and Review. However, Source Credibility did not show a significant influence on the perceived importance of OCRs.

#### Moderating effects

The results of model 2-5 which were utilized to test hypotheses 2-5 indicate mixed results. These hypotheses 2-5 observed whether or not individual's cultural value orientation significantly moderates between the influence of Quality, Volume, Valence, and Source Credibility and the perceived importance of OCRs. Hypotheses 3 and 5 were rejected whereas hypotheses 2 and 4 were partly supported.



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Table 3: SEM results for model 1-5

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Main Variables</b>					
Review Quality	0.285 (2.04)*	0.105 (0.64)*	0.099 (0.54)	0.053 (0.30)	0.104 (0.63)
Review Volume	0.35 (2.97)**	0.289 (2.30)*	0.223 (1.69)	0.356 (3.05)**	0.386 (3.28)**
Review Valence	0.507 (4.44)***	0.542 (4.67)***	0.558 (4.71)***	0.566 (4.92)***	0.49 (4.41)***
Source Credibility	0.155 (0.92)	-0.276 (-1.98)*	-0.261 (-1.85)	-0.258 (-1.80)	-0.192 (-1.29)
Power distance	-0.135 (-1.05)	-0.189 (-1.34)	-0.191 (-1.38)	-0.095 (-0.75)	-0.142 (-1.11)
Uncertainty Avoidance	0.397 (2.42)*	0.403 (2.01)*	0.457 (2.60)**	0.503 (2.98)**	0.414 (2.34)*
Masculinity	0.062 (0.57)	0.033 (0.31)	0.024 (0.21)	0.027 (0.24)	0.093 (0.83)
Individualism	-0.114 (-1.04)	-0.128 (-1.13)	-0.129 (-1.00)	-0.105 (-0.98)	-0.116 (-0.92)
Long-term orientation	0.199 (1.10)	0.187 (1.00)	0.142 (0.77)	0.233 (1.29)	0.179 (0.89)
<b>Interaction Effects</b>					
Quality x Power distance		-0.258 (-2.40)*			
Quality x Uncertainty Avoidance		-0.098 (-1.44)			
Quality x Masculinity		0.14 (1.18)			
Quality x Individualism		-0.027 (-0.28)			
Quality x Long-term orientation		0.094 (1.17)			
Volume x Power distance			-0.166 (-1.83)		
Volume x Uncertainty Avoidance			0.024 (0.27)		
Volume x Masculinity			0.053 (0.49)		
Volume x Individualism			-0.085 (-0.78)		
Volume x Long-term orientation			-0.078 (-0.61)		
Valence x Power distance				-0.085 (-1.97)*	
Valence x Uncertainty Avoidance				-0.198 (-0.88)	
Valence x Masculinity				0.196 (2.06)*	
Valence x Individualism				-0.033 (-0.45)	
Valence x Long-term orientation				0.081 (0.71)	
Credibility x Power distance					-0.083 (-0.89)
Credibility x Uncertainty Avoidance					0.108 (1.49)
Credibility x Masculinity					-0.01 (-0.12)
Credibility x Individualism					0.01 (0.09)
Credibility x Long-term orientation					-0.096 (-1.14)
<b>Control Variables</b>					
Age	0.003 (0.39)	0.005 (0.61)	0.008 (0.84)	0.006 (-0.74)	0.003 (0.39)
Gender	-0.209 (-1.24)	-0.258 (-1.52)	-0.218 (-1.21)	-0.248 (-1.51)	-0.145 (-0.83)
Education	-0.058 (-0.52)	-0.107 (-0.96)	-0.106 (-0.95)	-0.017 (-0.15)	-0.064 (-0.59)
R2	0.36	0.39	0.41	0.39	0.42
Adjusted R2	0.33	0.35	0.38	0.35	0.39

Notes: \*, \*\*, and \*\*\* indicate that the coefficient is significant at 0.05, 0.01, and 0.001 level (two tailed)

## Discussion

While previous research focused on OCRs' influence on purchase intention and sales, very little attention was paid on how consumers' cultural value orientation might influence the perception of OCRs. Addressing this important research gap, the study attempted to observe how consumer's cultural value orientation along Hofstede's dimensions influences the perceived importance of OCRs. The findings of the present research showed mixed results.

The one achievement of this study was to demonstrate that three of the cultural value orientation along Hofstede's (1980,1991) dimensions has a significant moderation effect on how the importance of OCRs is perceived. The cultural dimension Power distance negatively moderated the effect that both Valance and Quality have on perceived OCR importance; whereas the Masculinity dimension had a significant interaction with Valence and the perceived importance of OCRs. Surprisingly and maybe even more interesting none of the

other examined interactions between cultural dimensions and OCR perception showed any significance.

Furthermore, this study could confirm the influence of Quality, Volume, and Valence on the perceived importance of OCRs, in line with previous research. Source Credibility was found to play no significant role in the consumers' perception of OCRs.

### The moderating effects

As suggested in the hypothesis-development, it appears that people from high power-distance backgrounds perceive Valence and Quality as less important. The reasons for this might be due to the fact that these cultures tend to differentiate between private and public consumption goods (Mooij, 2011:41; Kim & Zhang, 2014). An interesting research objective would be to examine these moderations for other products that convey status to other people or to change the task to e.g. 'you want to buy a gift for a good friend', which might increase the overall importance of OCRs to these people. This could have implications for product marketing such that when advertising high-



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involvement products in cultures dominated by this dimension, it might be of advantage to market goods as status product or suitable gifts. This could enhance the importance that consumers place on several aspects of OCRs.

Furthermore, the cultural dimension of Masculinity significantly promotes the positive effect of OCR Valence on the importance of OCR for the purchase intentions. High Masculinity cultures place value on fast and optimized decision outcomes (Hofstede, 2001) and individuals with a high degree of Masculinity spend less time shopping online before arriving at the purchase decision (Ref). In light of these characteristics, it is not surprising that the most salient feature of OCRs, namely the star-rating (i.e. Valence), is most important for these cultures as compared with any other cultural orientation. This finding offers potential for online marketplaces to increase sales in countries where this dimension is dominant, simply by making the Valence feature on the website more salient, e.g. by increasing the size of the star symbols.

### ***Not all cultural dimensions show a moderation effect***

Besides the above discussed cases, no other significant moderating effects of cultural dimensions were found. This is a surprising result since a large body of previous research found substantial impact of Hofstede's cultural dimensions on various consumer activities (e.g. Moon, Mishra & Kang, 2016; Leng & Botelho, 2010; Schoefer, 2010, 2016; Furrer & Sollberger 2011; Pentina et al., 2015; Ma, 2013; Mooji & Hofstede, 2011). Several theoretical and practical explanations could explain these findings.

### ***Behavioural convergence of Internet users***

Firstly, it is possible that the 'traditional' cultural value orientation has less influence on online behaviour than on conventional shopping and is dampened by the proxy Internet. Therefore, it might be possible that consumers establish a parallel culture for online behaviour. This idea was initially discussed in the late 1990s when the Internet grew expansively. While Mooji (2003) still reported that proof to this thesis had never been delivered, Constantinides et al. (2008) later found an "emerging behavioural convergence among internet users of different cultures". This may indicate that cultural behaviour in the "real world" has only limited influence on online behaviour. Furthermore, the scholars stated that this development resembles the concept of a Global Virtual Village. This idea refers to an artificial village (the internet) where everyone regardless of their physical origin

behaves similarly. Therefore, the present findings may be seen as further evidence of the expanding influence of the Global Virtual Village.

Similarly, Chau et al. (2012) outlined after observing online buying behaviour in a cross-cultural setting that online consumer behaviour can significantly differ from offline consumer behaviour. Furthermore, they found that the higher the propensity to use online communication the more likely the online buying behaviour is to change. This has twofold implications. Firstly, the use of online communication methods such as WhatsApp and Facebook has significantly increased since the publication of Chau's study, which might amplify this effect (Chaykowski, 2017). Secondly, participants of the present study appear to be very experienced internet users (76% spend more than 1 hour online a day). Thus, it is possible that the intensive usage of internet has dampened the influence of consumers' individual cultural value orientation and has led to a unified "Internet behaviour".

The effect of dampened culture features might also be amplified by the design and content standardization of huge online shopping platforms such as Amazon, eBay, or Trip Advisor. The appearance and structure of these websites are nearly the same, globally. Hence, OCRs on these platforms are also presented the same everywhere (except for a few examples such as China). Such standardized appearance and function is likely to promote unified online behaviour, both in the form of actively writing and passively perceiving OCRs, no matter the culture of creator and receiver of OCRs.

Contrarily, findings by Ma (2013) indicate that the content of product reviews and recommendations from consumers via Twitter (eWOM) significantly differs in cross cultural comparisons. Hence, it may be possible that cultural value orientation influences the way people provide information (active) but less or not at all on how information is perceived. Future studies could therefore compare if and how the effect of cultural value orientation differs when actively writing or passively perceiving information. Additionally, more research is needed to understand how a Global Virtual Village ('internet-culture') interacts with both traditional cultural value orientations and consumer behaviour.

### ***Influence of Quality, Volume, Valence, and Source Credibility***

As expected, Quality, Volume, and Valence showed significant influence on the perceived importance



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of OCRs, which is in line with several scholars (Cheung & Thandis, 2012; Mudambi & Schuff, 2010; Elwalda & Lu, 2016; Park et al., 2007). However, Source Credibility did not have significant influence. There are two possible explanations for this finding.

### **Problems of fake OCRs**

Firstly, it is possible that consumers are not aware of the possibility of unreal or 'fake' OCRs. The opportunity for companies to buy OCRs written by payed workers or by internet-bots (Dunham & Melnick, 2009; Li, Hitt & Zhang, 2011) is increasingly causing problems for online websites (Filieri, 2016). Therefore, Filieri (2016) stressed that websites which publish OCRs, should further invest in defence mechanisms to prevent 'fake' OCRs. However, it is not quite clear how much consumers know about the threat of false reviews. In this light, Filieri (2016) stressed that Credibility of OCRs is in an interdependent relationship with the trustworthiness of the website. That is when consumers perceive OCRs on a website as trustworthy, they simultaneously perceive the website as trustworthy and vice-versa. This indicates, consumers may not have to be aware of dangers of fake reviews since they might just rely on the website.

This and the findings presented here suggest that OCR Source Credibility should not be observed in isolation but always in combination with the website's reputation in order to gain understanding how trustworthiness influences the perceived importance. This should be addressed in future research.

### **Little segregation between Quality and Source Credibility**

Secondly, the academic concepts of Quality and Source Credibility, as used by several scholars, overlap to some degree. Accordingly, Awad and Ragowsky (2008) found that a high-quality review automatically increases the perceived Credibility. Furthermore, the relationship

between Quality and Credibility is likely to work reversed as well. In other words, it is unlikely that consumers would judge a review as being of high quality when it is obvious that it is not trustworthy. Newest findings by Lin and Xu (2017) also suggest that Valence also has significant influence on the perceived Source Credibility. Therefore, it might be possible that the participants of the present study did not rank Source Credibility as very influential since they have already processed this attribute when judging Quality or Valence. Further research could address this finding by observing the relationship between Credibility and OCRs better, or by developing a new concept to measure Credibility.

### **Limitations and further research**

Finally, some limitations of sample and design should be noted. Firstly, since most of the participants (62%) studied in the UK, it is likely that living abroad and in a new culture has reduced the influence of their original cultural orientation. Secondly, because the age and the level of education of the participants is quite homogenous, it is not clear how generalizable the results are for other groups. For example, older people might have different internet usage behaviour would likely influence results as outlined above. In future studies, these limitations should be addressed by taking a more heterogeneous sample. Finally, the results might have been compromised by inconsistent measurements. While the usefulness of the measurement for Hofstede's dimensions has been proven successfully in several studies (Yoo et al., 2011; Schoefer, 2010, 2016), the measurement for Quality, Volume, Valence, and Source Credibility as well as the perceived importance of OCRs is not as established yet and might be immature. Thus, future research could develop a more reliable set of questions to measure these attributes of OCRs.

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