HOW ONLINE SEARCH BEHAVIOR IS INFLUENCED BY USER-GENERATED CONTENT ON REVIEW WEBSITES AND HOTEL INTERACTIVE WEBSITES?

Abstract

Purpose – This paper is a further step in research on consumer psychology of hospitality, since it investigates how online search behavior of users (particularly, information search and choice) is influenced by the opinions of other people in a new context characterized by the generalized use of web 2.0 applications. In particular, this study develops a theoretical model to explain the influence on behavior, as perceived by the individual, of user-generated content on web 2.0 applications.

Design/methodology/approach – Empirical research was carried out in the hotel sector in Iberian Peninsula, where two web 2.0 applications are especially relevant for users: the review websites and the hotel interactive websites. A qualitative method (in-depth interviews with hotel managers) and a quantitative technique (personal surveys to a sample of 830 users) were used to conduct this research.

Findings – The results indicates that the perceived influence on behavior of the user-generated content on these web 2.0 applications is determined, in both cases, by the value of the information, the credibility of the sources, and the degree of similarity between the user and the creators of content.

Originality/value – This paper is the first study in the hospitality literature that develops and empirically tests an integrative model explaining the perceived influence on behavior of user-generated content on web 2.0 applications.

Practical implications – Firms should have an active presence in the review websites and the hotel interactive websites, and use these platforms for market research and communication. Firms should engage users to post content, support their credibility, and facilitate the evaluation of the content generators’ similarity.

Keywords online search behavior, web 2.0, e-WOM, behavior, value, credibility, similarity.

Paper Type Research paper.
Introduction

This paper is focused on the consumer psychology of tourism and hospitality, a field of knowledge that receives growing attention from different disciplines (Crouch et al., 2004; MacKay and Vogt, 2012). In particular, the present study examines the decision-making process of users, where the intentions and behaviors of individuals are influenced by different internal mechanisms (e.g., beliefs, motivations, and emotions) which are the result of the stimulus situation and the socio-cultural context (Mullen and Johnson, 1990). With this in mind, this paper is a further step in current research on consumer psychology of tourism and hospitality, since it investigates how user behavior (particularly, information search and choice) is influenced by the opinions and experiences of other people in a new context characterized by the generalized use of Internet and, more concretely, of Web 2.0 applications (MacKay and Vogt, 2012).

The Internet has become an essential tool in tourism and hospitality (Law et al., 2009), allowing individuals to search for information on products and services, compare and evaluate the alternatives, and finally make reservations. Thus, the Internet promotes consumer centricity (Niininen et al., 2007), allowing individuals to select and customize their products and, therefore, their experiences. The importance of Internet, and particularly the websites, in the decision-making process of users has led to the development of abundant studies on the adoption (for example, Kim et al., 2008; Bigné et al., 2010; Usoro et al., 2010) and the characteristics determining the success of tourism websites (see analysis conducted by Park and Gretzel, 2007). In particular, quite a few papers agree in indicating the following key characteristics contributing to the success of tourism websites: information quality, interactivity, and navigability (for example, Baloglu and Pekcan, 2006; Ho and Lee, 2007; Kim et al., 2007). More recently, the emergence of Web 2.0 has revolutionized the use of the Internet; consequently, new research, beyond studies on traditional websites, is needed to better understand this current phenomenon in tourism and hospitality (Leung et al., 2013).
The term “Web 2.0” includes a wide range of electronic applications (e.g., social networks, review websites, blogs, interactive websites and photo and video sharing platforms), which facilitate interactions among individuals and among companies and users. Particularly, the greatest contribution of this type of applications lies on the side of users/consumers by facilitating individuals’ active communication with other people and organizations. The influence of these applications has been especially important in the industry of tourism and hospitality (Xiang and Gretzel, 2010; Kwok and Yu, 2013), where there is a tendency to share experiences with other people through publishing recommendations, opinions, photos, or videos on the Internet (Buhalis and Law, 2008). This information created and shared by individuals through web 2.0 applications is called, in the academic literature, user-generated content.

This research focuses in two of the main web 2.0 applications in the hotel sector: the review websites and the hotel interactive websites. Review websites, recently examined in hospitality research (Melian et al., 2013; Park and Allen, 2013), allow to users publish comments on and evaluations of services (Buhalis and Law, 2008; Xiang and Gretzel, 2010; Chan and Guillet, 2011). Therefore, these websites fall into a specific class of virtual communities that satisfy individuals’ needs to meet with other people who have similar interests and behaviors (Wang et al., 2002; Wang and Fesenmaier, 2004). Review websites can be generalist or thematic, being Tripadvisor the most extended platform that is focused on tourism reviews. For its part, Web 2.0 applications allow interactivity in the websites of hotels, so they can be also used by users to publish comments and contents about the hotel. Therefore, other individuals can use the hotels’ websites in order to access the opinions published by other users that have previously had an experience with that hotel. In both cases, individuals can use opinions and ratings from other people to aid their decisions.

Accordingly, the review websites and the hotel interactive websites represent two sources of electronic word-of-mouth (e-WOM) given that the information published by some users in these applications may affect other individuals’ behaviors (Allsop et al., 2007; Litvin, et al., 2008, Steffes and Burgee, 2009). In tourism and hospitality, e-WOM sources have a special relevance for users in their decision-making process (Litvin et al., 2008; Parra-López et al., 2011). With this in mind, this paper aims to
analyze how is formed the perceived influence on behavior of the user-generated content on the review websites and the hotel interactive websites. In this sense, the main contribution of this study is the development and empirically testing of an integrative model that explains the perceived influence of user-generated content on web 2.0 applications on user behavior by incorporating the factors most frequently examined in past research on communication and consumer behavior.

In particular, our research examines three of the main drivers of the influence of e-WOM (Brown et al., 2007): 1) the user’s perceptions about the value of the user-generated content about the hotels; 2) the credibility attributed to the content creators; and 3) the degree of similarity between the user and the content creators. Therefore, we establish a direct causal relationship between these explanatory variables and the perceived influence of e-WOM on user behavior (information search and final choice). The application of the theoretical model in the case of two e-WOM sources, the review websites and the hotel interactive websites, allows better estimation of the generalization ability of our model to other electronic applications. Finally, it is necessary to emphasize that the findings of this study provide deeper knowledge on the psychological mechanisms that are at the basis of the influence of different e-WOM sources on consumer behavior in tourism and hospitality.

**Background**

WOM is defined as a consumer-dominated channel of marketing communication in which the sender is independent of the market (Brown et al., 2007). WOM allows the production of and/or access to consumption-related information that holds greater “informational value” than formal advertising messages provided by the company and, therefore, that has a strong influence on individual decision making (Brown et al., 2007). Consumers therefore perceive WOM to be more reliable, credible, and trustworthy than firm-initiated communications (Arndt, 1967; Silverman, 1997; Allsop et al., 2007). Accordingly, past research supports that WOM is one of the more influential forms of communication. In particular, in traditional communications theory, WOM exerts a powerful influence on consumers’
information search, evaluation, and subsequent decision-making processes (Cox, 1963; Brown and Reingen, 1987; Money et al., 1998; Allsop et al., 2007; Silverman, 2011).

Over the last decade, technology has increased the relevance of WOM in the form of electronic word-of-mouth (e-WOM). e-WOM refers to any positive or negative statement made by potential, actual, or former customers about a product or company that is made available to a multitude of people and organizations via the Internet (Hennig-Thurau et al., 2004; Cheung et al., 2008). Similar to WOM, past research has shown that e-WOM may have higher credibility, empathy, and relevance to customers than marketer-created sources of information on the Web (Bickart and Schindler, 2001). This new computer-mediated form of interpersonal influence requires new approaches to management, thus requiring additional research efforts (Brown et al., 2007). Specifically, the review websites and corporate interactive websites have a huge potential as e-WOM sources, as they allow individuals to post contents about products and services that can be read by any user of these applications around the world. However, despite the consensus among academics and practitioners about the influence of e-WOM on consumer behavior, very little empirical evidence is available in this field and more research is still required (Cheung et al., 2008).

As stated before, our research focuses on the determinants of the perceived influence of e-WOM from web 2.0 applications on user behavior, considering the information value, source credibility, and similarity in the context of review websites and hotel interactive websites. In accordance with a well-established line of literature on WOM (Brown and Reingen, 1987; Bansal and Voyer, 2000; Wangenheim and Bayon, 2004; Steffes and Burgee, 2009), the dependent variable in our research is the influence of e-WOM from these applications, as perceived by users themselves, on their information search and final choice. More concretely, since there is a widespread use of these electronic applications in the users’ decision-making processes, in this study we consider more interesting to analyze the perceived influence as dependent variable instead of use intention.

The following sections focus on the relevant literature on the conceptualization of information value, source credibility and similarity, as well as their effects on the perceived influence of e-WOM.
**Information value**

In past research, user perceptions of the value (Gruen et al., 2006, Brown et al., 2007; Mathwick et al., 2008; Steffes and Burgee, 2009) or quality (Cheung et al., 2008) of the information available through e-WOM sources has often been identified as a determinant of the influence exerted by these sources on their behavior. Therefore, with a user centric perspective, information value is conceived as its utility in the decision-making process (Steffes and Burgee, 2009), and is related to the relevance, timeliness, accuracy and comprehensiveness of the information available to the consumer (Cheung et al., 2008). According to this approach, individuals will be especially influenced by user-generated contents on the review websites and the hotel interactive websites if they consider the information to be useful and relevant to their decision-making process.

Despite the relevance of this topic on consumer behavior literature, the empirical evidence available regarding the influence of information value on consumer behavior in tourism and hospitality is very limited (Cho and Sung, 2012, Tang and Jang, 2014). The few studies developed in this field have supported the influence of information value on tourism websites' motivational effectiveness (Kah et al., 2010), the performance of travel destination websites (Cho and Sung, 2012) or destination image formation (Tang and Hang, 2014). However, very few papers has explicitly examined how the information value perceived on user-generated contents influences behavior, particularly, in the case of review websites and hotel interactive websites. In this sense, Huang et al. (2010) confirmed that the influence of e-WOM sources on behavior is determined by the perceived value of the content published in these sources. Similarly, Filieri and McLeay (2014) found that users’ perceptions about the information value of online reviews are strong predictors of the adoption of these sources of information to book accommodations. Therefore, we propose the first hypothesis for the two e-WOM sources considered in this research:
H1a. Higher perceived value of the user-generated content on review websites leads to higher perceived influence of this content on user’s behavior.

H1b. Higher perceived value of the user-generated content on hotel interactive websites leads to higher perceived influence of this content on user’s behavior.

Source credibility

Several authors have observed that the positive effect of WOM is related to the credibility (expertise and trustworthiness) attributed to other consumers’ opinions (in contrast to commercial communication) because they are not filtered by company interest (Allsop et al., 2007). This approach is supported by different theories in the field of communication and persuasion that have highlighted the relevance of source credibility on consumer behavior -see Pornpitakpan (2004) for an extensive revision of the literature on this topic-. For example, according to Attribution Theory (Eagly and Chaiken, 1993), when consumers are presented with a message they will make an effort to assess whether the message provides an accurate representation of the product or company. If the message lacks in credibility, it will be discounted and will not be very persuasive (Buda, 2003; Kelly, 1967, 1972). Moreover, behavioral influences are higher when the credibility of the sources is high (e.g., Dholakia and Sternthal, 1977; Bansal and Voyer, 2000, Pornpitakpan, 2004). In this sense, Petty and Cacioppo (1986) define source credibility as the extent to which an information source is perceived to be believable, competent, and trustworthy by information recipients. Accordingly, the dimensions of source credibility have been commonly identified to consist of expertise and trustworthiness (Pornpitakpan, 2004). As stated before, consumers perceive WOM to be more reliable, credible, and trustworthy than firm-initiated communications (Arndt, 1967; Silverman, 1997; Allsop et al., 2007) because it comes from other consumers, which are perceived as an unbiased source of information.

In the specific field of e-WOM sources, Cheung et al. (2008) and Jin et al. (2009) have established that the effects of e-WOM on behavior are determined by the credibility attributed by the user to the information source. Therefore, the influence of e-WOM sources on consumer behavior will depend on
the degree to which the user trusts the contents posted in these sources or considers them credible. In tourism, diverse studies have confirmed that user-generated content about tourist destinations and services is perceived as being more credible or trustworthy than firm-generated content (Dickinger, 2011; Sparks et al., 2013). However, few authors have examined how the credibility of user-generated content about tourist destinations or firms influences consumer behavior. Sotiriadis and van Zyl (2013) find out that Twitter users that believe that other users/followers/groups are reliable, tend to use information retrieved from Twitter regarding tourism services in their decisions. For its part, López and Sicilia (2014) confirm a positive effect of credibility on the influence perceived by users. Similarly, Ayeh et al. (2013) obtain empirical evidence that supports that the perceptions of the credibility of the user-generated content on a source significantly influence behavior during the travel planning process. This leads to the second pair of research hypotheses:

H2a. Higher perceived credibility of the user-generated content on review websites leads to higher perceived influence of this content on user’s behavior.

H2b. Higher perceived credibility of the user-generated content on hotel interactive websites leads to higher perceived influence of this content on user’s behavior.

In addition, several authors have observed that the information provided by highly credible sources is perceived to be more useful and reliable (Sussman and Siegal, 2003; Ko et al., 2005; Cheung et al., 2008). Accordingly, Brown et al. (2007) and Camarero et al. (2011) suggest that source credibility has a positive effect on the perceived value of the information available in that source. However, the empirical evidence about the relationship between the credibility of user-generated content and the information value attributed to them is almost inexistent in tourism. In this sense, only the study developed by Parra-López et al. (2011) showed that user trust in an e-WOM source is an incentive for its use as a source of information for purchasing processes. Accordingly, users will consider the information available in a source to be more useful or valuable if they perceive the source to be
credible. In the specific field of hospitality, users will perceive more value in the contents generated by other individuals on the review websites and the hotel interactive websites if they consider that the people who have created those contents are credible (i.e. they have expertise with the service and are trustworthy). We therefore propose the third pair of hypotheses:

H3a. Higher perceived credibility of the user-generated content on review websites leads to higher perceived value for the content available in these sources.

H3b. Higher perceived credibility of the user-generated content on hotel interactive websites leads to higher perceived value for the content available in these sources.

Similarity

The influence of WOM on consumer behavior has also been associated with users' perceptions of their similarity to the source (Gilly et al., 1998; Wangenheim and Bayon, 2004). Brown and Reingen (1987) define similarity or homophily as the degree to which individuals are similar to sources in terms of certain attributes. In particular, similarity between individuals predisposes them toward greater levels of interpersonal attraction, trust, and understanding than would be expected among dissimilar individuals (Ruef et al., 2003). Therefore, this variable affects the information that consumers receive, the attitudes they form, and the interactions they experience (McPherson and Smith-Lovin, 1987). This influence of similarity on the consumer decision-making processes can be justified by several theories, such as the Theory of Social Comparison (Festinger, 1954), the Source-Attractiveness Model (Kelman, 1961), and the ‘Match Up’ Hypothesis (Kamins, 1990). Past advertising research suggests that communications from a similar referent are perceived as being more influential than messages coming from dissimilar ones (e.g., Feick and Higie, 1992). Additionally, several authors have confirmed that the effect of WOM is higher when the information comes from a source perceived to be more similar to the receiver (Brown and Reingen, 1987; Price et al., 1989; Steffes and Burgee, 2009). Despite the intensive review of the literature undertaken, we have not found any previous
research in tourism that has examined the relationship between the influence exerted on behavior by
user-generated content and the similarity perceived by the individual on content's generators.
However, according to evidence available regarding WOM, individuals will consider that the contents
(opinions, comments or reviews) published by other users on the review websites and the hotel
interactive websites are more applicable to their own behavior if they perceive that they have been
posted by people who are similar to them in terms of needs and preferences. Accordingly, we propose
the fourth pair of hypotheses:

H4a. Higher perceived similarity between the user and the creators of content on review websites leads
to higher perceived influence of this content on user’s behavior.

H4b. Higher perceived similarity between the user and the creators of content on hotel interactive
websites leads to higher perceived influence of this content on user’s behavior.

According to Ruef et al. (2003), the perceived similarity to other people predisposes consumers toward
a greater level of trust than would be expected among dissimilar individuals. Brown et al. (2007) also
suggest a positive influence of the perceived similarity (i.e., homophily) on the credibility attributed
by users to e-WOM sources. Likewise, Ziegler and Lausen (2004) and Golbeck (2009) observe that
user trust in a source of information is correlated with the similarity as perceived by the individual.
Although there is not empirical evidence available with regard to this issue in tourism, according with
WOM and e-WOM literature, users will rely more on the information available in a source if they
perceive that the content creators have characteristics and interests that are similar to their own.
Accordingly, we establish the fifth pair of hypotheses:

H5a. Higher perceived similarity between the user and the creators of content on review websites leads
to higher perceived credibility of this content.
H5b. Higher perceived similarity between the user and the creators of content on hotel interactive websites leads to higher perceived credibility of this content.

Our research hypotheses give place to a theoretical model that is shown in figure 1.

**Figure 1**

**Methodology**

Empirical research was carried out in the hotel sector in Iberian Peninsula. In particular, a combination of qualitative and quantitative methods was used to data collection. The qualitative research consisted of six in-depth interviews with hotel managers, who have to face the e-WOM about their establishments generated on review websites or in their own corporate website. The in-depth interviews were conducted with managers of hotels with different sizes and categories to ensure the typological representativeness of the qualitative sample. For data collection, the moderator used the semi-structured interview as research instrument. In particular, the topics debated included the main characteristics and motivations of individuals who use web 2.0 applications (in particular, the review websites and the hotel interactive websites) in their decision-making process, the interactions between the supplier and the users, and strategies used by the hotels to manage e-WOM. After an inductive analysis and a subjective interpretation of the contents which were collected through the in-depth interviews, the qualitative results were used to build the measurement scales; more concretely, the expertise of the participants helped to refine the descriptors of the questionnaire taking into account thus, not only the literature review, but also the managerial perspective. In addition, as will be shown later, the qualitative results helped to better interpret the quantitative results.

Data collection in quantitative research was carried out using a questionnaire that included questions about the following issues: 1) the level of use of the review websites and the hotel interactive websites; 2) the evaluation of these applications in a context of hospitality (i.e. perception of the
variables of the theoretical model for each web 2.0 application); and 3) the socio-demographic characteristics of respondents. Particularly, the variables of the model were operationalized by using multi-item measures and individuals were asked for their responses using a five-point Likert scale (see the descriptors used in the questionnaire in the appendix). It is necessary to indicate that the interviewers were instructed to ask for respondents, first, about the review websites and, second, about the hotel interactive websites. Consequently, the perceptions of individuals about the different variables of the model were captured using independent and clearly distinguishable questions for each web 2.0 application.

On the one hand, the dependent variable is the individual’s perception of the influence of the user-generated content on these applications on the information search and the final choice of a hotel. More concretely, the informative influence as established by Bearden et al. (1989) was used as reference to operationalize the “perceived influence” variable. In this sense, perceived influence was measured by using a scale where the respondents had to evaluate the degree to which the user-generated content is “relevant”, offers “security” and is of “great help” for their decisions. In addition, the work of Cheung et al. (2008) was used as reference to build the measurement scales of information value and source credibility. In particular, information value was operationalized by using an instrument where the degree to which the user-generated content is considered by the respondent “useful”, “current”, “detailed”, “large”, and “numerous” was measured. For its part, source credibility was measured considering the following aspects: “knowledge”, “ability to judge”, “experience”, “reliability”, “independence”, and “disinterest” of content creators. Finally, the scales developed by Wangenheim and Bayon (2004) and Brown et al. (2007) were used as reference for the measurement of similarity; more concretely, it was measured using an instrument where the degree to which the respondents perceived that the content creators are similar to them in terms of “interests”, “preferences” and “tastes” was captured.

Since empirical research was to be conducted in two languages (i.e., Spanish and Portuguese), a pretest of the questionnaire was conducted following the recommendations of Churchill (1991). The participants were twelve members of the Iberian Network of Tourism Researchers (REINTUR). The
pretest was conducted to: 1) evaluate the format and wording of the questions for clarity and administrability; 2) check the different language versions of the questionnaire; and 3) determine the length of the measurement instrument. The pretest proved to be very valuable in improving the quality of the questionnaire.

The target population of quantitative research was formed by individuals who use web 2.0 applications to search for information on hotels in their choice processes. Because the size of this target population was unknown, the survey sample was selected using a non-random sampling procedure. Specifically, following a convenience sampling procedure, the interviewers were instructed to personally administer the questionnaire to subjects in Iberian Peninsula who fulfilled one condition: during the last twelve months, they had used both review websites and hotel interactive websites to obtain comments on hotels in their choice process. This requirement of recent experience was established to ensure the quality of the responses and, consequently, to collect reliable data on the individual’s perceptions of user-generated content on the review websites and the hotel interactive websites. Finally, a total of 830 valid surveys were collected during the period January-February 2012 (the main characteristics of the respondents are shown in table 1).

Table 1

Results

In order to test the research model, a Structural Equations Model (SEM) approach is used. This statistical method allows the estimation of causal interrelations between latent factors measured with multi-item scales. Therefore, it is especially appropriate to study psychological variables that are not directly observable, as is the case in this research. In particular, SEM approach require the development of two levels of analysis: First, Confirmatory Factor Analysis (CFA) is carried out to confirm the psychometric properties (reliability, convergent validity and discriminant validity) of the measurement scales (measurement model), and then structural model is estimated to test the causal
interrelations established in the theoretical model. In this research, the measurement model and the structural model for the two e-WOM sources considered (review websites and hotel interactive websites) are estimated through the Maximum Likelihood Robust method, using EQS 6.1 computer program.

Convergent and discriminant validity are tested through the procedures proposed by Steenkamp and Van Trijp (1991) and Anderson and Gerbing (1988). Convergent validity refers to the degree to which the instruments used to measure a latent factor are correlated among them (Hair et al., 1998). According to Steenkamp and Van Trijp (1991), convergent validity of a measurement scale is confirmed if all items are significant to a confidence level of 95% and their standardized lambda coefficients are higher than 0.5. A first estimation of the measurement model (CFA) shows the need to remove the item of credibility labeled as “users who give their opinion in a disinterested way” for both e-WOM sources, because of convergent validity problems (standardized coefficient below 0.5).

Therefore, the measurement model is re-specified, taking out that item from the “credibility” scale. The results of the CFA for the re-specified model summarized in tables 2 and 3 confirm the convergent validity of all the measurement scales in both e-WOM sources (review websites and hotel interactive websites).

Additionally, the results obtained for the goodness-of-fit indexes show a correct specification of the structure. In particular, there are three main classes of fit criteria: measures of absolute fit, measures of incremental fit and measures of parsimonious fit (Hair et al. 1998). In this case, we use the statistics given by EQS 6.1, widely used in SEM literature (Byrne 1994, Hair et al. 1998): Bentler-Bonett Normed Fit Index (BBNFI), Bentler-Bonett Not Normed Fit Index (BBNNFI) and Root Mean Square Error of Approximation (RMSEA) for the measurement of overall model fit, Incremental Fit Index (IFI) and Comparative Fit Index (CFI) as measure of incremental fit, and Normed $\chi^2$ for the measurement of parsimony of the model. More concretely, the results summarized in tables 2 and 3 confirm that BBNFI, BBNNFI, IFI and CFI statistics exceed the recommended minimum value of 0.9, while the RMSEA is located below the maximum limit of 0.08 (Hair et al., 1998).
Discriminant validity refers to the degree to which two latent factors are different despite of being correlated among them (Hair et al., 1998). According to Anderson and Gerbing (1988) discriminant validity is confirmed if the confidence interval for the correlation between latent factors does not contain value 1 (maximum correlation). The results summarized in tables 4 and 5 confirm the discriminant validity of all the measurement scales in both models (review websites and hotel interactive websites).

In addition, the reliability of measurement scales is evaluated by calculating the Cronbach’s α, Composite Reliability and AVE coefficients (Bagozzi and Yi 1988). The values of these statistics (summarized in tables 2 and 3) are, in every case, above the required minimum values of 0.7 and 0.5, respectively (Hair et al. 1998). Therefore, inner reliability of the proposed constructs is supported for both e-WOM sources examined.

Subsequently, the structural model was estimated to empirically test the research hypotheses, first, for the review websites and, second, for the hotel interactive websites (figures 2 and 3). The statistical analyses were run using a Robust Maximum-Likelihood Estimation procedure in order to avoid problems of non-normality with the data. The goodness-of-fit indexes were obtained within the recommended intervals, thus confirming that the research model fits to the data for both e-WOM
sources considered. In both models, all the causal relationships between variables were significant (p-value equal or less than 0.05 and t-student statistic above 1.96) and in the direction postulated in the research hypotheses.

In particular, the perceived influence of the user-generated content on behavior is positively affected by the value and credibility of this content, as well as by the perceived similarity between the user and the content creators. It is necessary to emphasize that, for both models, the perceived value of the user-generated content is the main determinant of the perceived influence of this content on behavior. This result is coherent with one of the findings from the qualitative methodology, where the hotel managers that participated in the interviews highlighted that the information quality is an extremely important factor for users when they use web 2.0 applications. In addition, the perceived value of the user-generated content is positively influenced by the credibility of this content. This result is supported by the participants in the in-depth interviews, who emphasized that the success of the web 2.0 applications is due, in great part, to the independence (an important facet of credibility) granted by users to the content creators. Finally, credibility is positively affected by the perceived similarity between the user and the content creators. According to the hotel managers, individuals usually filter the contents published on web 2.0 applications to look for those contents from people similar to them.

**Figure 2**

**Figure 3**

**Discussion and Conclusions**

**Conclusions**

In the tourism and hospitality industry, e-WOM has special relevance for users during the pre-purchase stage (i.e., information search and final choice). This research developed and empirically
tested an integrative model that explains the process of social influence by using review websites and hotel interactive websites. In particular, this study examined how the influence on behavior of user-generated content on those Web 2.0 applications is determined by 1) the users’ perceptions about the value of this content; 2) the credibility that users attribute to it; and 3) the degree of similarity between the users and the creators of this content. This paper provided a relevant contribution with regard to past research both from a theoretical and from a practical perspective.

From the perspective of consumer behavior theory, the results of this research allow a deeper understanding of the factors that determine the influence of e-WOM on individuals’ decision-making process. The empirical evidence obtained confirms that the influence of user-generated content on review websites and hotel interactive websites on user behavior is affected by the value of the content available on those sources (i.e., information value), by the credibility attributed to them (i.e., credibility) and by the degree to which the users perceive that the content generators are similar to them in their interests, needs and preferences (i.e., similarity). Therefore, users will be more affected by the content published on review websites and hotel interactive websites when they consider that such content (e.g., comments, ratings, pictures, videos) is credible and valuable in terms of usefulness, quantity, timeliness and detail. The similarity between the users and the creators of content is also a direct determinant of the influence of these sources of e-WOM on user behavior. Nevertheless, this effect is much weaker than that exerted by information value and source credibility. Therefore, when interacting with user-generated content about hotels on review websites and hotel interactive websites, users’ behavior will be more influenced if they perceive that such content is credible and valuable for their decision-making process, even though the content creators are not similar to them.

This study also examined the relationships among the direct determinants of the perceived influence of user-generated content available on review websites and hotel interactive websites on user behavior. In particular, the results obtained indicate that the value attributed to the information available from these Web 2.0 applications is influenced by source credibility, which in turn is affected by the perceived
similarity between the individuals and the creators of the content. More concretely, user-generated content on review websites and hotel interactive websites is considered to be more valuable when individuals consider it to be credible. In addition, individuals attach more credibility to content that is generated by users whom they perceive to be similar to them in their needs and preferences.

Theoretical Implications

The findings of this research have relevant theoretical implications. Thus, although the effects of information value, source credibility and user similarity on behavior have been studied in the general communication literature, very limited empirical evidence is available in the area of tourism and hospitality. Additionally, the causal interrelations between these variables have been scarcely studied in the previous literature on marketing and communication, not to mention in the field of tourism. As a consequence, our paper provides new insights into the influence of user-generated content on Web 2.0 applications in the context of hospitality.

First, our results show that the influence of user-generated content on users’ behavior is complex and depends on the value perceived in the information provided, but also on the credibility attributed to the source and to the similarity perceived by users in relation to content generators. Accordingly, not all the content posted by users has the same effect on the online search behavior and hotel choice, and all these factors should be taken into account when studying the effect of e-WOM on consumer behavior. Second, this research allows an understanding of the cognitive process that determines the influence of e-WOM on consumer behavior. Specifically, we provide theoretical justification and empirical evidence to support the existence of a chain of effects between the information value perceived in user-generated content, the source credibility and the similarity attributed to content generators. Therefore, while the previous literature about e-WOM in tourism mainly focuses on the direct influence of these variables on consumer behavior (Huang et al., 2010; Ayeh et al., 2013; Sotiriadis and van Zyl, 2013; Filieri and McLeay, 2014; López and Sicilia, 2014), it is necessary to take into
consideration the interrelations existing between the information value of user-generated content and the users’ perceptions of source credibility and similarity.

Some relevant theoretical implications can also be extracted from the analysis of the effects found for each individual explanatory variable. On the one hand, our results reinforce the scarce studies (Huang et al., 2010; Filieri and McLeay, 2014) that examine the influence of the value perceived in user-generated content on the information search and hotel choice. Thus, even though this effect is well established in the general marketing literature, our study provides relevant evidence in the specific field of tourism. More concretely, our results confirm that information value is the main determinant of the influence exerted by user-generated content on behavior in both cases, hotel interactive websites and review websites.

On the other hand, this research supports the relevance of source credibility in the case of user-generated content, a topic that has been raised by different authors but has been paid scant attention in tourism research (Ayeh et al., 2013; Sotiriadis and van Zyl, 2013; López and Sicilia, 2014). Thus, our results support the idea that credibility attributed to information sources determines the influence of those sources on user behavior as well as the information value attributed to them. In particular, the empirical evidence regarding the relationship between the credibility of user-generated content and the information value attributed to it is very limited in the general marketing literature and almost inexistent in the field of tourism (Parra-López et al., 2011). Therefore, our study provides new insights into the effect of source credibility on the cognitive process that determines the influence of e-WOM on consumer behavior and, specifically, online search behavior and hotel choice.

However, the main theoretical implication of this paper is linked to the relationship between the similarity perceived by the individual in relation to the content creators and the influence on behavior exerted by user-generated content. In particular, the effect of similarity or homophily on consumer
behavior has been very little researched in the literature on communication and consumer behavior in general, but the lack of empirical evidence is almost total in the context of tourism. In this sense, the empirical evidence obtained in this research supports the assertion that similarity determines the influence exerted by user-generated content on user behavior and, especially, the credibility attributed to this information source. In fact, given that very heterogeneous people (i.e., individuals with diverse interests, needs and socio-demographic profiles) can publish user-generated content, research on e-WOM should devote more attention to the effects exerted by the similarity perceived by consumers in relation to content generators. Therefore, our evidence can open up a new field of study on the influence of e-WOM depending on the profiles of consumers and content creators as well as a function of the characteristics of specific platforms such as review websites, interactive hotel websites and social networking sites, among others.

Practical Implications

From a managerial perspective, these results have significant implications for marketing activities in the hospitality industry. First, given the influence on behavior of user-generated content about hotels, published either on hotel interactive websites or on independent review websites, hospitality firms should have an active presence on these platforms. Concretely, companies should invest in interactive corporate websites that allow the publication of user-generated content about the firms and their services, and they should create a corporate profile on review websites whenever possible. Additionally, hospitality firms should develop proactive strategies to manage consciously the e-WOM about their products and services, both on their own corporate interactive website and on independent review websites.

In this sense, although organizations cannot directly control user-generated content, they should try to follow and manage what users post online (e.g., information, ratings, comments, pictures, videos) regarding their business. In order to foster positive e-WOM, hotels should encourage their customers
to post content both on review websites and on their interactive corporate websites in order to share their positive experiences with other people (e.g., potential clients). According to the findings of our research, organizations should support the credibility of content creators to reinforce the value of the information posted online and both will contribute to maximizing the positive impact of this type of personal communication on user behavior. In particular, companies should emphasize the expertise and independence of the creators of content as well as the relevance of this content to users’ choice processes. In addition, organizations should continuously monitor review websites and hotel interactive websites for both positive and negative content about their services and reinforce or mitigate the content with personalized messages. Without such monitoring, firms would be ignoring a relevant source of information about their potential customers’ opinions and preferences and would allow an unchecked stream of e-WOM that could have a negative influence on their sales.

However, the heterogeneous characteristics of review websites (independent and consumer-centric) and hotel interactive websites (marketer-centric) imply the need to implement complex communication strategies. On the one hand, hotel interactive websites should be designed to provide an effective direct communication channel with past, present and potential customers, with a clear interactive focus aiming to foster the posting of user-generated content. This will lead to various positive outcomes for the firm: 1) the availability of content perceived as valuable by potential customers will increase the value of the website itself, encouraging visits to and use of the hotel website; 2) the posting of user-generated content, perceived as independent and credible, will foster an image of transparency and confidence in the quality of the service provided by the hotel; and 3) the direct interaction with users will make the surveillance and monitoring of e-WOM about the hotel much easier, especially in the case of dissatisfied customers. Additionally, following a habitual practice for review websites, firms should provide user-generated content classified as a function of generators’ profiles. In this way, individuals would be able to search for those comments, opinions or ratings about hotels posted by people who are similar to them and who would have a higher impact on their behavior.
Moreover, firms can boost the positive effects of properly managing hotel interactive websites if they adopt a long-term strategy and use these applications for the development of relationship marketing aimed at the specific segment of customers who are more active as content generators. In this sense, it is very important to foster a continuous dialogue with content generators, answering and commenting on their reviews and posts on the hotel website, which will encourage the publication of new positive reviews and content. Additionally, from a relationship marketing perspective, hotel interactive websites can also be used to manage customer attention and service recovery. Thus, these applications can be an appropriate channel to answer consumers’ questions about the hotel and its services, which can be useful for other users if the response is public. Similarly, the use of hotel interactive websites to respond to customers’ complaints can help service recovery and can also give place to the customers’ feedback (e.g. clarification or even acknowledgements of the solution to the complaint). Therefore, and as long as these dialogues are developed publicly on the hotel interactive website, they will give place to new user-generated content, fostering positive and credible e-WOM about the hospitality firm.

On the other hand, review websites are consumer-centric platforms that function as open communities formed by millions of users. These platforms can be tourism-specific (e.g., TripAdvisor) or generic (e.g., Ciao). As a consequence, firms cannot manage their relationships with users in the same way that they can on their own corporate interactive website. However, review websites may be especially useful to identify the strengths and weaknesses of the organization as perceived by users and opinion leaders in a non-biased environment. Accordingly, firms should use these media as a tool for market research, surveying the content to detect both negative and positive recurring comments.

In particular, most review websites offer different types of user-generated content about hotels, including quantitative values and qualitative evaluations and opinions. Quantitative evaluations are
presented on a wide range of scales (e.g. numerical or symbolic, such as stars) and may refer to the global quality of the hotel or to services’ specific facets (for example, TripAdvisor provides users’ quantitative evaluations of hotels in relation to the following issues: sleep quality, location, rooms, service, value and cleanliness). Qualitative evaluations are usually open-text comments and may include any type of opinion about the general service or its specific aspects, whether positive or negative. Therefore, hospitality firms should monitor review websites in order to analyze the user-generated content and thus obtain information about customers’ perceptions of their service. More importantly, they can also examine user-generated evaluations about other hospitality firms and thus learn the relative position of their firm with regard to relevant competitors.

In addition, many review websites allow the possibility to filter evaluations according to the content generators’ characteristics or motivations (for example, TripAdvisor distinguishes four categories: families, couples, solo and business). This functionality can also be used by firms to obtain information about service evaluation from different market segments, focusing on those that are more relevant to their businesses. This segmented analysis is particularly pertinent according to our results, given that user-generated content has a stronger influence on consumer behavior and it is perceived as more credible if the source is perceived as similar in terms of needs and preferences. Therefore, this should allow firms to identify the user-generated content, whether positive or negative, that has a stronger influence on each relevant market segment.

Finally, content creators, especially those who may act as opinion leaders, may be contacted directly to influence their opinions, ratings and recommendations. This strategy should be managed carefully, adopting an indirect approach based on the provision of relevant and positive information about the firm or its services and using service-recovery techniques for dissatisfied customers. More direct or aggressive attempts to influence content creators should be avoided, as these tactics may be perceived as an intrusion by the firm and therefore have an undesired negative effect.
Limitations and Future Research

This study has several minor limitations. First, although the dependent variable (i.e., the individual’s perception of the influence exerted by e-WOM sources on behavior) has been widely used in past research on consumer behavior, it would be interesting to explore a more direct approach to measure the effect of e-WOM on a user’s choice process. Second, the sample used in the study was formed by individuals who use Web 2.0 applications to obtain information about hotels in their choice processes. Accordingly, the results can be generalized only to the most technologically engaged users, although this group is becoming increasingly dominant with the rising popularity of the Internet.

As stated before, future research should deepen the understanding of the interrelations existing between information value, source credibility and similarity and of the influence of these variables on consumer behavior. Specifically, the empirical evidence available with regard to the effect of similarity perceived in the sources of user-generated content is very scarce, and more research is needed on this topic. In addition, it would be interesting to replicate this research in different contexts. For example, the study of the influence of review websites and corporate interactive websites on behavior may be especially relevant in the context of tourist destinations. Further research should also examine the influence of other Web 2.0 applications (e.g., social networks) on user behavior. In particular, it is necessary to explore the effects exerted by variables such as information value, credibility and similarity within the scope of these applications or e-WOM sources. Finally, a deeper understanding of the influence of e-WOM requires a consideration of other explanatory variables, such as past experience with e-WOM sources, level of involvement in the purchasing process, socio-demographic characteristics and cultural factors.

In this study, a distinction was not made between Spanish and Portuguese users because its objective was to conduct a global analysis of the determinants of the perceived influence on behavior of user-
generated content on several Web 2.0 applications. However, in future research, it would be interesting to explore whether cultural differences (see Hofstede, 2001) may affect the role of the determinants of the influence of e-WOM on user behavior. Therefore, this cultural factor should be addressed in future studies to gain a better understanding of the influence of user-generated content on Web 2.0 applications on user behavior.
References


### Appendix

<table>
<thead>
<tr>
<th>Perceived influence - Contents about hotels published by other users on review websites / hotel interactive websites influence my hotel choice because…</th>
</tr>
</thead>
<tbody>
<tr>
<td>... They offer security in my decision (Perceived influence 1).</td>
</tr>
<tr>
<td>... They are of great help in making a good decision (Perceived influence 2).</td>
</tr>
<tr>
<td>... They give me relevant information for my decision (Perceived influence 3).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information value - Contents about hotels published by other users on review websites / hotel interactive websites are…</th>
</tr>
</thead>
<tbody>
<tr>
<td>... Useful (Information value 1).</td>
</tr>
<tr>
<td>... Current (Information value 2).</td>
</tr>
<tr>
<td>... Detailed (Information value 3).</td>
</tr>
<tr>
<td>... Large (Information value 4).</td>
</tr>
<tr>
<td>... Numerous (Information value 5).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credibility - Contents about hotels on review websites / hotel interactive websites are published by…</th>
</tr>
</thead>
<tbody>
<tr>
<td>... Users with great knowledge of hotels (Credibility 1).</td>
</tr>
<tr>
<td>... Users with reasonable standards for judging hotel quality (Credibility 2).</td>
</tr>
<tr>
<td>... Users who use hotels often (Credibility 3).</td>
</tr>
<tr>
<td>... Reliable users (Credibility 4).</td>
</tr>
<tr>
<td>... Users who have independent opinions about hotels (Credibility 5).</td>
</tr>
<tr>
<td>... Users who give their opinion in a disinterested way (Credibility 6).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Similarity - Contents about hotels on review websites / hotel interactive websites are published by…</th>
</tr>
</thead>
<tbody>
<tr>
<td>... Users who have interests which are similar to my own (Similarity 1).</td>
</tr>
<tr>
<td>... Users who are like me in their preferences (Similarity 2).</td>
</tr>
<tr>
<td>... Users with tastes similar to mine (Similarity 3).</td>
</tr>
</tbody>
</table>