Theoretically encompassing B2C relationships in the hospitality industry

Abrangência teórica dos relacionamentos B2C na indústria da hospitalidade

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Abstract

Having witnessed the technological revolution that has taken place in the hospitality industry, the aim of this study is to encompass theoretical approaches used in customer behaviour research and to provide a comprehensive understanding of crucial aspects necessary for enhancing business-to-consumer (B2C) relationships. A special emphasis was placed on technology-related and personality-related approaches, highlighting their importance in traveller decision making, as well as on Signalling theory, offering an underpinning for companies to improve their services. It is expected that this study will offer the basis for a more exhaustive and multidisciplinary investigation, undoubtedly focusing on both customer and service elements. The review suggests that to maintain customers, a major focus should be put on signals, technology and personality-related issues at the beginning of the relationship.

Keywords: Literature review; hospitality; B2C; ICT; personality; signalling theory.

Resumo

Tendo em consideração a revolução tecnológica na hospitalidade, o objetivo deste estudo é incluir as abordagens teóricas utilizadas na pesquisa de comportamento do cliente, e fornecer uma compreensão integral dos aspectos necessários para melhorar as relações business-to-consumer (B2C) em hospitalidade. Foi colocada especial atenção nas abordagens relacionadas à tecnologia e personalidade, para destacar a sua importância na tomada de decisões dos viajantes e na Teoria da sinalização, no sentido de oferecer sustentação às empresas para melhorar os seus serviços. Espera-se que este estudo ofereça a base necessária para uma investigação multidisciplinar, incidindo nos elementos relacionados com clientes e serviços. A revisão da literatura sugere que, para manter os clientes, um foco importante deve ser colocado em sinais, tecnologia e personalidade, no início do relacionamento.

Palavras-chave: Revisão da literatura; hospitalidade; B2C; TIC; personalidade; Teoria da sinalização.

1. Introduction

Building favourable, long-lasting relationships with customers leads to customer loyalty. This is clearly supported by Relationship Marketing and Customer Relationship Management, which help vendors to get closer to their customers through communication and information and services, including marketing, management and aspects of information technology (Rahimi, Köseoglu, Ersoy & Okumus, 2017). Researchers emphasise that, over the past decade, e-commerce and the internet have led to new opportunities in relationship customisation for creating and maintaining connections with the customer, especially in an environment such as the hospitality service industry, where customers face intangibility and high implication when purchasing (Zhang, Li, Wang & Wang, 2016). Since the setting in which companies operate is constantly changing in the era of information and communication technologies (ICTs), hospitality managers will need a detailed description of the elements perceived as valuable for a stable relationship between customers and companies.

Furthermore, the body of knowledge offers abundant information regarding the adaptations made by companies facing real challenges in the race to achieve distinctive competitive advantages and by customers who have almost completely adjusted their activities to the potentials of smartphones and the internet (Kim, Connolly & Blum, 2014).

Consequently, the general purpose of this study is to offer a richer description of the B2C relationship in the modern hospitality industry. Through a review of a variety of theoretical proposals from different disciplines, the specific objective is to reflect both customers' and companies' participation in the electronic provision of hospitality services.[1] Given that customer behaviour is affected by constantly evolving new technologies and their implementation in service provision and that customers' behaviour is closely related to their personalities, we outline some of the most frequently used technology-related and personality-related theories. The importance of hospitality service specifics for B2C relationships is explained through Signalling theory (ST), which offers the first steps that companies should take in order to communicate service quality and environmental characteristics to customers, enhancing their satisfaction and loyalty. The interrelations of these theoretical proposals are presented in Figure 1.

Figure 1. Theoretical frameworks implied in studying the electronic provision of hospitality services

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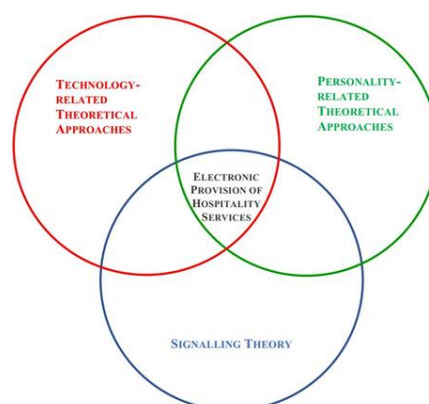
[1] When denoting the electronic provision of hospitality services, we are referring to the use of internet and/or mobile phones (including smartphones) for any of the aspects related to the offering or consumption of the hospitality service provided by the company.

This study underlines the most relevant arguments regarding the B2C relationship and the factors stemming from different disciplines which influence the evolution of the relationship in the hospitality industry. Specifically, a literature review was made for peer-reviewed published articles in the field of the electronic provision of hospitality services. As Pickering and Byrne (2014) have suggested, well-known academic databases such as Scopus, Emerald Insight, Science Direct and the Web of Science were consulted and, given the continuous expansion of the new technologies' application in hospitality services, the search was limited to the last five years. By mapping the studies published over this period (2013 to 2018), information on findings and gaps detected in previous research was classified in tables, according to their focus on the topic's key spectrum variables. Exploration of ICT aspects with regard to this is outlined in Section 2, the personality features in Section 3 and the signals in Section 4. This study is summarised with a general discussion of the most recurrent elements indicated as enticements of the B2C relationship establishment and their development and maintenance in the hospitality sector. Section 5 sets out practical examples of ICT usage by hospitality companies followed by directions for researchers and practitioners from the hospitality industry to empirically confirm the outcomes of this study. Finally, the conclusions and proposals for future lines of research presented in Section 6.

2. New technologies in hospitality-related customer behaviour

Understanding the behaviour of customers has been a real challenge that many academics and practitioners from marketing, management, psychology, sociology, computer science and other disciplines have faced for many years. However, this challenge has become more complex as customer behaviour has undergone changes due to the environment in which individuals act. A clear example of these changes is the electronic market (online and mobile), where there is no physical contact between the parties. Everything is done online, beginning with the basic service information search and concluding with the recommendations shared after having had an experience with the hospitality service or the company in question. New technologies in hospitality have informative and presentation roles, but they also have a number of potential applications that go far beyond usual communication activities (Wang, Xiang, Law & Ki, 2016). In fact, companies use ICT interfaces to draw closer to customers and satisfy individuals' needs, wants and preferences with offers created that are based on their values. Furthermore, there are several advantages of ICTs implementation, such as time and money saving, convenience, comfort, control, large amounts of information in one place, better prices and continuous contact without place restrictions (Lien, Wen, Huang & Wu, 2015; Ozturk, Bilgihan, Nusair & Okumus, 2016).

Customers using smartphones specifically benefit from improvements in the personalisation, mobility and ubiquity of hospitality services (Kim *et al.*, 2014). It has been recognised in the literature that in the same way as the internet opened the path for e-commerce, smartphones - that are data-ready and connected to digital communication networks - helped to build a base for m-commerce (Lee & Lee, 2010). Mobile contexts make a wide range of services possible, for example, unlimited communication anytime and at any place, including ubiquitous communication with the hospitality company by chats, e-mail or SMS; easy organisation through timetables, schedules and agendas; entertainment through social networks, games or blogs; location-based services such as tour guides, maps or GPS (Global Positioning System) ticketing and booking services of the accommodation and the destination (Park & Huang, 2017; Wang *et al.*, 2016).

However, there are also issues of credibility, security and privacy that may represent conflict for customers in particular. Vendors are therefore making an effort to detect the beneficial and critical

aspects of an offer that lead towards the maintenance or a breakup of the B2C relationship, while looking for the best way to provide customer satisfaction.

As a result, the increasing interest in online and mobile customers over the past few years is obvious. For the purpose of electronic customer exploration, some of the most relevant theories and customer behaviour research approaches have been observed, some of which have been adapted from the offline context to the electronic setting, and others raised with the expansion of the ICTs. Indeed, customer intentions to adopt a concrete technology, to purchase within a certain context or to repeat the purchase and become loyal customers are all subjects of research (Lien *et al.*, 2015). Thus, since customer practices are changing as a consequence of ICT implementation, customer behaviour remains one of the greatest focus points in research. In Table 1 the main theoretical approaches for researching customer behaviour in electronic contexts, with a focus on the hospitality industry, are presented.

In line with the aforementioned, we should bear in mind that the provision of hospitality services has changed enormously as a consequence of the implementation and constant improvement of information and communication technologies, which have had a dynamic effect on customer behaviour in the hospitality industry. Since the usage of internet and mobile devices has had a significant impact on the general activities and lifestyle of customers, the ways services are delivered to them and how customers perceive electronic markets are different from those used in the offline setting, in the sense of accessibility, usability and versatility opportunities. Subsequently, significant changes have taken place in the behaviour of travellers due to the characteristics of the environment in which customers operate, offering a variety of benefits including comfort, information availability, competitive prices and time-saving benefits (Ben-Elia, Alexander, Hubers & Ettema, 2014).

Nevertheless, in the conceptualisation of customers, they have been regarded as dynamic agents who are not interested in a simple purchase but rather in active consumption, conditioned by a psychological decision-making (Fullerton, 2005). Accordingly, some of the aspects that play a part in customer choice are found to be customer identity, attitudes, motivation and previous experiences (Kennedy & Laczniak, 2016). The relevancy of customers' personality in their practices, preferences, decisions and intentions is therefore further indicated.

Table 1. Technology-related theoretical approaches for customer behaviour research in hospitality

Approach and authors	Proposal description	Main insights	Application to customer research in hospitality
Theory of Reasoned Action (TRA) Fishbein and Ajzen (1975)	Proposes that customers' intention to behave in a certain way is influenced by customers' attitude and subjective norms.	- Behavioural intention measures individuals' strength of intention to perform some behaviour regarding the use of new technologies - Attitude consists of beliefs about the consequences of performing the behaviour multiplied by his or her evaluation of these consequences. - Subjective norm is as a combination of perceived expectations from relevant individuals or groups along with intentions to comply with these expectations (i.e. to use a technology).	Memarzadeh, Blum, and Adams (2015); Kim and Cichy (2017); Confente and Vigolo (2018).
Technology Acceptance Model (TAM) Davis (1989) **Extended Technology Acceptance Model TAM2** Venkatesh and Davis (2000) **Extended Technology Acceptance Model TAM3** Venkatesh and Bala (2008)	Suggests that especially two factors influence customer decision about how and when they will adopt and use a technology: perceived usefulness and perceived ease of use. Extended to TAM 2, introduces antecedents of perceived usefulness and customer intention. TAM 3 proposes an extension of the TAM2, including antecedents of perceived ease of use.	TAM: - Perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her performance. - Perceived ease of use defines the degree to which a person believes that using a particular system would be free from effort. Perceived ease of use is besides observed as a factor influencing perceived usefulness. TAM2 adds: - The direct effect of subjective norms, image, job relevance, output quality and result demonstrability on perceived usefulness. - The direct effect of subjective norms on customer intention and image. - The moderating effect of customers' experience and voluntariness on the impact of subjective norms on customer intention. - The moderating effect of customers' experience on subjective norms-perceived usefulness relation. TAM3 complements TAM2 by the effect of two general dimensions on the perceived ease of use: - Anchor - consisted by the computer self-efficacy, perceptions of external control, computer anxiety and computer playfulness. - Adjustment - perceived enjoyment and objective usability.	tom Dieck, Jung, Kim, and Moon (2017); Tung and Law (2017); Jung, Lee, Chung, and tom Dieck (2018);
Theory of Planned Behavior (TPB) Ajzen (1991)	States that customers' attitude toward behaviour, subjective norms, and perceived behavioural control together shape individuals' behavioural intentions and behaviours.	- Improvement regarding the predictive power of TRA by including perceived behavioural control, defined as the individuals' perception of ease or difficulty in performing the behaviour (i.e. when using a technology).	Irwansyah and Triputra (2016); Mao and Lyu (2017); Park and Huang (2017).
Technology Readiness Index Parasuraman (2000)	Explores individuals' readiness to engage and interact with technology.	Four groups of users are defined based two dimensions being motivators (+) and another two being inhibitors (-) of new technology use: (+) Optimism - a positive view of technology, described by the belief in increased control, flexibility, and efficiency in life due to technology. (+) Innovativeness - a tendency to be the first using new technologies, a tendency to be a technology pioneer and thought leader. (-) Insecurity - distrust in technology and scepticism about its ability to work properly. (-) Discomfort - a perception of lack of control over technology and a feeling of being overwhelmed by it.	Kim and Qu (2014); Rosenbaum and Wong (2015); Kaushik and Rahman (2017).
Theory of Diffusion of Innovations Rogers (2010)	Explores the reason and the manner for spreading new ideas and technologies in the society.	- Four main elements influence the spread of new ideas and technologies: the innovation itself, communication channels, time, and a social system. - Diffusion reveals itself in different ways depending on the type of adopters, and the innovation-decision process and the environment. - The categories of adopters are: innovators, early adopters, early majority, late majority, and laggards.	Cobos, Mejia, Ozturk, and Wang (2016); Enz and Way (2016); Horng, Liu, Chou, Tsai, and Hu (2018).
Unified Theory of Acceptance and Use of Technology (UTAUT) Venkatesh, Morris, Davis, and Davis (2003) **Extended Unified Theory of Acceptance and Use of Technology (UTAUT2)** Venkatesh, Thong, and Xu (2012)	Researches customer intentions to use a new technology and the subsequent usage behaviour following the new technology adoption. UTAUT 2 incorporates three constructs into UTAUT: hedonic motivation, price value, and habit.	UTAUT: - Four key constructs are observed: performance expectancy, effort expectancy, social influence and facilitating conditions. The first three are considered direct determinants of user's intention, and the fourth is a direct determinant of user's behaviour. - Gender, age, experience and voluntariness of use are observed as moderators of the impact of the four key constructs on usage intention and behaviour. UTAUT 2: - The hedonic motivation, the price values and the habit directly influence users' intention, and the habit also determines users' behaviour. - The impact of facilitating conditions on users' intention is also included. Individual differences, like age, gender and experience are expected to moderate the effects of hedonic motivation, price value, habit and facilitating conditions on behavioural intention and technology use.	Morosan and DeFranco (2016); Kim, Mejia, and Connolly (2017); Rita, Oliveira, Estorninho, and Moro (2018).

Bearing in mind the evident, continuous improvement of new technologies, in recent years a new trend has emerged regarding the hospitality service offer, namely the use of robots. In the service industries, robot use was initially primarily reserved for tasks that did not involve contact with humans, ranging from food preparation to vehicle guidance (Vis, 2006; Wilson, 2010). However, today robots have become a part of society, with humanoid robots who communicate with individuals, for example. In the hospitality services sectors, these robots engage in human-robot interaction, carrying out traditional human-service activities such as hotel reception attention, check-in, luggage delivery, in-room companion, shopping assistance, tourist information and restaurant services (Kanda, Shiomi, Miyashita, Ishiguro & Hagita, 2009; Datta & Vijay, 2010; Nakanishi, Kuramoto, Baba, Kohei, Yoshikawa & Ishiguro, 2018, although not all practices have been classified as positive. Those interacting with robots reported feeling discomfort, concern (Sugaya, Nishida, Yoshida & Takahashi, 2018) and insecurity (Tung & Au, 2018), which would provoke an unpleasant experience.

However, given the constant development of the appearance of the humanoid robots, there is no clear resistance against hospitality services involving communication with robots (Sugaya *et al.*, 2018), which leaves a lot of space for improving this industry and meeting customers' expectations regarding human-based tasks performed by robots (Tung & Au, 2018). Accordingly, some of the benefits that have been observed due to this interaction include improved staff efficiency and productivity (Ivanov & Webster, 2017), gratifying communication with the robot, increased predisposition to receive a recommendation, an enhanced overall satisfaction with the hospitality service (Nakanishi *et al.*, 2018) and enjoyment Sugaya *et al.*, 2018).

3. Customer personality in hospitality-related behaviour

When a company's pursuit for a long-term beneficial B2C relationship is the main goal, it needs to address the right target by studying customers' personality to fully understand how different customers respond to their company's efforts (Prodanova, San-Martín & Jimenez, 2018). This is why they need information regarding the appropriate target, in order to purchase a particular hospitality service. Furthermore, their perceptions, values, emotions and personalities might be what best describe their purchasing preferences. Hospitality services are typically characterised by customer involvement, simultaneous production and consumption, all of which makes their quality so difficult to evaluate. Characteristics such as abstractness, intangibility, impossibility to store the necessary information, comparison between services and the probability for change due to external reasons all involve a greater complexity in customers' decision making when purchasing such a service (Fernández-Barcala, González-Díaz & Prieto-Rodríguez, 2010). It has therefore become indispensable for companies to identify customer characteristics, since information regarding customer profiles facilitates the achievement of the company's goals.

With the understanding that there are also causes, other than demographic characteristics, that can alter customer actions in hospitality services, such as emotions, personality and social features (Chen, Phelan & Chang, 2016; Hu & Kim, 2018), the literature on the subject has switched its attention from technical issues to a more holistic view of the customer. Personal factors are deemed to affect an individuals' cognitive interpretation of the objective issues, meaning that if the intention is observed without considering personality variables, customers' interpretations will appear to be a more rational process than, in fact, it is (Lu, 2014). Personality is believed to be closely connected with guest behaviour, providing significant information about customers and

their decisions (Kaushik & Rahman, 2017). Research into the personality characteristics of customers and their influence on behaviour has centred on a number of theoretical frameworks, some of which have their origins in psychology, but adapted to customer behaviour research objectives. Therefore, Table 2 presents a review of the principal approaches used to better understand individuals' behaviour in the hospitality industry through personality.

Table 2. Personality-related theoretical approaches for customer behaviour research in hospitality

Approach and authors	Proposal description	Main insights	Application to customer research in hospitality
Stimuli-Organism-Response Model (SOR) *Mehrabian and Russell (1974)*	Supposes that stimuli influences organism, which on its side impacts customer response.	Stimuli are associated with the shopping environment, organism is related to customer behaviour and response represents the customer behaviour linked to the organism function. - Stimuli refer to something that rouses or incites to action or increased action. - Organism is defined by cognitive and affective intermediary states and processes that mediate the relationships between the stimulus and individuals' responses. - Response refers to a behavioural reaction of a customer shopping experience.	Suwanamas, Trimetsoontorn, and Fongsuwan (2015); Su, Swanson, Hsu, and Chen (2017); Wang, Wang, Xue, Wang, and Li (2018).
Elaboration Likelihood Model (ELM) *Petty and Cacioppo (1986)*	Defines a dual process theory that describes how attitudes are formed and changed based on the way stimuli are processed.	Two major routes to persuasion are identified: - A central route supposes that persuasion will result from individuals' careful and thoughtful consideration of the information presented; it involves a high level cognitive elaboration of the message. - A peripheral route supposes that persuasion will result from individuals' association with positive or negative cues or the stimuli; the cues are generally unrelated with the logical quality of the stimulus.	Lu and Gursoy (2015); Leong, Hew, Ooi, and Lin (2017); Lo and Fang (2018).
The Big Five (Five-Factor Model) *Digman (1990)*	Proposes a model that describes individuals' personality on the basis of five principal personality traits.	Five personal traits are introduced: - Openness to experience reflects the degree of individual's intellectual curiosity, creativity and preference for variety, and delineates the tendency to be imaginative, independent and interested in variety. - Conscientiousness measures the individual's tendency to be organised and dependable, to show self-discipline, to act with duty and care, to aim for achievement and to prefer planned rather than spontaneous or impulsive behaviour. - Extraversion describes the level of individuals feeling energy, positive emotions, assertiveness, sociability and tendency to seek stimulation; outlines sociable, fun-loving and affectionate individuals. - Agreeableness reveals individual's propensity to be trusting and helpful compassionate and cooperative rather than suspicious and antagonistic towards others. - Neuroticism describes individuals' tendency to experience negative emotions, anger, anxiety and vulnerability and the feeling of insecurity and self-pitying.	Leung, Rong, Li, and Law (2013); Jani and Han (2015); Hu and Kim (2018).
Brand Personality *Aaker (1997)*	Describes the set of human characteristics associated with a brand and examines how the relationship between brand and human personality may drive customer preference.	Five brand personality dimension are associated with a brand: - Sincerity describes the idea of warmth and acceptance, identifying a down-to-earth, honest, wholesome and cheerful brand. - Excitement shows notion of sociability, energy and activity, recognising a daring, spirited, imaginative and up-to-date brand. - Competence encompasses responsibility, dependability and security, outlining a reliable, intelligent and successful brand. - Sophistication delineates the glamour and pretentiousness of an upper class and charming brand. - Ruggedness reflects the degree to which a brand is perceived as rugged or strong, describing it as outdoorsy and tough.	Lee, Chua, Kim, and Han (2017); Su and Reynolds (2017); Yen, Kyutoku, and Dan (2017).

In fact, there are a countless number of personal variables used in customer behaviour research to determine how individual characteristics differentiate customers from one another, including their commercial and purchasing habits, which are important for the establishment, evolution and maintenance of B2C relationships. Furthermore, with the appearance of new technologies there is an ever-increasing interest in customers' personality and their internal factors, including customers' innovativeness, skilfulness, self-efficacy, perceived convenience, motivation and their influence on adoption behaviour in the electronic provision of services (Park & Huang, 2017; Yoon, Kim & Connolly, 2018). However, in the case of hospitality services, we have perceived a lack of research into the personality of electronic customers. The current personality-related investigation into hospitality is rather focused on the non-electronic provision of these services.

To summarise, the importance of customers' personality traits lies in their relevant connection with customers' behaviour and the ability to predict the preferences and reactions of the customers. This way, the companies from the hospitality industry can establish an adequate strategy to communicate with and attract their target customers.

In any event, the intangible nature of hospitality services and the inseparability of the service from the service provider (Fullerton, 2005) highlight the need to observe the service that hospitality companies provide, aside from customers perceptions and preferences, in order to move towards the retention of a satisfied customer. The interaction of companies with their consumers does not always focus on the best interests of the clients, but on the company's own benefits (Kennedy & Laczniak, 2016), meaning that the requirement to ensure an equal and bilateral beneficial relationship arises. This can be ensured by empowering customers with knowledge about the offered service, providing them with quality signals that specify service characteristics and reduce the perceived uncertainty, as outlined in the following section.

4. Signalling theory in the provision of hospitality services

In situations where the issue of uncertainty in hospitality services arise, the problem of asymmetric information[2] starts to come to the fore (Martin-Fuentes, 2016). Asymmetric information frequently presents difficulties that concern both parties in a B2C relationship. For the customers, the problem arises because of the inability to estimate the value of the service or firm's behaviour. For high-quality companies, there is a risk not to be distinguished from those offering low-quality services.

Signalling theory is an approach that deals with the problem of information asymmetry. It suggests that there are signals sent by one party (the company) to another (the customer) communicating relevant information regarding the characteristics of the service, the company or the selling conditions, in order to mitigate customer uncertainty and help them in the decision-making process in the purchase of hospitality services (Akerlof, 2002; Rezaei, Mazaheri & Azadavar, 2017). In circumstances when the parties have access to different or imperfect information, and in a market where they can face a trustworthy or untrustworthy seller, the customer's ability to resolve a classification problem will depend on the level of effectiveness of the signals (Martin-

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[2] According to Mishra, Heide and Cort (1998), asymmetric information refers to a situation where one side has less information regarding a transaction than the other side involved in the same transaction. It leads to two problems: adverse selection and moral hazard. The former appears when customers are unable to ascertain supplier's skills before purchasing, while the latter stems from the fact that the supplier can easily influence the level of quality provided for the offer and act opportunistically post- purchase.

Fuentes, 2016). As Lee, Ang and Dubelaar (2005: 610) have explained, "a signal is an action taken by the better-informed party in a setting of asymmetric information to communicate its true characteristics in a credible fashion to the less-informed party." For signals to be effective, they have to (a) be observable, defining the degree to which the customer can notice the signal and (b) help companies to cover the costs associated with the signal delivery (Connelly, Certo, Ireland & Reutzel, 2011). The companies that fulfil these conditions will show high-quality communication and performance, which will help customers to distinguish them from low-quality companies.

In recent years, especially in the case of electronic markets as an environment where the only channel of communication is a company's website or mobile site/app, the research of signals used for communicating with customers has increased. In the electronic environment of the hospitality industry, signals are found to be precise website/app characteristics that transmit information from the electronic seller to the electronic buyer (Hung, 2017). Given the nature of electronic markets, their impossibility for face-to-face communication, the plausible insufficiency of information privacy and security, the time lag between selection and purchase and the distance gap that makes examination of the service unmanageable, the customer has to confirm the credibility of the signals and service quality after delivery. For instance, a journey can be evaluated only after experiencing the offered service, the moment at which a customer is able to build an opinion about the quality of the service. In such situations, the service supplier has more information about the offer than the receiver. This may be a critical issue since some companies could use signals to transmit misleading or incomplete information in order to persuade customers, although it would provide a beneficial state only for the party that sends the signal (the company) and would not help establish a reciprocal and mutually favourable relationship. For this reason, researchers pay attention to a variety of signals and examine the level of influence on customers' behaviour, allowing customers to more easily determine the importance of each characteristic that the hospitality company communicates (Lai, Hitchcock, Yang & Lu, 2018). Such signals include pre-purchase features that increase the willingness to establish a B2C relationship (i.e. information and service quality, brand reputation, data privacy and security), purchase process characteristics that assure the development of the transaction (i.e. delivery, payment and warranty) and post-purchase traits that confirm the maintenance of the established relationship (i.e. post-purchase service, word-of-mouth practices and promotional incentives for customers) (Radilla, Lobato, Tena & García, 2014).

The essence of Signalling theory in hospitality e- and m-commerce is to find out how the information sent by companies is interpreted by customers and how it can be used to induce certain behaviour, such as a customer's intention to visit a website, to purchase or repurchase a service (e.g. accommodation) or to recommend the company (e.g. a hotel), based on their previous experience, satisfaction or trust. Accordingly, Table 3 shows some of the most frequently studied signals, as a form of achieving customer behavioural intention and repetitive behaviour in the electronic provision of hospitality services.

Table 3. Signals-related studies of customer behaviour research in hospitality

Authors	Research objective	Main findings	Studied signals
Lim, Tan, and Nwonwu (2013)	To explore the effective ways of incorporating ads in mobile app for rating a hotel.	Although there were participants who did not click banner ads due to lack of significance for their aim, most participants were able to recall image banner ads compared to text banner ads, and they perceived large image banner ad as app content.	Advertising.
Berezan, Yoo, and Christodoulidou (2016)	To evaluate the impact of communication channels on communication style and information quality as perceived by hotel loyalty program members.	The choice of a communication channel has a significant impact on the perceived communication style and information quality.	Information quality.
Ozturk, Bilgihan, Nusair, and Okumus (2016)	To research the antecedents of mobile shopping loyalty in a hotel booking context.	Convenience, compatibility and perceived ease of use had a significant impact on users' loyalty intentions toward mobile hotel booking. In addition, compatibility significantly influenced perceived ease of use and convenience and perceived ease of use had a significant impact on loyalty and convenience.	Convenience and compatibility.
Hahn, Sparks, Wilkins, and Jin (2017)	To analyse customers' perception of e-service quality in the hotel website context.	The design as an instrument for assessing the e-service quality, the atmospheric quality, the emotional engagement and customers' reviews are all important dimensions for the e-service quality of hotel websites.	Website design and service characteristics and quality.
Hung (2017)	To study the online positioning of companies in the hospitality industry and to analyse the online-offline positioning consistency.	The study demonstrates three online segments of Taiwanese hotel industry and reveals the problem of hotel positioning consistency between online website quality and offline star rating. Vendor's website quality plays as an online marketing thrust to acquire the subsequent service transactions strategically	Website quality.
Li, Peng, Jiang, and Law (2017)	To investigate the relationships among economy hotel website quality, e-trust, and online booking intentions.	Usability, entertainment, and complementarity of hotel websites significantly positively affected e-trust, which further positively influenced online booking intentions. Moreover, complementarity showed a more positive influence than the three other attributes on online booking intentions.	Website entertainment, usability and complementarity.
Magalhães, de Magalhães, Revett, and Jahankhani (2017)	To review the existing research and knowledge on privacy issues in the hotel industry and their secure management.	Privacy issues, beside a necessary legal requirement, are likewise a managerial and marketing opportunity for hotels. There is a need for clear indications on how hotels could create, implement and publicize adequate information security policies or how to align the marketing strategies to the importance of privacy assurance.	Privacy and security issues.
Sarmah, Kamboj, and Rahman (2017)	To analyse the impact of guests' innovativeness, co-creation, interaction and involvement on their adoption intention towards co-creatively developed new luxury hotels services.	Both guests' innovativeness and interaction with service staff significantly affect their involvement, and guests' co-creation acts as a partial mediator between innovativeness and intention to adopt co-creatively developed new services.	Interaction.
Manes and Tchetchik (2018)	To study the electronic word-of-mouth as a contributor to reducing information asymmetry in online hotel booking.	Price vs. reputation gradient is much steeper in lower star-rated hotels than in higher star-rated hotels, and in unbranded hotels than in branded hotels. The greater the information asymmetry, the greater the role of electronic word-of-mouth in reducing uncertainty in online hotel booking.	Reputation and price.
So, Oh, and Min (2018)	To examine the motivators and constraints that affect consumers' adoption of Airbnb.	For motivations, price value, enjoyment and home benefits significantly explain overall attitude toward Airbnb. As for constraints, distrust is the only factor that significantly predicts overall attitude.	Price.

5. Discussion

The relationship that a hospitality company establishes with its customers is of crucial importance as it reflects the communication between two parties throughout the entire process of offering the service, the purchasing intention, the actual purchase transaction and the post-purchase practice. As previously observed, there are a wide variety of factors that influence the behaviour and actions of travellers that further act as a bridge towards each of the phases of a relationship: its establishment, its development and its maintenance.

Based on the theoretical insights posited above, Figure 2 summarises the aspects which are most frequently considered to contribute to variations in hospitality service provision and that influence customer behaviour. There is a distinction made between the three phases of the relationship, presenting a usual B2C relationship lifecycle within an electronic context. The influencing elements are organised by the phase in which they have the highest impact on customer behaviour and their relationship with the company in question. Included are characteristics describing the electronic environment of service provision, the guests' personality traits that affect their decisions in traditional and electronic markets and signals communicating service and service provider features.

As far as technology-related features are concerned, the perceived ease of use, usefulness, control and influence coming from reference groups regarding the use of certain new technologies have a greater impact on the relationship-establishment phase. This is especially the case for inexperienced electronic customers, a tendency that decreases as the customer gains thier own experience and shapes a style of behaviour. Elements that would lose importance to customer behavioural responses as the relationship progresses would similarly be customer self-efficacy, anxiety, playfulness and demographic characteristics. Other influencing factors stemming from the technological environment of the service provider and those related to customers' personality are equally important throughout the relationship lifecycle. This occurs because even though the service conditions stay the same, customer needs, preferences, experiences and knowledge may be transformed in the course of time and as the usage of electronic services becomes a repeated action.

Regarding the service characteristics communicated to the customer, these are relevant throughout the entire relationship and seek to counter asymmetric information and any possible uncertainty that customers might perceive. Nevertheless, although aspects such as security or service quality tend to maintain their traits during the whole relationship, other aspects such as price, interaction or advertising and entertainment become less important once the relationship is stable as it is to be supposed that loyal customers are satisfied ones.

Figure 2. The B2C relationship lifecycle and influencing aspects in the electronic provision of hospitality services

B2C relationship establishment	B2C relationship development	B2C relationship maintenance	
Perceived usefulness and ease of use Perceived control and social norms Attitude and experience Individual's optimism, innovativeness, insecurity and discomfort Performance and effort expectancy Facilitating conditions and habits Voluntariness and hedonic motivation New technology self-efficacy, anxiety and playfullness Perceived enjoyment and usability	Perceived usefulness and ease of use Perceived control and social norms Attitude and experience Individual's optimism, innovativeness, insecurity and discomfort Performance and effort expectancy Facilitating conditions and habits Voluntariness and hedonic motivation New technology self-efficacy, anxiety and playfullness Perceived enjoyment and usability	Attitude and experience Individual's optimism, innovativeness, insecurity and discomfort Performance and effort expectancy Facilitating conditions and habits Voluntariness and hedonic motivation Perceived enjoyment and usability	Technology-related aspects
Demographics (gender and age) Individual's congnitive and affective states and processes Congnitive consideration of the information Individual's association stimuli Individual's level of openness, conscientiousness, extraversion, agreeableness and neuroticism Individual's level of sincerity, excitement, competence, sophistication and ruggedness Individual's material needs, need for activity and impulsivness and suscepatability to peer influence Shopping confidence and utilitarian and hedonic shopping orientation	Demographics (gender and age) Individual's congnitive and affective states and processes Congnitive consideration of the information Individual's association stimuli Individual's level of openness, conscientiousness, extraversion, agreeableness and neuroticism Individual's level of sincerity, excitement, competence, sophistication and ruggedness Individual's material needs, need for activity and impulsivness and suscepatability to peer influence Shopping confidence and utilitarian and hedonic shopping orientation	Individual's congnitive and affective states and processes Congnitive consideration of the information Individual's association stimuli Individual's level of openness, conscientiousness, extraversion, agreeableness and neuroticism Individual's level of sincerity, excitement, competence, sophistication and ruggedness Individual's material needs, need for activity and impulsivness and suscepatability to peer influence Shopping confidence and utilitarian and hedonic shopping orientation	Personality-related aspects
Service and information quality Price Security and privacy Website quality Interaction Entertainment Advertising	Service and information quality Security and privacy Entertainment Advertising	Service and information quality Security and privacy	Signals

In summary, it is of crucial importance to have accurate information of the phase in which the offered hospitality service is in the precise moment of observation. Based on whether it is in the establishment, development or maintenance stage of the B2C relationship, the level of consideration of the technological aspects (e.g. mobile app, website, payment system), personality traits (e.g. customers' needs, preference, emotions) or signals communicated to customers (e.g. customer perceptions regarding the design or quality of the hospitality service offer) can be determined. Focusing on efforts to underpin the elements that are most likely to benefit the B2C relationship will result in a committed customer and an efficient company.

Based on the groundwork of the offered theoretical concepts, researchers could find this study useful for determining the right direction to take in the adoption of certain concepts, with the objective of filling gaps in the field of customer behaviour investigation based on empirical evidence. In this review, the need for the employment of a multidimensional approach is emphasised, rather than only focusing on one kind of potential incitement. Taking into consideration propositions from marketing, management, psychology, sociology or computer science would permit enhanced research in hospitality, detailing the influencing elements of guest behaviour.

As a matter of fact, the constant evolution of the provision of hospitality services brings out the necessity to interchangeably use approaches from different disciplines, since it is more and more obvious that the environment in which customers operate is nowadays an

omnichannel one. Opting for such a strategy, companies are striving to offer a seamless experience to their customers and offer them the opportunity to purchase their services. Researchers could use this trend of companies doing business and try developing theoretical proposals that could encompass different components that have been found in the presented literature as influencing customer behaviour in the context of hospitality services.

These approaches could also be related to other social science fields, which have laid the foundations to establish models that describe customer behaviour from a more technology- or personality-related perspective. Furthermore, from a managerial point of view, it is important to look into the possible differences between actual activity and customers' perception of the same (Rahimi *et al.*, 2017), determined by the technology used or by personality characteristics. An understanding of these discrepancies could provide companies with accurate information as to the consequent relation between a company's actions and their customers' behavioural responses, as may be the case with the imbalanced use of mobile services, compared to online usage, especially in current times of continuance connection.

At this point, we also find it essential to determine the degree of influence that the studied aspects have on customers and their interrelationship. Moreover, detecting the situations in which a service component has a positive or negative effect would also be useful in shrinking the breach between objective action and subjective reaction, as the approach to attract one customer might not be the best for attracting another. Through all this, companies may get a clearer image of the importance that each service feature has for their target customers, through which a broader familiarity with customers will also be obtained.

Additionally, a more practical vision of company performance in certain B2C relationships is still needed, especially since traveller behaviour has been so significantly affected by new technological innovations (Kim *et al.*, 2014). Finally, in order to give an overview of the revolution that has happened in the range of hospitality services offered, the table below summarises the innovative possibilities that hospitality companies provide to customers. We have considered the world's Top 10 most valuable hotel brands (Brand Finance, 2018). By reviewing the information provided in Table 4, it can be concluded that the range of services offered by all brands is very similar. However, there are different levels of mobile services, some of which are rather scarce. For instance, some brands provide a variety of services in addition to the standard (e.g. Holiday Inn), while others are almost totally dependable on their mother brand (e.g. Ramada). It is worth mentioning that all the brands appear as a choice in hospitality services marketplace apps. All this could serve as evidence of the current state of the hospitality sector as well as providing guidance towards improvements to and a differentiation of the services electronically presented on the market.

Table 4. New technologies use in B2C hospitality services

Brand name/Country	Services offered electronically	Mobile apps details
Hilton/USA	- Accommodation reservations and management, offers, packages and leisure, meetings and events management, membership rewards program. - Social media presence	- No global app - Guest loyalty program app (global) - Several individual apps, for sub brands and for different locations around the world
Marriott/USA	- Accommodation reservations and management, deals, packages and leisure (including car rental, tours and activities), membership rewards program, meetings and events management, shop Marriot. - Social media presence	- Owns a global app - A number of other apps for leisure activities and events in different locations around the world - Employment offer
Hyatt/USA	- Accommodation reservations and management, offers and packages, meetings and events management, membership loyalty program. - Social media presence	- Owns a global app - Several individual apps, for sub brands and for different locations around the world
Holiday Inn/UK	- Accommodation reservations and management, offers, packages and leisure, meetings and events management, membership rewards club. - Social media presence	- Owns a global app - Several individual apps, for sub brands and for different locations around the world - Employment offer - Language translator app - Global events portal app
Courtyard/USA	- Being a Marriott-operated brand, it offers the same services as Marriott, most of them operated through Marriott official website. - Social media presence	- No global app - Being a Marriott-operated brand, it may be accessed as Marriott service and through marketplace apps
Shangri-La/Hong Kong	- Accommodation reservations and management, packages and leisure offers, meetings and events management, membership rewards program. - Social media presence	- Owns a global app - Guest loyalty program app (local) - Few other apps for leisure activities and events in different locations around the world
Wyndham/USA	- Accommodation reservations and management (including groups), offers, membership rewards program. - Social media presence	- Owns a global app - Guest loyalty program app (local) - Few apps for sub brands and for different locations around the world
Sheraton/USA	- Accommodation reservations and management, deals and offers, leisure events benefits, meetings and events management, membership rewards club, Sheraton store. - Social media presence	- No global app - Stay management app - Guest loyalty program and owner management app (global) - A number of individual apps, for sub brands and for different locations around the world
Ramada/USA	- Being a Wyndham-operated brand, it offers the same services as Wyndham, most of them operated through Wyndham official website. - Social media presence	- No global app - Several individual apps, for sub brands and for different locations around the world
Hampton Inn/USA	- Accommodation reservations and management (including groups), offers and packages, meetings and events management, membership rewards program. - Social media presence	- No global app - Several individual apps, for sub brands and for different locations around the world - Being a Hilton-operated brand, it may be accessed as Hilton service and through marketplace apps

As can be seen in Table 4, prestigious hospitality companies are opting for a combination of different channels and acting in more than one context at a time, combining online and mobile channels, while still maintaining offline activity. This synergy is easily recognisable in the hospitality sector, where hotels mostly operate on the internet and via mobile apps, enabling customers to organise their stay by exclusive electronic means. However, the different channels present diverse possibilities for accomplishing guests' behavioural intentions. Companies should therefore be equipped with relevant experience in all channels, in order that they might offer a 360° experience to their customers, through the design of a multichannel and even an omnichannel strategy, optimising channel performance and the customer experience across all channels (Verhoef, Kannan & Inman, 2015).

6. Conclusion

In this study, a theoretical background has been summarised from the most relevant approaches used in customer behaviour research into hospitality. We have seen different

theories and proposals that contribute to a better B2C relationship. The importance of two-way communication between companies and customers was likewise found to be one of the essentials in B2C relationships. Bearing in mind the argumentation exposed in the earlier sections, the general image of the hospitality services sector has undergone enormous changes over the past decade, which enabled a variety of possibilities for both customers and companies to interact with each other. Customers therefore benefit through the acquisition of hospitality services, such as comfortable, easy and efficient purchase, and companies in the delivery of the service, including service characteristics, in the channel in which it is offered and communication with their customers.

In our research we found a lack of research into the personality of travellers as a focal point in their electronic obtainment of hospitality services. Existing literature proposes that personality characteristics do not normally change to a significant extent over time (Leung & Law, 2010). However, this may be misleading, creating the confusion that all new technology users are alike and that there are not many differences between users of different channels (offline, online, mobile). This would be a mistaken supposition because, obviously, the nature of these channels is different on several levels. Hence there may be other characteristics interrelating with the behaviour of guests. For this reason, we would like to see more exhaustive research on the personality-related differences of customers of hospitality services.

Another possible line for future research could be a quantitative analysis based on a survey exploring actual customer perception of hospitality sector services. It would be useful to obtain first-hand information about the use, habits and satisfaction of customers regarding the services provided. This would further facilitate research into the act of sharing experiences through traditional and electronic word-of-mouth, which would make companies more aware of their performance and strengthen their customer network (Pacheco, 2017; Pacheco, 2018). Finally, Figure 2 can be used as guidance for exploring the different phases of a relationship and determining the most influencing aspects that could affect traveller behaviour at any precise moment of the B2C relationship, in order find the best ways for both customers and companies to establish, develop and maintain their bond.

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