IUL School of Social Sciences

Department of Social and Organizational Psychology

Using Emoji in an E-commerce Context: Effects in Brand Perception, Quality of Service and Intention to Recommend

Nuno Emanuel Branquinho Moutinho Marques de Paiva

Dissertation submitted as partial requirement for the conferral of *Master's in Social and Organizational Psychology*

Supervisor:

Doctor Marília Prada, Invited Assistant Professor

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Lisbon, October 2018

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RESUMO

A evolução das tecnologias digitais levou ao surgimento de novos modelos de negócio, e formas de fornecer serviços e produtos (e.g., e-commerce). Adaptando-se a estas mudanças, as pessoas alteraram parte dos seus hábitos. Um exemplo é o caso da Comunicação mediada por meio Eletrónicos (EMC), que mudou a forma e o conteúdo do que as pessoas comunicam (e.g., Skype, e-mail). A EMC em formato de texto (e.g., e-mails) evoluiu, permitindo a expressão da emoção entre emissor e recetor, nomeadamente através da utilização de emoji. No entanto, a forma como marcas e prestadores de serviço se relacionam com clientes em contextos eletrónicos, e quais os possíveis resultados desse relacionamento, é uma área de pesquisa pouco explorada. Neste trabalho apresentamos dois experimentos que examinam a influência do uso de emoji na comunicação da marca-consumidor durante uma venda de bilhetes on-line, na perceção da marca, qualidade do serviço e intenção de recomendar dos consumidores. Para além da presença (ausência) de emoji, manipulámos a valência da mensagem (sucesso ou insucesso da transação - Experimento 1) e a disponibilidade de produto (Experimento 2). Globalmente, os resultados sugerem que garantir o sucesso de serviço é mais determinante para a avaliação de marca e qualidade de serviço do que o tipo de linguagem utilizado. Especificamente, no Experimento 1, o uso de emoji parece influenciar a perceção de informalidade da linguagem, enquanto no Experimento 2, parece ter influenciado a perceção de presença social e calor da marca, de linguagem ser informal e divertida, assim como qualidade de serviço.

Classificação APA

2750 Comunicação através de Mass Media

3900 Psicologia do Consumidor

3920 Atitudes e Comportamento do Consumidor

Palavras-chave: Emoji; Comunicação Mediada por meios Eletrónicos; Avaliação de Marca; Psicologia do Consumidor; Sistemas de Comunicação; Atitudes e Comportamento do Consumidor

ABSTRACT

The increasing development of digital technologies has lead to business model disruption, transformation and developed new means of providing services and products (e.g., e-banking and e-commerce). In order to cope with, and benefit from these changes, people have changed their habits. Such is the case of Electronic Mediated Communication (EMC) that changed how and what people communicate (e.g., Skype, e-mail). Text-centric EMC (e.g., IM, e-mails) has itself evolved to allow the expression of emotion between sender and receiver, namely through the use of emoji. However how service providers and brands relate with their progressively more digital customer base in electronic contexts, and what may be the outcomes of that relationship is still an unexplored area of research. In the present work, we present two experiments that aimed to examine the influence of emoji use in brand-consumer communication during an online ticket selling transaction, on consumers perception of brand, quality of service and intention to recommend. Besides manipulating emoji presence (or absence), we additionally manipulated message valence (e-commerce transaction success or failure - Experiment 1) and product scarcity (Experiment 2). Overall, results suggest that guaranteeing service success is more determinant of brand and quality of service evaluation than the type of language used. Specifically, in Experiment 1, emoji use seems to have influenced the perception of language informality, while in Experiment 2, seems to have influenced the perception of brands social presence and warmth, language informality and funniness, as well as quality of service.

American Psychological Association (PsycINFO Classification Categories and Codes):

2750 Mass Media Communications
3900 Consumer Psychology
3920 Consumer Attitudes & Behavior

Key Words: Emoji; Electronic Mediated Communication; Brand Evaluation; Consumer Psychology; Communication Systems; Consumer Attitudes & Behavior

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Abbreviation List

B2B - Business-to-Business

B2C - Business-to-Consumer

CMC - Computer Mediated Communication

E- Service - Electronic Service

E-Commerce - Electronic Commerce

EMC - Electronic Mediated Communication

QoS - Quality of Service

e-QoS - Electronic Quality of Service

F2F - Face-to-Face

I. Introduction

Nowadays, we live in a digital world. The development of information communication technology has changed society, social human behavior and the nature of work activities (Kvasnicova, Kremenova & Fabus, 2016). Digital transformation that was once regarded as a distant future and with skepticism, is happening right now. A variety of different electronic means (e.g., computers and smartphones) changed not only the way we communicate (e.g., Social Media, Instant Messaging), but also what we communicate (e.g., food porn on instagram, or jokes with memes). Electronic mediated communication (EMC), specifically text-centric communication (e.g., e-mail, Instant Messaging) has evolved in order to allow the expression of complex messages, concepts and emotions, with substitutes for smiling (Ganster, Eimler & Krämer, 2012) and other face-to-face (F2F) and voice-to-voice communication cues emerging online (e.g., caps and emoticons, Aldunate & González-Ibáñez, 2017).

Along with such changes in communication, we are witnessing the rise of a digital economy, which nowadays allows us to manage monetary transactions (e.g., homebanking), watch entertainment (e.g., Netflix) and even book services (e.g., Ticketline) or buy products online (e.g., Amazon). Therefore, from a consumer point-of-view, buying a product or a service was never this easy. We can buy products and services at a push of a button. Indeed, most industries have been influenced, in one way or another, by electronic commerce (e-commerce, Ghane, Fathian & Gholamian, 2011) with the online economy pushing into ever more markets such as retail, transportation and even illegal substance trade, revolutionizing them as it goes (Wainwright, 2016). New forms of service delivery such as e-banking, e-learning, e-government and e-commerce have emerged (Cardoso & Fromm, 2015), the latter making up more than one-tenth of all retailing in developed countries by most accounts (Wainwright, 2016) and being one of the most popular and growing activities on the web (Nanehkaran, 2013). Indeed, advances in computer systems, along with digital technologies, are at the core of traditional business model disruption and extensively contributed to the evolution of services (ACEPI, 2018, January; Cardoso & Fromm, 2015). As technology develops, services that were once delivered by humans to humans, are increasingly able to be delivered to humans by computers (Cardoso & Fromm, 2015), bringing significant changes in customer experience, especially in how consumers communicate and interact with other

consumers, brands and companies, as well as do commercial transactions (ACEPI, 2018, January).

However, the digitalization of society also brings challenges to service providers. In an online context, consumers expect at least the same, or even higher, levels of service quality as do offline consumers (Santos, 2003). Hence, e-Service Quality has a significant influence on many important aspects of e-commerce (Blut, Chowdhry, Mittalc, & Brock, 2015; Ladhari, 2010), such as customer satisfaction and repurchase intention (e.g., Blut et al., 2015), intention to recommend (e.g., Leonnard, Comm, & Thung, 2017), and consumer perception of the service providers trustworthiness (e.g., Chek & Ho, 2016).Thus, investigating the e-service quality of website is critical to gain a deeper understanding of its influence on consumers, since it represents the first point of interaction and interface between consumers and online retailers (Chek & Ho, 2016). Even though studies in e-service quality combine dimensions from traditional service quality and web interface quality as a starting point (Alnaser, Almsafir & Alshoura, 2014), one of the main differences between the two is the absence of F2F and interpersonal contact in online services, that make traditional dimensions of physical service quality such as "empathy" apparently not applicable and less important in the context of e-Service Quality (Kalia, 2017; Ladhari, 2010). However, despite this difference between offline and online shopping settings, shoppers in these environments share a common need for social interaction (Hassanein & Head, 2007). Indeed, an effective web platform should allow the customer to psychologically and socially, feel the presence of the company's representative (Toufaily, Souiden, & Ladhari, 2013). Consequently, in order to replace the almost absent F2F interactions in a virtual environment, pure online businesses should focus on improving their social presence by humanizing and infusing social cues through the Web interface (Toufaily et al., 2013). Taking these considerations into account, there seems to be a paradox: on the one hand, there is evidence that emotion expression, online interaction and social presence are important in EMC, and on the other hand, empathy seems to be a less relevant factor in e-quality of service. We should bear in mind that EMC is not necessarily emotion deprived, with the use of emoticons/emoji being defined as a means to express emotion (Luor, Wu, Lu & Tao, 2010) and a way for text-based EMC users to make their conversations more dynamic and with more social presence (Aldunate & González-Ibáñez, 2017). Furthermore, emotion, social presence and human touch are essential to a memorable offline service experience (Cardoso & Fromm, 2015). Hence, we hypothesize that if a brand or service provider uses emoji in its online interactions with the consumer, e-quality of service perception may improve due to the warmth and sympathy signaled. Thus,

this study aims to contribute to the literature of Online Consumer and Brand Interaction, by examining how emoji use in brand to consumer communication, during an e-commerce transaction, can modify a consumer's perception of the service providers brand and quality of service.

In the section that follows, we present a literature review focused on the features of EMC.

II. Literature Review

2.1. Electronic Mediated Communication (EMC) and Emoji

In the last few decades, new communication technologies have dramatically changed the way people communicate with each other (for a review, see Rodrigues, Prada, Gaspar, Garrido, & Lopes, 2018). Since the introduction of the internet, we have witnessed an enormous increase in computer-mediated communication (CMC), with e-mail and groupware replacing some characteristics of F2F or voice-to-voice communication, whether in private or professional contexts (Derks, Fischer, & Bos, 2008; Luor et al., 2010; Rivera, Cooke & Bauhs, 1996). As technology advances, different electronic communication channels (e.g., Social Media, WhatsApp) and a variety of different devices (e.g., computers, tablets, smartphones) that allow people to communicate with each other are emerging. Therefore, CMC is becoming a dated term, and its giving way to an electronically - mediated communication (EMC) terminology (Dunlap et al., 2015).

People are aware that the use of electronic-mediated environments lead to a change in the nature of communication, one that may hinder the communication of emotion (Huang, Yen, & Zhang, 2008; Riordan, 2017). Given that the ability to express emotions in F2F communication is very important for establishing a social and friendly atmosphere (Neviarouskaya, Prendinger, & Ishizuka, 2009), EMCs lack of cues necessary to interpret incoming messages, may have consequences for the decoding, recognition and expression of one's emotions (Derks, Fischer, & Bos, 2008). Nevertheless, EMC users have found ways to increase the richness of their interaction in order to achieve socially oriented communication (Walther & D'Addario, 2001). A few examples include the use of non-standard spelling ("'sup?"), lexical surrogates (“uh huh”), as well as inserting visual cues and affective symbolic conventions like emoticons and emoji into text (Huang et al., 2008; Neviarouskaya et al., 2009; Prada et al., 2018). Thus, EMC is not necessarily an emotion deprived medium. It may actually allow the expression of positive emotions to the same extent as in F2F interactions, and more overtly, frequently and explicitly express intense negative emotions (e.g., trolling) (Derks, Fischer, & Bos, 2008).

In sum, the evolution of the internet and EMC lead to changes in the way we communicate and establish personal and professional relationships, and continues to do so at a fast pace. It also changed the way companies interact with consumers (e.g., Social Media pages) and the way brand and service providers trade and conduct business (e.g., e-

commerce). Thus, it has never been more important to study how brand and consumers interact through EMC and EM business transactions. Next, we will review the concept of e-commerce, one of the most popular ways that brands and service providers interact with consumers.

2.2. E-Commerce & Brand - Consumer Interaction in the Digital Age

The definition of e-commerce is not completely established, with "e-business", "e-commerce" and "e-services" being used interchangeably. However, e-commerce seems to imply some manner of electronic mediation for business transactions (e.g., buying a book online) (Jackson, Harris, & Eckersley, 2003). In contrast e-service is a broader term that can include non-commercial transactions (e.g., online customer support through live chat) whereas e-business includes digital business operations (e.g. a business that uses online business processes such as inventory management).

For the present study, we will consider Wigand's (1997) definition of e-commerce: "electronic commerce includes any form of economic activity conducted via electronic connections". E-commerce is now one of the most popular and growing activities on the web (Nanehkaran, 2013). For example, in Portugal, e-commerce has been increasing in the last few years (CTT, S.D.; DPD Group, 2017, November; Statistics Portugal, 2017). In 2017, the country had the biggest online market growth rate in Europe, even though below the European mean (DPD Group, 2017, November). In the same year, business to consumer online shopping in Portugal reached 4,6 million euro, a value that is expected to grow in 2018 (ACEPI, 2018, January). E-commerce user rate grew, as well as the use of smartphones to access e-commerce platforms as well (ACEPI, 2018, January; CTT, S.D.). This broader use of mobile phones to do online transactions is associated with higher trust in e-vendors, increased social media use and bigger investments in e-commerce strategies by companies (SIBS Group, 2016). E-commerce global growth is due to the increased ease of access to the internet and mobile users in emerging markets, better shipping and payment options, and entry of major brands in the international markets (Kalia, 2017; Nanehkaran, 2013). Because it has overcame many of the limitations of traditional business (Nanehkaran, 2013), companies are able to trade easier, faster, cheaper, and overcome geographical distances with storefronts in the form of Web pages reaching consumers all over the world (Nanehkaran, 2013; Terzi, 2011).

However, e-commerce has its disadvantages as well. Traditional human-based services are characterized by the personal service encounter involving human touch and service experience (Cardoso & Fromm, 2015). In contrast, with internet and e-commerce applications, a whole range of activities can occur without physical proximity or personal contact between buyer and seller (Taherdoost, Shamsul, & Jalaliyoon, 2015; Terzi, 2011). This may prove to be a disadvantage given that interactions that occur between people, technology, resources, and customers are considered to be a crucial part of a memorable service experience (Cardoso & Fromm, 2015). Specifically, service experiences are directly shaped by the functional, behavioral, and emotional outcomes of the service system-customer interactions (Cardoso & Fromm, 2015). Indeed, the decreased presence of human and social contact is one of the characteristics (Cardoso & Fromm, 2015; Nanehkaran, 2013) that is holding back e-commerce growth (Hassanein & Head, 2007). So, in order to continue growing, how can service providers overcome the lack of emotion in e-commerce? Can brands communicate emotion during their e-commerce transactions? In the following section we provide a review of emoticons, emoji and how they can be used to communicate emotion in EMC.

2.3. Emoticon and Emoji Use in EMC

The integration of EMC into human relationships is widespread and so deeply ingrained (Riordan, 2017) that sending an instant message with a happy-face emoticon attached may be perceived as more personal than greeting a person in the hallway (Huang et al., 2008). Substitutes for smiling have first appeared in online interaction in the 1980s, in order to distinguish humorous textual messages from serious ones (Ganster et al. 2012; Novak, Smailović, Sluban, & Mozetič, 2015). Throughout the years there has been an increased use of alternative cues to communicate emotional states in EMC (Aldunate & González-Ibáñez, 2017). Nowadays, with a generalized use of online social media and instant messaging, the use of emoticons is a simple, effective way to communicate emotions (Manganari & Dimara, 2017). Emoticons - a construction of the words ‘‘emotion’’ and ‘‘icon’’ - are typographic symbols, based on a short sequence of keyboard inputs and resembling facial expressions, that often follow utterances in written EMC (Luor et al., 2010; Novak et al., 2015; Skovholt, Grønning & Kankaanranta, 2014; Walther & D’Addario, 2001) or act as an utterance on its own (Garrison, Remley, Thomas, & Wierszewski, 2011). A *quasinonverbal* cue (Lo, 2008), and a key aspect of text communication, emoticon utility grew alongside the increasingly computerized social transactions (Stark & Crawford, 2015).

They are used for social relation purposes (Riordan, 2017; Skovholt et al., 2014) and regulate interaction just as smiles and frowns do in daily life (Derks, Fischer, & Bos, 2008; Luor et al., 2010). Hence, emoticon use can have different purposes. In Derks, Bos, & Von Grumbkow's (2008b) study, participants self-reported that the most common use for emoticon is expressing emotion, humor and strengthening the verbal part of a message. Lo (2008) found that Internet users interpreted the emotion, attitude and attention in the same sentence differently, according to the emoticon that followed (e.g., "The sun is bright today :)" vs. "The sun is bright today : ("). Luor et al. (2010) also found that positive and negative emoticon use can generate different emotional effects, when compared to messages without one (e.g., "We have to discuss in 5 minutes" vs. "We have to discuss in 5 minutes >:S"). Recent neuropsychology studies, using functional Magnetic Resonance Imaging (fMRI) and electroencephalography (EEG), suggest that emoticons activate the same areas involved in emotional discrimination and that there are similarities in emoticon and face perception (for a review, see Aldunate & González-Ibáñez, 2017).

Like natural language, emoticons can be considered evolutionary (Garrison et al., 2011) and as computer-based text has become richer, they have evolved (Moore, Steiner, & Conlan, 2013), increasing in number, complexity and cultural diversity (Park, Barash, Fink, & Cha, 2013; Rodrigues et al., 2018). A new generation of emoticons, called emojis, is increasingly being used in mobile communications and social media (Novak et al., 2015).

2.4. Emoji

Emoji (from the Japanese e [picture] + moji [character]) are graphic symbols with predefined names/IDs and code (Unicode), which include representations of facial expressions, abstract concepts, emotions/feelings, animals, plants, activities, gestures/body parts, and objects (e.g., 😐, 💯, 💟, 🐵, 🌴, 🚲 ,🤘 ,👃, 🛴, Novak et al., 2015; Rodrigues et al., 2018). Commonly used in our everyday texting, they are increasingly popular (Novak et al., 2015; Rodrigues et al., 2018) such that the "face with tears of joy" emoji was Oxford's dictionaries "word of the year 2015" (Rodrigues et al, 2018). They differ from emoticons, by being colored, upside up instead of rotated by 90º, and the ones that represent facial expressions, are often delimited by a circle and can include multiple facial cues (Ganster et al., 2012). For example a happy face emoticon can be represented with :), and a happy face emoji with 😐. They are considered to be emoticons that are more human than typographic in nature - more aesthetically appealing, familiar, clear and meaningful, and

thus a further development of emoticons (Aldunate & González-Ibáñez, 2017; Ljubešic & Fišer, 2016; Rodrigues et al., 2018). Like emoticons, emojis have several purposes. They can contextualize messages with a humoristic or sarcastic frame (e.g., Skovolt, Grønning, & Kankaanranta, 2014), strengthen a written message valence and have an impact on message interpretation (e.g., Derks, Bos, & Von Grumbkow, 2008a). For instance, the same sentence can be interpreted in a different way by adding an emoji / emoticon after the message: "Want to grab dinner?" vs. "Want to grab dinner? 😉" (message disambiguation); "I hate you" vs. " I hate you 😜" (sarcasm); "I'm so sad" vs. "I'm so sad ☹" (intensify message). Riordan (2017) found that even messages with non-facial emoji (e.g.,🏆) can communicate joy and affect, when compared with messages with no emoji, signaling and enabling users to act out emotion work essential to maintain social relationships.

In conclusion, emoji and emoticons help to build and maintain relationships and social ties in digital environments and technological platforms (Stark & Crawford, 2015). Brands can be considered relationship partners (Fournier & Alvarez, 2012), and the ones that build a sustainable relationship with customers gain a competitive edge in the marketplace (Bolton & Mattila, 2015). Then it seems logical that in today's digital society, where e-commerce, EMC and emoji use are part of our daily lives, brands need to understand how using emoji in brand consumer EMC and online services, can influence their relationship with an increasingly digital customer base.

Furthermore, given that focusing on quality of service leads to competitive advantages and enhanced customer relationships (Santos, 2003) brands also need to understand how quality of service changes along the evolution of technology. The lack of social presence and human interaction is typically a disadvantage of e-commerce (Cardoso & Fromm, 2015). Moreover, communication tends to be cold without affective cues, so emoji/emoticons become important tools to convey in convey social presence and expressing emotions in text-based interactions (Aldunate & González-Ibáñez, 2017; Dunlap et al., 2015; Yamada & Akahori, 2007). Therefore, we set out to study if the presence of emoji in brand-consumer interaction, specifically during an e-commerce transaction, will impact the consumers brand and quality of service perception, as well as intention to recommend it.

Next, we will review the dependent variables chosen for this study, and how they influence brand and quality of service perception, and consumers intention to recommend.

2.5. Psychological & Social Variables

2.5.1. Quality of Service

Investigating websites e-service quality is critical to gain a deeper understanding of its influence on consumers because websites are the first point of interaction and interface between consumers and online retailers (Chek & Ho, 2016). Indeed, online service quality has a significant influence on many important aspects of e-commerce (Ladhari 2010). For example, e-Quality of Service (e-QoS) is an antecedent of trust in a variety of e-commerce contexts such as e-banking (e.g., Chu, Lee & Chao, 2012; Ghane, Fathian & Gholamian, 2011), online stores (e.g., Ghalandari, 2012; Ribbink, van Riel, Liljander, & Streukens, 2004) and internet vendors in general (Oliveira, Alhinho, Rita, & Dhillon, 2017). E-QoS is also correlated with e-service satisfaction, which in turn can lead to increased frequency of service use by customers, repeated purchase and intention to recommend (Ghalandari, 2012). In a study with 30 focus groups, Santos (2003) found that good support, speed and attentive maintenance that composes part of a websites e-service quality, can increase customer retention, and encourage positive word of mouth. However, even though its importance to online business is consensual, there is no agreement in the literature about the exact nature and definition of e-service quality (Blut et al., 2015; Ladhari, 2010; Zemblytė, 2015). Still, the construct is clearly multidimensional, with a set of dimensions being consistently identified (e.g., security/privacy, reliability/fulfillment, responsiveness, web design, ease of use/usability and information quality/benefit, Kalia, 2017; Ladhari, 2010).

As a starting point, studies in e-service quality have combined traditional service quality dimensions and web interface quality dimensions (Alnaser et al., 2014). However, traditional service quality dimensions may not be readily applied to the e-service quality domain (Blut et al., 2015). For instance, an online environment differs from the traditional retail context in convenience and efficiency, safety and confidentiality, co-production of service quality and absence of F2F contact (Ladhari, 2010). This absence of F2F and interpersonal contact make traditional dimensions of physical service quality such as "empathy" apparently not applicable or less relevance in the context of e-Service Quality (Kalia, 2017; Ladhari, 2010). In traditional quality of service literature, "empathy" is defined as caring, individualized attention that the firm provides its customers and "assurance" is the knowledge and courtesy of employees and their ability to convey trust and confidence (Parasuraman, Zeithaml, & Berry, 1988). Despite the efforts of online vendors to create a personalized interaction with the customer and service through customized contents, personal greetings, and individualized e-mails, they do not create the same empathy as human service

providers (Gefen, 2002). The knowledge and courtesy of human assistants measured in the assurance dimension, are also absent, and are substituted by courteous error messages and guidance boxes (Gefen, 2002).

With this in mind, and considering our previous review about the importance of emoji/emoticon in providing emotional cues in EMC, we hypothesize that the inclusion of emoji in e-commerce brand-consumer communication, signals empathy of the service provider, thus leading to a bigger e-QoS perception.

2.5.2. Brand Evaluation

In order to fully comprehend how consumers evaluate the brand, based on the literature we chose to assess the following aspects: Language (i.e., its adequateness, funniness and formality), service provider's warmth, competence, trustworthiness and social presence. A brief description of each will ensue.

2.5.2.1. Language

Most studies examining how particular aspects of communication, such as language and style, influence consumer responses have focused on an advertising context (Gretry, Horváth, Belei, & van Riel, 2017). For example, Delin (2005) compared how two brands adopt different offline advertisement tone of voice in order to achieve a certain brand position.

Importantly, research on brand-consumer communication through EMC studies is still scarce. However, recent studies have already provided some insights. In a study regarding consumer-brand communication through Social Media, Gretry, Horváth, Belei and van Riel (2017) found that informal communication style (that often includes emoji) was often described as “personal” and “friendly”. The authors also found that informal communication and familiarity between brand and consumer could impact consumers' trust in the brand. Another recent study, using a two stepped approach, postulated that emoticon/emoji complement text messages by fostering playfulness and fun in mobile instant messaging (Hsieh & Teng, 2017). On the other hand, one experimental study has shown that in German speaking countries, addressing online communities in a formal way, may be the expected adequate way for brands to communicate with online communities (Steinmann, Mau, & Schramm-Klein, 2015). This implies cultural differences in the perception of emoji use, being an informal, fun and adequate signal of a brands communication. We aim to explore

how using emoji in brand-consumer communication in an e-commerce transaction may be perceived by Portuguese consumers and how it can impact brand perception.

Specifically, we hypothesize that emoji use in an e-commerce transaction will influence consumers perception of formal, fun and adequate communication and thus impact brand perception.

2.5.2.2. Warmth & Competence

Warmth (e.g., friendliness, trustworthiness, empathy, and kindness) corresponds to perceptions of other's intent (positive or negative), and competence (e.g., intelligence, power, efficacy, and skill) to the perception of others capability to act on those intents (Cuddy, Glick, & Beringer, 2011; Fiske, Cuddy, Glick, & Xu, 2002). Perceiving others as warm and competent elicit positive emotions and behavior, whereas those perceived as lacking warmth and competence elicit negativity (Fiske, Cuddy, & Glick, 2006). People spontaneously form warmth and competence impressions of individuals, groups (Cuddy, Glick, & Beringer, 2011; Fiske et al., 2002; Fiske, Cuddy, & Glick, 2006), technologies (Brown, Broderick & Lee, 2007; Pols & Moser, 2009) and brands (Fournier & Alvarez, 2012). Thus, it is important for brands and service providers to understand how these judgments are made, and how they can impact business. For instance, Bolton and Mattila (2015) found that Corporate Social Responsibility can lead to a perception of a brand as warmer, and consequently improve satisfaction, loyalty intentions and a buffering effect against a potential service failure.

The e-commerce context typically has no interpersonal or human interactions, thus lacking emotions, warmth and sociability (Cyr, Hassanein, Head, & Ivanov, 2007; Gefen & Straub, 2004; Toufaily, Souiden, & Ladhari, 2013). Nevertheless, the CASA (Computers Are Social Actors) paradigm suggests that social dynamics and rules guiding human–human interaction apply to human–computer interactions, with features of the computer interface impacting the perception of social presence (Hassanein & Head, 2007). Hence, brand-consumer interactions through EMC and digital platforms should be another way that brands and consumer can form impressions and develop a relationship with a brand/service provider.

Considering that warmth judgments are primary, preceding judgments of competence and having greater impact in affective and behavioral reactions (Cuddy, Fiske & Glick, 2008; Fiske, Cuddy, & Glick, 2006) and that emoji /emoticon can be a mean to convey emotion, we propose that emoji use in EMC communication between brand/service provider and consumer, may influence consumers perception of the brands warmth. We also propose that, warmth may be related to the empathy dimension of traditional service quality, a dimension

typically lacking in e-service quality. Regarding the perception of competence, we expected it to be determined by the success (or failure) of the online service.

2.5.2.3. Social Presence

Social presence is a social and psychological construct that has been studied alongside the continuous adoption of EMC, especially in online educational contexts (Cui, Lockee, & Meng, 2012). A psychological phenomenon, it can be defined as a sensation, an individual subjective sense of salience of another person in the interaction (Triberti, Brivio, & Galimberti, 2018; Zhang, Lu, Shi, Tang, & Zhao, 2012). It is known that the presence of other humans (Markus, 1978) or even of a mere social robot (for a review, see Riether, Hegel, Wrede, & Horstmann, 2012) can impact several processes (e.g., task performance). The concept is associated with affective interaction, closeness, warmth, affiliation, attraction and openness (Rourke, Anderson, Garrison, & Archer, 1999). For instance, communication mediums with a high degree of social presence are perceived as more sociable, warm, personal (Zhang et al., 2012) and trustworthy (Toufaily et al., 2013). Note that the "sense" of social presence is the result of the detection of specific clues, related to the behavior of other entities that can be implemented through a communication medium (Triberti et al., 2018; Zhang et al., 2012**).** Incorporating social cues adopted from human-to-human interaction into human-to-computer interaction, by means of the computer interface, can intensify the sense of social presence, and generate strong connections (Tung & Den, 2007). Importantly, the creation of warm and friendly features in web interfaces have been suggested to help impact the perception of social presence in online classrooms (Tung & Den, 2007) and e-commerce (Zhang et al., 2012). If users in digital environments are able to detect traces and effects of others' actions and symbols in the environments itself they are more prone to feel the presence of other selves, even if actual interactions have not been initiated yet (Triberti et al., 2018).

Because a lower social presence is deemed as one of the major differences between service in a traditional commerce environment and service in an e-commerce environment (e-service, Gefen & Straub, 2003), and given that emoji/emoticons are important in conveying social presence and expressing emotions in text-based interactions (Aldunate & González-Ibáñez, 2017; Dunlap et al., 2015; Yamada & Akahori, 2007), we expect that emoji use in consumer-brand communication will have an effect in social presence perception.

2.5.2.4. Trust

Trust is a fundamental feature of social life (Taddeo, 2010), allowing people to create a comprehensible organization of their interactions with others (Gefen, 2000) and to interact with their social environment (Gefen & Straub, 2003; 2004). In digital storefronts, online transactions involve trust in one-to-one relationships (between a buyer and a seller, Oliveira, et al. 2017). Building trust in online environments as a place to do business, and in Internet vendors, is a key aspect of e-commerce (Gefen, 2000; McCole, Ramsey, & William, 2010) that has a direct effect on e-consumers' willingness to buy (Gefen & Straub, 2003) or use e-services (Roca, Garcia & Vega, 2009). Therefore, establishing trust in the vendor whether in offline or online exchanges and economic transactions is vital (Cyr et al., 2007; Grabner-Kräuter & Faullant, 2008), particularly for consumers to accept the associated risk with any given transaction (McCole, Ramsey, & William, 2010). Hence, assessing trustworthiness in a relation between two parts - trustor and trustee - and is usually considered the foundation of trust and e-trust (Taddeo, 2010).

Assuming that emoji/emoticons are important to convey social presence and expressing emotions in text-based interactions, and that increased social presence leads to a higher e-trust (Toufaily et al., 2013), we propose that emoji use will also positively impact service providers' perceived trustworthiness.

2.5.3. Word-of-Mouth

eWOM (Electronic Word-of Mouth) can be defined by any comment, recommendation or statement about companies, brands, products, or services shared among consumers in digital or electronic formats (Wang & Rodgers, 2011). Marketers cannot afford to ignore its growth and power of influence on consumers' behavior and decision-making in today's virtual era (Goyette, Ricard, Bergeron & Marticotte, 2010; Kundu & Rajan, 2017; Manganari & Dimara, 2017). Emotion is an important part of eWOM with emotional reactions to affective stimuli and social cues - defined as arousal - being one of its key determinants (Fang, 2014; Wang & Rodgers, 2011). Thus, we propose that emoji will act as an affective stimuli and lead to bigger intention to recommend.

III. Overview of the Experiments

Even though emoji are increasingly popular in our everyday lives, experimental studies that allow us to comprehend their impact in consumer-brand interaction are still scarce. The present work aims to contribute to the literature by examining the impact of emoji use in a new context - e-commerce. In addition, we seek to understand how the sense of social presence can be activated through the use of emoji, and how it relates to user's perception of service providers. Also, we aim to further contribute to e-QoS literature by bringing a new light to the traditional and online service quality analogy, by considering that emoji/emoticon use and expression in EMC can influence overall e-QoS, such as empathy influences traditional quality of service. Specifically, we conducted two experiments using realistic scenarios to examine how including an emoji in the last screen of an online sale (tickets platform) promotes the sense of social presence and influences how the consumer perceived the language used by the service provider, and its quality of service, competence, warmth and trustworthiness. We also examined its effects on intention to recommend. Two similar experiments were conducted. Overall, the methods used in both experiments were similar.

In Experiment 1 we tested if including an emoji on positive and negative scenarios (i.e, service success vs. service failure, respectively) could affect the perception of the service provider, quality of service and consumers intention to recommend. In Experiment 2, we partially replicated Experiment 1. However, the scenario was always negative (i.e., service failure), but we manipulated product scarcity (i.e., most tickets still available vs. most tickets almost sold) in order to test if emoji use could affect the perception of the service provider, quality of service and consumers intention to recommend, in different decision-making scenarios. Overall, we expect to observe a main effect of emoji presence, such that when the message of the service provider includes an emoji, participants will provide higher ratings across measures (i.e., higher e-QoS, more positive impressions, increased sense of social presence and intention to recommend). We also manipulated the valence of the scenario (Experiment 1) and product scarcity (Experiment 2) for replicability reasons. Specifically, we were interested in exploring if the influence of emoji presence is independent of the success of the of service and how scarce was the product or, if it is only observed in successful cases or in failure cases without scarcity. Figure 1.3 summarizes the study model:

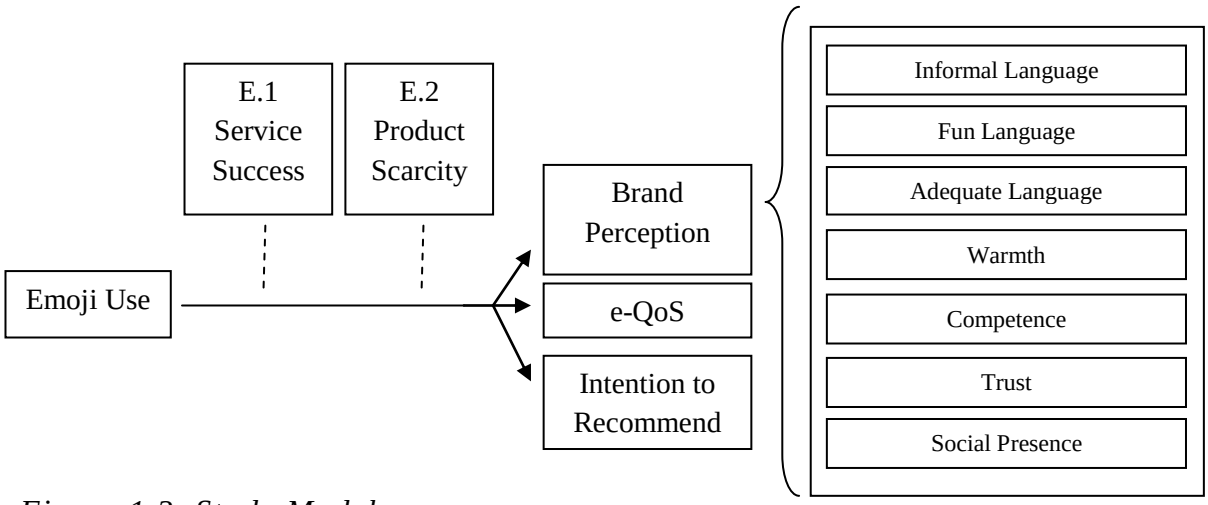


Figure 1.3. Study Model

IV. Experiment 1

4.1. Method

4.1.1. Participants and Design

The sample included 202 participants (59.9% female), between 18 and 62 years old (M = 28.5; SD = 8.1). All participants were native Portuguese speakers or had been living in Portugal for the last 5 years. The majority (82.2%) had a bachelor's degree or higher. Regarding occupation, most participants (61.9%) were employed or students (24.3%).

The majority of the participants reported using emoji in their daily conversations frequently (M = 5.70; SD = 1.59), $t(200) = 50.82$, $p < .001$, as well as a frequent use of online platforms to schedule services or buy products (M = 4.75; SD = 2.04), $t(201) = 33.12$, $p < .001$ (one sample t tests against the scale midpoint, 4). Specifically, regarding online ticket selling platform use, 78.7% of the sample had used this kind of platforms at least once, the majority of which 53.5% had experience using these platforms from one to five times. Participants reported favorable attitudes regarding using the internet to purchase products or services in the next 6 months (M = 5.26; SD = 1.48), $t(201) = 50.56$, $p < .001$.

Overall, participants considered that using emoji in written communication is useful (M = 5.16, SD = 1.62), $t(201) = 45.21$, $p < .001$, (M = 5.16, SD = 1.62), interesting (M = 5.13, SD = 1.53), $t(201) = 47.54$, $p < .001$, fun (M = 5.80, SD = 1.47), $t(201) = 56.11$, $p < .001$, easy (M = 5.89, SD = 1.37), $t(201) = 61.25$, $p < .001$, informal (M = 2.43, SD = 1.66), $t(201) = 20.78$, $p < .001$, good (M = 5.23, SD = 1.56), $t(201) = 47.71$, $p < .001$, and adequate (M = 4.97, SD = 1.44), $t(201) = 48.89$, $p < .001$ (one sample t tests against the scale midpoint, 4).

Most participants answered the questionnaire using a smartphone (55.4%) or personal computer (41.6%). Participants were randomly distributed by the four conditions (see Table 4.1) resulting from the 2 (Valence: negative vs. positive) x 2 (Emoji: absent vs. present) between-participants design.

Table 4.1

Participant Distribution by Experimental Condition (Scenario valence X Emoji Use)

Experimental Condition	*n*
Service Failure x Emoji Absent	53
Service Failure x Emoji Present	45
Service Success x Emoji Absent	52
Service Success x Emoji Present	52
Total	202

4.1.2. Materials

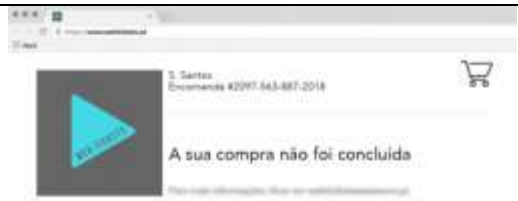
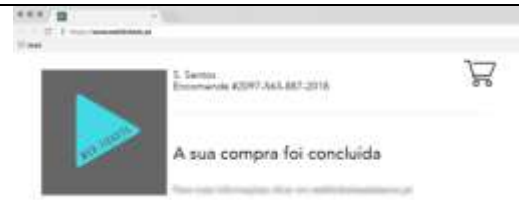
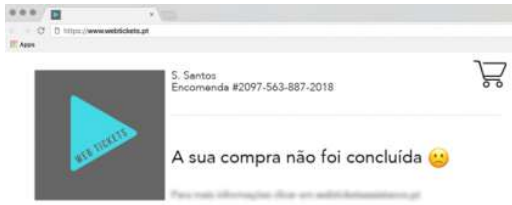
Participants were presented with a description of a fictitious, genderless user (S. Santos) interacting with a fictitious online ticket selling platform (Webtickets), in order to buy a concert ticket to see his favorite band six months after the present date. This study only made use of what Walther and D'Addario (2001) called "pure messages" - written messages with the same valence as the complementing emoji - and a written message without an emoji. The scenario stated that:

> "S. Santos is a frequent internet user and in recent months has made online purchases. After being informed that his/her favorite band would give a single concert in Portugal, six months from that day, he decided to buy a ticket for the concert. In order to do it, he/she accessed the official online ticket sales platform - Web Tickets. At Web Tickets, S. Santos explored all the ticket options and eventually chose the standing audience. After adding a ticket to the virtual shopping cart and confirming the payment details, S. Santos clicked on "Finish Purchase". Then, a new pop-up window appeared on the screen, with the following message:"

In order to increase scenario credibility, a Webtickets company logo was created by using a graphic design tool for editing pictures (www.canva.com). The manipulation of valence and emoji presence was conducted in the last part of the scenario. Specifically, the alleged final message included information relative to the success (or failure) of the purchase and included (or not) an emoji (see Table 4.2).

Table 4.2

Scenarios presented in the Different Experimental Conditions (Experiment 1)

	Service Failure	**Service Success**
Emoji Absent		
Emoji Present		

4.1.3. Instruments

To examine how users perceived of the language used by the brand we asked participants to evaluate "the language used by the service provider" using three semantic differential scales. Each item assessed a different type of perception - Informal Language (1 = *Informal*, 7 = *Formal*), Fun Language (1 = *Boring*, 7 = *Fun*) and Adequate Language (1 = *Inadequate*, 7 = *Adequate*).

In order to measure the dependent variables, we used adapted measures from previously published studies. In order to measure the overall opinion of service providers competence and warmth, we used an adaptation of Bolton and Mattila's (2015) items. We asked participants to evaluate their "general opinion regarding Web Tickets", using two different items to measure each construct: Competence (1 = *Not Competent at all*, 7 = *Very Competent;* 1 = *Not effective at all*, 7 = *Very effective*, $r = .86$, $p < .01$), and Warmth (1 = *Not thoughtful at all*, 7 = *Very thoughtful;* 1 = *Not helpful at all*, 7 = *Very helpful*, $r = .78$, $p < .01$). The two items comprised in both constructs were significantly correlated

Overall trust was measured with Palvia's (2009) trustworthiness construct, and like in Oliveira et al.'s (2017) study, the last item ("I like the trustworthiness of this vendor compared to other online vendors") was dropped. The resulting scale was composed of 4 items and presented good reliability measures ($\alpha = .92$). The items were "I like to trust this online vendor", "I find this online vendor trustworthy", "I like the reliability of this online

vendor", "I value the trustworthy characteristics of this online vendor". Every item was measured with a 7-point Likert Scale (1 = *Totally Disagree*, 7 = *Totally Agree*).

To assess social presence (α = .87), we used an adaptation of Zhang, et al.'s (2012) measure (four items). Participants were asked to rate the following items, using a 7-point Likert Scale (1 = *Totally Disagree*, 7 = *Totally Agree*): "The interaction with the service provider through the ticket selling platform made me sense a human touch", " I feel that the interaction with the service provider / platform was friendly", "The interaction with the online ticket selling platform made me sense a feeling of inclusion and belongingness", and "Interacting with the service provider through the website allows the possibility of social interaction".

Regarding the service quality measure, several studies attempt to develop specific measurement scales for online service quality, throughout the years (for a review of the development of e-service quality measures and some of its methodological issues, see Kalia, 2017) even though there is no consensus of its dimensions (Ladhari, 2010). In this study, we decided to use an adaptation of two individual single-item questions, each used in different questionnaires to measure the overall service quality (Bauer, Falk & Hammerschmidt, 2006; Lee & Lin, 2005). Specifically, participants rated their perception regarding both items (“Overall, the quality of S. Santos transaction with the digital platform - Web Tickets - was"; Overall, my opinion regarding the services provided by the digital ticket selling platform - Web Tickets is") using a 7-point Likert Scale and (1 = *Very Bad*, 7 = *Very Good*). Both items were highly correlated (r = .74 , p < .01).

Intention to recommend was measured (1 = *Not Likely*, 7 = *Highly Likely*) with a single item "What is the probability of recommending the use of this digital ticket selling platform - Web Tickets - to a friend, colleague or relative?", adapted from Finn, Wang and Frank (2009).

Moreover, we also included three manipulation check questions. These questions regarded the success of the transaction (i.e., "Was the client [S.Santos] able to buy the ticket using Webtickets?" - 1 = *I am sure he/she was not*, 7 = *I am sure he/she was*), emoji use by the fictitious platform (i.e., "Did the message presented in Webtickets pop-up window included any emoji?" - 1 = *I am sure it did not*, 7 = *I am sure it did*) and emoji valence ("Webtickets used a..." 1 = *Sad emoji*, 2 = *Did not use an emoji*, 3 = *Happy emoji*).

Regarding intentions to reuse the online ticket selling platform in future ticket purchases, two items were used. The first measured intention to use the online platform

"Please indicate now the likelihood of in the future buying tickets for shows using this method (online ticket platform)". The second regarded intention to use of an alternative way of ticket purchasing, in this case regarding brick and mortar stores: "Please indicate now the likelihood of in the future buying tickets for shows using another method (face-to-face)?". Participants responses were measured with a 7-point rating scale (1 = *Not Likely*; 7 = *Highly Likely*).

Expectations regarding the online ticket platform were measured with three items. They regarded utility of online ticket selling platforms "Online ticket sales platforms are useful", their security "Online ticket selling platforms sales are secure", and the target audience of the online channel "The target audience of this sales channel (online ticket sales platform) are young people". Every item was measured with a 7 points Likert Scale (1 = *Totally Disagree*; 7 = *Totally Agree*).

Frequency of online platform use to book services or buy products was measured with a single item (1 = *Rarely*; 7 = *Frequently*). Specifically, in order to better understand the frequency intervals, participants were asked to choose between one of four options, regarding how many times they have used ticket selling platforms online before (1 = *Zero*, 2 = O*ne to Five*, 3 = *Six to Ten*, 4 = *More than Ten*).

In order to assess attitude regarding completing an online purchase in the next six months, participants were asked to rate on a 7-point rating scale if "using the Internet to make purchases in the next 6 months is" a "wise idea", "good idea", "positive idea", "idea that I like". The construct showed high reliability (α = .95).

Emoji use in daily conversations was measured with a single item "Do you use emoji in your daily conversations?" (1 = *Rarely*, 7 = *Frequently*) while general attitudes towards emoji use in written communication (e.g., computer, mobile phone, tablet or other devices) were measured with 8 semantic differential scales (1 = *Useless*; 7 = *Useful*; 1 = *Not interesting* to 7 = *Interesting*; 1 = *Boring*, 7 = *Fun*; 1 = *Difficult*; 7 = *Easy*; 1 = *Informal*; 7 = *Formal*; 1 = *Bad*, 7 = *Good*; 1 = *Inadequate*, 7 = *Adequate*, Rodrigues et al., 2018).

Participants were also asked six control questions regarding attitudes towards the use of emoji by brands in different contexts. Specifically, we asked the participants to indicate to what extent they considered "the use of emoji to be appropriate" in several scenarios: "in advertising posts on social networks (e.g., Facebook, Instagram, etc.)"; "Commercial transactions involving monetary values"; "In direct response to a consumer's comment on social networks"; "In direct response to a service request"; "In communication of new

product releases" and "in defective product collection notice". Each item was measured using 7-point rating scales (1 = *Not adequate at all*, 7 = *Totally Adequate*).

The final question considered the type of equipment used in order to respond to the questionnaire, with participants choosing one of 4 different options "PC", "Smartphone", "Tablet" and "Other".

In total, the questionnaire comprised forty-six items (for the complete questionnaire, see appendix A; for the original constructs, items and adaptation, see appendix C).

4.1.4. Procedure

All procedures were conducted in agreement with the Ethics Guidelines issued by the Scientific Commission of ISCTE-IUL. Data collection was conducted online, and subjects could complete the study from any computer, smartphone, tablet or any other electronic device with an Internet connection. The sample was collected through an online survey using the Qualtrics platform (www.qualtrics.com). Participants inclusion criteria was being of Portuguese nationality or living in Portugal for at least five years and being over eighteen years old. Volunteer participants were recruited through posts shared on social media websites such as Facebook, LinkedIn and Instagram, thus using a snowball method. Participants were invited to collaborate in a study regarding e-Commerce and online communication between brand and consumer. By accessing the hyperlink (secure webpage at Qualtrics) participants were informed about the goals and description of the task (i.e., to read the description of an online shopping experience between an e-service provider and a user, and to answer questions about the situation), and the expected duration of the survey (10 minutes). It was also stated that all data was collected anonymously and that they could abandon the study at any point by closing the browser, without their responses being considered for analysis. After providing their informed consent to collaborate in the study (by checking the "I agree" option), participants were then randomly assigned to a experimental conditions. Participants were asked to answer four socio-demographic questions: age, sex, educational level, current occupation, and to indicate which type of electronic device was used in filling out the questionnaire. After reading the description of the online interaction (Table 2), participants were asked to complete the questionnaire, previously described (Appendix A). After completing the questionnaire, participants were thanked for their participation and were debriefed on the purpose of the study ("In this study we are interested in understanding how new technologies can influence written communication, specifically

communication between brand/services and consumer"). They were also given an e-mail address which they could use in order to contact the research team.

4.2. Results

99.9% of items were answered, with missing answers (0.1%) being non significant. Statistical analysis and treatment of the data was made use of the Statistical Package for Social Sciences (SPSS) software, version 23.0.

First, we present results regarding the manipulation checks of both factors (i.e., scenario valence and presence of emoji). Second, we conducted a 2(valence) x 2(emoji) univariate ANOVA for each dependent variable.

4.2.1. Manipulation Checks

In order to verify the manipulation of scenario valence, we compared participants ratings about how successful the online transaction was (i.e., ticket purchase). As expected, participants in the positive condition reported that they were more certain that the reservation was successful (M = 5.41, SD = 1.64) and participants in the negative valence condition were more certain that the online transaction failed (M = 3.14, SD = 1.71), $t(200) = 9.65$, $p < .001$. These results demonstrate that the valence manipulation was successful. We also found evidence that the emoji manipulation was successful, as participants in the emoji condition reported that they were more certain that the message included an emoji (M = 5.86, SD = 1.89) than those in the condition that did not include emoji (M = 2.03, SD = 1.48), $t(200) = 16.11$, $p < .001$.

Moreover**,** overall participants were accurate in identifying which specific emoji was presented. In the positive message with emoji condition, 78.8% of the participants accurately reported that they saw a happy emoji, 17.3% reported that no emoji was included and only 3.8% incorrectly reported seeing an unhappy emoji. A similar pattern was found for the negative message with emoji condition such that 73.3% of the participants reported that they saw an unhappy emoji, 17.8% reported that no emoji was presented and 8.9% incorrectly reported seeing a happy emoji.

4.2.2. Impact of Emoji Presence and Valence of the Scenario Across the Dependent Variables

We computed univariate ANOVAs for each dependent variable according to the between-participants design 2(emoji) x 2(valence). Table 4.3 summarizes the descriptive results obtained in such analyses.

Table 4.3

Descriptive Results (*M and SE*) *according to Scenario Valence and Emoji Use*

	Positive Scenario		**Negative Scenario**		
	M	***SE***	***M***	***SE***	***Total***
Quality of Service					
With Emoji	4.64	0.18	3.44	0.19	*4.09*[1]
Without Emoji	4.92	0.18	3.39	0.17	*4.15*[1]
Total	*4.78*[a]		*3.41*[b]		*4.11*
Informal Communication					
With Emoji	4.35	0.21	3.96	0.23	*4.16*[1]
Without Emoji	3.50	0.21	3.87	0.21	*3.69*[2]
Total	3.92[a]		3.91[a]		*3.92*
Fun Communication					
With Emoji	4.25	0.19	3.22	0.21	*3.77*[1]
Without Emoji	3.73	0.19	3.02	0.19	*3.37*[1]
Total	3.99[a]		3.11[b]		*3.56*
Adequate Communication					
With Emoji	4.77	0.25	3.73	0.27	*4.29*[1]
Without Emoji	4.96	0.25	3.89	0.25	*4.42*[1]
Total	4.87[a]		3.82[b]		*4.36*
Warmth					
With Emoji	4.42	0.18	3.47	0.19	*3.98*[1]
Without Emoji	4.43	0.18	3.40	0.18	*3.91*[1]
Total	4.43[a]		3.43[b]		*3.95*
Competence					
With Emoji	4.58	0.19	3.22	0.21	*3.95*[1]
Without Emoji	4.92	0.19	3.51	0.19	*4.21*[1]
Total	4.75[a]		3.38[b]		*4.1*
Social Presence					
With Emoji	3.70	0.19	3.16	0.20	*3.45*[1]
Without Emoji	3.48	0.19	2.90	0.19	*3.19*[1]
Total	3.59[a]		3.02[b]		*3.31*
Trust					
With Emoji	4.54	0.19	3.86	0.21	*4.22*[1]
Without Emoji	4.62	0.19	3.81	0.19	*4.21*[1]
Total	4.58[a]		3.83[b]		*4.22*

Word Of Mouth					
Com emoji	6.17	0.95	3.82	1.02	*5.08*[1]
Sem Emoji	4.52	0.95	3.53	0.94	*4.02*[1]
Total	5.35[a]		3.66[a]		*4.53*

Note. Means in the same line - [a,b] (means associated with main effect of scenario valence) - and means in the same column - [1,2] (means associated with main effect of emoji presence) with identical superscripts did not differ significantly.
Note. Quality of service, Warmth, Competence, Social Presence and Trust were measured with more than one item.

As shown in table 4.3, no interaction effects between emoji use and scenario valence were detected, all *p*s >.079.

Regarding the main effect of emoji use, in contrast with our predictions, there was only one statistically significant result. Specifically, emoji presence influenced the perception of language informality, such that messages that where emoji was used (M = 3.99, SE = .14) being perceived as having a more informal language than conditions without emoji (M = 3.12, SE = .14), $F(1,198) = 4.71$, MSE = 10.96, p = .031, η_p^2 = .023. There were no further statistically significant main effects of emoji use, all *p*s > .073.

In contrast, we observed that scenario valence had a significant impact in most dependent variables. Indeed, participants in the positive condition provided higher quality of service ratings (M = 4.78, SE = .12), than those in the negative condition (M = 3.42, SE = .13), $F(1,198) = 58.82$, MSE = 94.10, $p < .0001$, η_p^2 = .23. Likewise, participants exposed to a positive scenario condition had a higher perception of the language used being fun (M = 4.25, SE = .19), than those exposed to a negative scenario condition participants perception of fun (M = 3.22, SE = .21), $F(1,198) = 18.89$, MSE = 38.04, $p < .0001$, η_p^2 = .090.

Similarly, participants that contacted with the positive condition had a higher perception of the adequateness of language (M = 4.87, SE = .18) than participants that contacted with the negative scenario (M = 3.81, SE = .18), $F(1,198) = 17.39$, MSE = 55.99, $p < .0001$, η_p^2 = .08. Additionally, participants of the positive condition also perceived the service provider as being warmer (M = 4.43, SE = .13) than those of the negative condition (M = 3.44, SE = .13), $F(1,198) = 29.06$, MSE = 49.45, $p < .0001$, η_p^2 = .13, as well as more competent (M = 4.75, SE = .14) than participants of the negative scenario condition (M = 3.36, SE = .14), $F(1,198) = 50.28$, MSE = 96.34, $p <. 0001$, η_p^2 = .02. Furthermore, participants of the positive condition had a higher perception of social presence (M = 3.59, SE = .13) than participants of the negative scenario (M = 3.03, SE = .14), $F(1,198) = 8.51$, MSE = 15.36, p = .004 , η_p^2 = .04. Also, participants of the positive condition perceived the

service provider as more trustworthy (M = 4.58, SE = .14) than participants in the negative condition (M = 3.83, SE = .14), $F(1,198) = 14.28$, MSE = 28.03, $p < .0001$, $\eta_p^2 = .07$. There were no further statistically significant main effects of scenario valence, all ps > .085.

Finally, regarding participants intention to recommend the service provider, there was no significant interaction nor main effects in any of the experimental conditions.

4.2.3. Post Hoc Analysis

While not directly related to the main purpose of this study, we also explored if scenario valence and emoji use influenced other variables, such as participants expectations regarding online ticket platforms, intentions to reuse it in future ticket purchases, attitude regarding completing an online purchase in the next six months, and attitudes towards the use of emoji by brands in different contexts. Results are summarized in Table 4.4

Table 4.4

Post Hoc Descriptive Results (*M and SE*) *according to Scenario Valence and Emoji Use*

		Positive Scenario		**Negative Scenario**		
		M	***SE***	***M***	***SE***	***Total***
Probability of, in the future, buying tickets for shows:						
Using this method						
	With Emoji	4.94	.24	4.22	.26	*4.61*[1]
	Without Emoji	5.12	.24	4.08	.24	*4.59*[1]
	Total	*5.03*[a]		*4.14*[b]		*4.60*
Using other method						
	With Emoji	4.35	.23	4.93	.25	*4.62*[1]
	Without Emoji	4.48	.23	5.28	.23	*4.89*[1]
	Total	*4.41*[a]		*5.12*[b]		*4.76*
Online ticket selling platforms are:						
Useful						
	With Emoji	6.02	.19	5.69	.21	*5.87*[1]
	Without Emoji	6.17	.19	5.66	.19	*5.91*[1]
	Total	*6.10*[a]		*5.67*[b]		*5.89*
Safe						
	With Emoji	4.77	.21	4.67	.22	*4.72*[1]
	Without Emoji	4.79	.21	4.74	.21	*4.76*[1]
	Total	*4.78*[A]		*4.70*[A]		*4.74*
Target audience are young people						

	With Emoji	4.27	.22	4.62	.24	*4.43*[1]
	Without Emoji	4.58	.22	4.74	.22	*4.66*[1]
	Total	*4.42*[a]		*4.68*[a]		*4.55*
Overall, I consider that it is adequate to use emoji in:						
Social Media Publicity Posts						
	With Emoji	5.37	.19	5.51	.20	*5.43*[1]
	Without Emoji	5.60	.19	5.42	.18	*5.50*[1]
	Total	*5.48*[a]		*5.46*[a]		*5.47*
in a direct reply to a consumers' social media post						
	With Emoji	4.67	.23	4.20	.24	*4.45*[1]
	Without Emoji	4.13	.23	4.53	.22	*4.33*[1]
	Total	*4.40*[a]		*4.38*[a]		*4.39*
in a direct reply to a consumers' service request						
	With Emoji	3.58	.24	3.22	.26	*3.41*[1]
	Without Emoji	3.06	.24	3.38	.24	*3.22*[1]
	Total	*3.32*[a]		*3.31*[a]		*3.31*
in a new product release communication						
	With Emoji	4.12	.23	4.09	.25	*4.10*[1]
	Without Emoji	4.58	.23	3.91	.23	*4.24*[1]
	Total	*4.35*[a]		*3.99*[a]		*4.17*
in a defective product collection notice						
	With Emoji	3.04	.24	3.07	.26	*3.05*[1]
	Without Emoji	2.29	.24	2.55	.26	*2.42*[2]
	Total	*2.66*[a]		*2.79*[a]		*2.72*
in commercial transactions that involve money values						
	With Emoji	2.98	.24	2.78	.26	*2.89*[1]
	Without Emoji	2.63	.24	2.15	.24	*2.39*[2]
	Total	*2.81*[a]		*2.44*[a]		*2.63*
Using the internet to shop online in the next 6 months is a:						
Wise Idea						
	With Emoji	5.12	.22	5.18	.24	*5.14*[1]
	Without Emoji	5.25	.22	5.09	.22	*5.17*[1]
	Total	*5.18*[a]		*5.13*[a]		*5.16*
Good Idea						
	With Emoji	5.37	.22	5.31	.23	*5.34*[1]
	Without Emoji	5.40	.22	5.25	.21	*5.32*[1]
	Total	*5.38*[a]		*5.28*[a]		*5.33*
Positive Idea						
	With Emoji	5.37	.21	5.11	.23	*5.25*[1]
	Without Emoji	5.44	.21	5.15	.21	*5.30*[1]
	Total	*5.40*[a]		*5.13*[a]		*5.27*
Idea that I Like						
	With Emoji	5.25	.23	5.20	.25	*5.23*[1]
	Without Emoji	5.42	.23	5.28	.23	*5.35*[1]

Total	*5.34*[a]	*5.24*[a]	*5.29*

Note. Means in the same line - [a,b] (means associated with main effect of scenario valence) - and means in the same column - [1,2] (means associated with main effect of emoji presence) with identical superscripts did not differ significantly.

There was no significant interaction between scenario valence and emoji use in any of the items, all *ps* > .060.

Regarding the main effect of emoji use, as shown in Table 4.4, there were two statistically significant results. Specifically, participants that saw a message containing emoji, considered its use as being more adequate (M = 3.04, SE = .24) in a defective product recall notice than participants that did not (M = 2.29, SE = .24), $F(1,198) = 6.82$, MSE = 20.26, p = .010, η_p^2 = .03. Participants in the emoji conditions also found it more adequate (M = 2.81, SE = .24) for brands to use in commercial transactions involving money, than those that did not (M = 2.44, SE = .24), $F(1,198) = 4.07$, MSE = 11.90, p = .045, η_p^2 = .02. There were no further statistically significant main effects of emoji use, all *p*s > .304.

As for the main effects of scenario valence, we also found three statistically significant results. In particular, participants of the positive valence condition referred they were more likely to use the same method to buy tickets in the future (M = 5.03, SE = .24), than negative scenario participants (M = 4.14, SE = .24), $F(1,198) = 12.99$, MSE = 38.94, p < .001, η_p^2 = .06. We can also see the inverse results, with participants of the negative scenario conditions indicating that that they more likely would use a different method to purchase tickets in the future (M = 5.12, SE = .24), when compared to participants of the positive scenario (M = 4.41, SE = .24), $F(1,198) = 8.73$, MSE = 24.27, p = .004, η_p^2 = .04.

Also, scenario valence also influenced participants opinion of online ticket selling platforms usefulness, with participants of the positive scenario (M = 6.10, SE = .19), perceiving the platforms as more useful than participants of the negative scenario (M = 5.67, SE = .19), $F(1,198) = 4.67$, MSE = 8.94, p = .032, η_p^2 = .02.

There were no further statistically significant main effects of scenario valence, all *p*s > .143.

4.2.4. Discussion

Results from this study show that, besides impacting consumers perception of informality of the brands language, including emoji in positive or negative scenarios does not influence consumers perception of the brand, quality of service, neither their intention to recommend service provider.

Overall, emoji use did not impact e-QoS perception. This result seems to be in accordance with the e-quality of service literature, by confirming that empathy assumes a less relevant role online. Another interpretation of this result may be that presenting the emoji with the service failure or success message, did not lead participants to interpret its presence as a signal of empathy, but rather as strengthener of the intensity of the message valence (Derks et al., 2008a).

Concerning communication style, as in previous studies (Gretry et al., 2017) emoji use did impact participants perception of language informality. Nevertheless, it did not influence ratings of how adequate or funny was the language used by the service provider. This finding can prove to be helpful to brands that want to position themselves with an informal style of communication, since it shows that emoji use in consumer-brand e-commerce transactions may lead to a brand being perceived has having a more informal communication style, without jeopardizing the perception of it being perceived as inadequate or fun.

Additionally, the presence of emoji on online ticket selling platforms did not seem to impact consumers perception of warmth, competence, the sense of the brand/service providers' social presence nor did it increase the perception of the service providers trustworthiness. Regarding the lack of impact of emoji use on the perception of social presence, we suggest that the cue may not have been strong enough to manipulate social presence. In future studies, the use of dynamic emojis that lead to a higher perception of social presence when compared to static emojis (Tung & Deng, 2007) may be explored.

Indeed, overall, emoji use seems to not have had the expected results on brand evaluation and quality of service perception. Instead, our findings suggesting that online service success seems to be a factor of major influence on consumers perception of the brand/service provider and its quality of service. A possible explanation for the fact that emoji use did not seem to influence the majority of variables, might be that service success exerts a halo effect on consumers perception of the brand, leading to a better evaluation of it in general.

Next, we will comment on the results regarding the influence of service success, on the different variables. As expected by common sense, it seems that consumers that experience a successful service, perceive the provider as having quality of service, more trustworthy and competent. These results highlight how the success of online service and e-commerce transactions can have an impact on business and brand evaluation. Indeed, while

studying the effects of warmth and competence of profit and non-profit firms, Aaker, Vohls and Mogilner's study (2010) showed that perceiving a brand as competent was critical to increment consumers intention of purchase. Additionally, as previously stated in this study, e-QoS is an antecedent of trust, e-service satisfaction, frequency of service use by customers, repeated purchase and intention to recommend (Ghalandari, 2012). Thus, results from this study show that guaranteeing a successful online service will lead to the brand/service provider being perceived as competent and having quality of service, which may impact consumers intention to interact with the brand.

However, service success seems to influence seemingly unrelated variables such as warmth, social presence and perception of fun and adequate language. Regarding its impact on warmth, we suggest that since warmth judgments can imply that the service provider is trustworthy and has positive intent (Cuddy, Glick, et al., 2011; Fiske, Cuddy, et al., 2002), when compared to a service provider that does not successfully complete a service. We also suggest that online service success may lead to consumers perceiving the brand through an admiration stereotype (Fisk et al., 2002), and thus highly competent and warm. Still, this hypothesis, should be addressed in future studies. On the subject of service providers social presence, we propose that a successful service can signal that the platform can serve as an offline shopping experience encounter substitute, making the consumer feel as if they were interacting with an actual brand representative.

As for language funniness, as opposed to Hsieh and Teng's (2017) study, emoji did not foster perception of fun. Keeping in mind that there are contextual differences between socio-emotional and task-oriented emoticons and emoji use (Derks, Fischer, & Bos, 2007). Because our study focuses on an online transaction, as opposed to an instant messaging context, we suggest that e-commerce may be an environment where emoji use may not be socially adequate. This may prove to be especially true because, as can be seen in Table 5.4, participants considered using emoji as less adequate in commercial transactions that involve money values.

In the same way, even though emoji use did not influence the perception of adequateness of language, in line with the Steinmann et al.'s (2015) study, we suggest that the expected adequate way to communicate during e-commerce transactions may not include emoji, regardless of its influence in language. Further studies may be useful in comprehending differences between appropriateness of emoji use in different contexts, instead of only considering its influence on the perception of the brands language.

To our knowledge, the current experiment is the first to examine how the features of EMC shape perceptions of online service providers, across different service outcomes. Noteworthy, participants in our study were asked to assume an outsider point of view, by reading a description of an e-commerce transaction instead of participating in it directly. Nevertheless, participants that read about the online service failure condition, had lower perceptions of the service providers competence and quality of service. Hence, this study provides insights about how service outcomes can influence brand/service provider perception by third parties, not directly involved in the e-commerce transaction.

Neither emoji use or scenario valence had an effect on intention to recommend the service provider. In order to interpret these results, we suggest that in any e-commerce transaction service success by itself is expected, hence not providing enough arousal for developing intention to recommend. Furthermore, emoji use, does not seem to convey a strong enough affective stimuli that can provide sufficient arousal for participants to engage in word of mouth.

Based on our post hoc analysis, a few considerations can be made. Our results show that guaranteeing that online shopping platforms function correctly, and thus providing a successful experience, will increase consumers perception of the platforms utility, and intention to repeat purchase, when compared to consumers that experience a failed service. From a managerial point of view, if e-commerce is part of the brand or service providers business strategy, it is important to guarantee e-QoS and that the platform is running adequately.

Additionally, overall, participants seem to consider that emoji use in a defective product collection notice, and in commercial transactions that involve money values is not very adequate. Nevertheless, participants of emoji presence scenarios had a higher perception of emoji use being adequate in those situations, than participants of the no emoji scenarios. This seems to imply that attitudes towards emoji use in different contexts, may change with familiarity of emoji use in these contexts.

Furthermore, and in hindsight, as far as the experimental manipulation goes, we point out some considerations regarding how the online transaction was manipulated. In order to allow comparison, it was necessary to guarantee that the positive scenario and negative scenario were as similar as possible. This meant that our failed service experimental situation had to end abruptly and without providing participants with any additional information about if the service provider or consumer took any service recovery actions (e.g., contacting service

support by telephone, email or live chat). This fact may have made participants doubt if the purchase transaction ended. In future studies, service failure experimental designs should also contemplate service recovery information, in order to more closely mimic real-life situations.

In order to control a possible halo effect by a successful service, we decided to proceed to a second study. This time, the experimental manipulation would only comprise failure conditions. Additionally, findings in Experiment 1 did not make it clear if emoji use does not affect brand and quality of service perception, and intention to recommend, or if message valence impacted variables that were predicted to be influenced by affective cues such as emoji. Thus it was decided that in the second experiment, the experimental condition should control the message valence, and try to study emoji use in a situation where participants could be more affectively aroused.

V. Second Experiment

People's reactions to missing out on a concert of their favorite band can provoke strong emotional reactions such as intense frustration. Also, tickets for a sold-out concert can be considered an exclusive product, often being sold for an inflated price, illegally, near the concert venues or online. Hence, in the second experiment, we set out to find if the effect of emoji use in brand consumer communication, during failed online ticket purchase conditions on customers intention to recommend, and their perception of the brand and quality of service, is independent of product scarcity.

5.1. Affect Heuristic and Scarcity

Affect is an important aspect to consider in judgment processes (Finucane, Alhakami, Slovic, & Johnson, 2000; Slovic, Peters, Finucane, & MacGregor, 2005; Slovic, Finucane, Peters, & MacGregor, 2005). Considering Petty and Cacioppo's (1986) Elaboration Likelihood Model, a model that has been criticized and updated throughout the years (for a review, see Kitchen, Kerr, Schultz, McColl, & Pals, 2014), people process persuasive messages by two main routes: one based on the thoughtful consideration of arguments central to the issue (central route), and the other based on affective associations or simple inferences tied to peripheral cues (peripheral route). The model is often used by advertising researchers when studying attitudinal change which is assumed to be the process by which externally generated persuasion occurs (Kitchen, Kerr, Schultz, McColl, & Pals, 2014). Additionally, even though the model has faced criticism for not appearing to be attuned to today's world of digital communications due to being developed in a pre-internet era (Kitchen, Kerr, Schultz, McColl, & Pals, 2014), it seems that people base their judgments of an activity or technology on what they think and feel about it (Slovic, Peters, et al., 2005). This fact has been known to marketers, that have used the affect heuristic in order to manipulate affect and positive feelings, towards a risky activity (e.g., associating positive imagery to tobacco and smoking) or in order to change attitudes toward stigmatized technologies (e.g., "clean bombs" and "peacekeeper missiles", Slovic, Finucane et al., 2005). However, certain conditions may alter the probability of using a central route or peripheral route of judgment making. When cognitive resources are reduced (e.g., tiredness) or the possibility for analytic deliberation and cognitive processing is impaired (e.g., time pressure), people tend to rely on quick judgments and heuristics (Finucane, Alhakami, Slovic, & Johnson, 2000). For this reason, people use affect heuristics because using a readily available

affective impression can be easier and more efficient than weighing the pros and cons or retrieving from memory relevant examples (Slovic, Finucane, et al., 2005). Hence, in time pressure conditions, people tend to rely on quick judgments and heuristics (Finucane, et al., 2000; for a review see Godinho, Prada, & Garrido, 2016). Without a doubt, scarcity appeal as a mean to create a sense of urgency among buyers is a marketing strategy widespread in the industry, that marketers use to manipulate purchase of increased quantities and satisfaction with the acquired products (Aggarwal, 2011). In addition, product scarcity creates perceptions of exclusivity and uniqueness (Aggarwal, 2011) that can impact the way we see brands, one example being the case of luxury brands (for a review, see Catry, 2003). However, **s**carcity can have contradicting effects on an individual's ability to process information (Suri, Kohli, & Monro, 2007). Commonly, when processing information in high involvement situations, people tend to rely on a central route of information processing, and exert the cognitive effort required to do so (Petty, Cacioppo & Schumann, 1983). Facing time pressure or product scarcity, consumers with high motivation to process marketing information, do it heuristically, while consumers with low motivation pay more attention to the available information (Suri et al., 2007). In low involvement situations, people tend to rely on a peripheral route, with the presence of simple positive or negative cues serving as stimuli to invoke simple decision rules and obviating the need to process information (for a review, see Petty, Cacioppo, & Schumann, 1983).

Thus, since scarcity can be considered a constraint to cognitive processing of consumers that are highly motivated to process marketing information, and thus able to make them more susceptible to heuristics, and since affective reactions to a stimulus are primary when compared to cognitive ones, we sought to find if emoji use in a product scarcity failed e-shopping transaction, between brand/service provider and consumer could impact consumers brand perception, quality of service perception and intention to recommend.

5.2. Method

5.2.1. Participants and Design

The sample was comprised of a total of 211 participants (63.3% female), between 18 and 67 years old (M = 27.7; SD = 8.2). All participants were native Portuguese speakers or had been living in Portugal for the last 5 years. The majority had a bachelor's degree or

higher (81.4%). Regarding occupation, most participants were employed (56.4%), or students (31.3%).

Overall, participants reported using emoji in their daily conversations frequently (M = 5.55; SD = 1.82), $t(203) = 43.48$, $p < .001$, as well as a frequent use of online platforms to schedule services or buy products (M = 4.55; SD = 2.11), $t(210) = 31.40$, $p = .001$ (one sample t tests against the scale midpoint, 4). Specifically, regarding online ticket selling platform use, 75.4% of the sample had used this kind of platforms at least once, nearly half of which (47.39%) had experience using these platforms from one to five times. Participants reported favorable attitudes regarding using the internet to purchase products or services in the next 6 months (M = 5.26; SD = 1.38), $t(210) = 55.43$, $p < .001$.

Overall, participants considered that using emoji in written communication is useful (M = 5.08, SD = 1.68), $t(210) = 43.82$, $p < .001$, interesting (M = 5.11, SD = 1.46), $t(210) = 50.79$, $p < .001$, fun (M = 5.59, SD = 1.57), $t(210) = 51.72$, $p < .001$, easy (M = 5.90, SD = 1.36), $t(210) = 68.82$, $p < .001$, informal (M = 2.43, SD = 1.59), $t(210) = 22.19$, $p < .001$, good (M = 5.26, SD = 1.61), $t(210) = 47.43$, $p < .001$, and adequate (M = 4.72, SD = 1.49), $t(201) = 46.10$, $p < .001$ (one sample t tests against the scale midpoint, 4).

Most participants answered the questionnaire using a smartphone (56.39%) or personal computer (41.71%).

Participants were randomly distributed by the four conditions (see Table 5.1) resulting from the 2 (Product Scarcity: ticket scarcity vs. ticket availability) x 2 (Emoji: absent vs. present) between-participants design.

Table 5.1

Participant Distribution by Experimental Condition (Product Scarcity X Emoji Use)

Experimental Condition	*n*
Ticket Scarcity x Emoji Absent	52
Ticket Scarcity x Emoji Present	52
Ticket Availability x Emoji Absent	60
Ticket Availability x Emoji Present	47
Total	211

5.2.2 Materials

As in the Experiment 1, participants were presented with a description of a fictitious, genderless user (S. Santos) interacting with a fictitious online ticket selling platform (Webtickets), in order to buy a concert ticket to see his favorite band six months after the

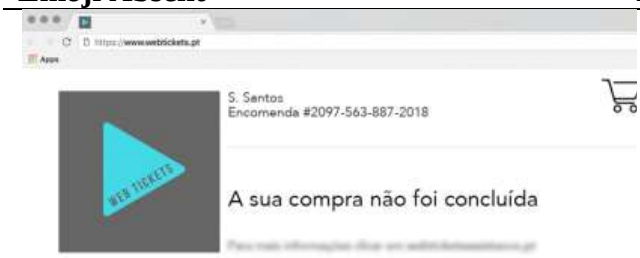
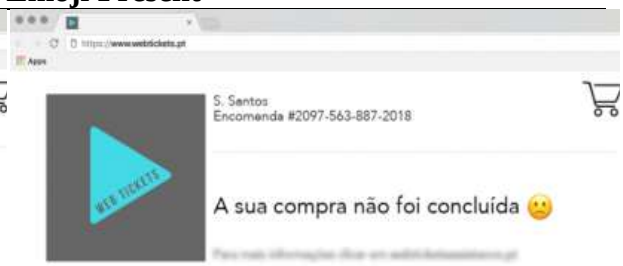
present date. However, in the present study, we compared four service failure situations, manipulating Emoji Presence (Emoji Absence vs. Emoji Presence) and product availability (Ticket scarcity vs. Ticket availability). Specifically, product availability was manipulated in the description, by presenting the number of tickets left (ticket scarcity - 5% of tickets left; ticket availability - 95% tickets left). Scenarios stated that:

> "S. Santos is a frequent internet user and in recent months has made online purchases. After being informed that his/her favorite band would give a single concert in Portugal, six months from that day, he decided to buy a ticket for the concert. In order to do it, he/she accessed the official online ticket sales platform - Web Tickets. At Web Tickets, S. Santos explored all the ticket options and verified that there still was **(5% vs. 95%)** of tickets left for the concert. After adding a ticket to the virtual shopping cart and confirming the payment details, S. Santos clicked on "Finish Purchase". Then, a new pop-up window appeared on his screen, where he/she verified the following message:"

As in the previous study, in order to increase scenario credibility, the Webtickets logo created using www.canva.com was presented. However, since the feeling of urgency was manipulated in the description of the experiment, only the manipulation of emoji presence was conducted in the last part of the scenario (see Table 5.2). Hence, participants only saw one of two possible pop-up windows.

Table 5.2

Scenarios presented in the Different Experimental Conditions (Experiment 2)

Emoji Absent	**Emoji Present**
	

5.2.3 Instruments and Procedure

In this experience, the same procedure, and forty-six item questionnaire were used in order to evaluate the same dependent variables of the previous study (Brand Perception, Quality of Service and Intention to Recommend).

Moreover, besides the three manipulation check questions used in Experiment 1, we added two additional manipulation check questions. These questions regarded importance of buying the ticket ("In your opinion how important was it for the client (S. Santos) to assure the ticket purchase on this occasion"; 1 = *Not Important*, 7 = *Very Important*), and percentage of tickets left ("The tickets for the concert were"; 1= *Almost all sold*, 7 = *Almost all available*).

Additional manipulation check questions can be seen in Appendix B.

5.3. Results

As Experiment 1, missing answers were below the 0.1%. Statistical analysis and treatment of the data was made use of the Statistical Package for Social Sciences (SPSS) software, version 23.0.

First, we present results regarding the manipulation checks of both factors (i.e., product scarcity and presence of emoji). Second, we conducted a 2 (emoji use) x2 (scarcity scenario) univariate ANOVA for each dependent variable.

5.3.1. Manipulation Checks

Overall, participants reported that they were confident that the client was not able to complete the purchase (M = 2.74, SD = 1.66), $t(210) = 24.01$, $p < .001$ (one sample t test against the scale midpoint, 4).

Also, as in Experiment 1, emoji manipulation was successful, as participants in the emoji condition reported that they were more certain that the message included an emoji (M = 5.42, SD = 2.18) than those in the condition that did not include emoji (M = 1.96, SD = 1.54), $t(209) = 13.42$, $p < .001$.

Additionally, overall participants were accurate in identifying the emoji when it was presented. In the emoji condition, 74.7% of the participants accurately reported that they saw a sad emoji, 21.2% reported that no emoji was included and only 4.4% incorrectly reported seeing an happy emoji. In the no emoji condition, the manipulation also proved to be successful, with 87.27% of participants correctly reported they did not see an emoji. Furthermore, 11.82% of participants erroneously reported they saw a negative emoji, while 0.91% of participants saw a positive emoji.

In order to verify the manipulation of urgency of the purchase, we used two manipulation check questions. First, we sought to verify if participants recalled the quantity

of tickets left. Second, we compared participants ratings about how important was it for the client to successfully complete the online transaction was (i.e., ticket purchase). Ticket scarcity was successfully manipulated, with participants in the urgent scenario reporting they were more certain that the tickets were almost sold out (M = 1.73, SD = 1.26) than participants in the almost all tickets available condition (M = 6.36, SD = 1.33), $t(208) = -25.88$, $p < .001$. Furthermore, participants in the urgent condition also reported that it was more important for the client to complete the purchase (M = 6.23, SD = 1.14), than participants in the non urgent condition (M = 5.51, SD = 1.59), $t(209) = 3.76$, $p < .001$.

5.3.2. Impact of Emoji Presence and Product Scarcity Across the Dependent Variables

In Table 5.3, we can find the univariate analysis of variance results of the dependent variables, in the different experimental conditions.

Table 5.3

Descriptive Results (M and SE) according to Product Scarcity and Emoji Use

	Ticket Scarcity		**Ticket Availability**		
	M	***SE***	***M***	***SE***	***Total***
Quality of Service					
With Emoji	3.25	0.17	3.34	0.18	*3.29*[1]
Without Emoji	3.04	0.17	2.86	0.16	*2.95*[2]
Total	*3.15*[a]		*3.07*[a]		*3.10*
Informal Communication					
With Emoji	4.39	0.23	4.23	0.24	*4.31*[1]
Without Emoji	3.7	0.23	3.68	0.21	*3.70*[2]
Total	*4.05*[a]		*3.93*[a]		*3.99*
Fun Communication					
With Emoji	3.50	0.19	3.32	0.20	*3.41*[1]
Without Emoji	2.85	0.19	2.72	0.18	*2.78*[2]
Total	*3.17*[a]		*2.98*[a]		*3.08*
Adequate Communication					
With Emoji	4.04	0.25	3.74	0.27	*3.90*[1]
Without Emoji	3.75	0.25	3.55	0.24	*3.64*[1]
Total	*3.89*[a]		*3.64*[a]		*3.76*
Warmth					
With Emoji	3.25	0.18	3.84	0.19	*3.53*[1]
Without Emoji	3.07	0.18	3.00	0.17	*3.03*[2]

	Total	*3.16*[a]		*3.37*[a]		*3.27*
Competence						
	With Emoji	3.36	0.20	3.56	0.21	*3.45*[1]
	Without Emoji	3.42	0.20	3.15	0.19	*3.28*[1]
	Total	*3.39*[a]		*3.33*[a]		*3.36*
Social Presence						
	With Emoji	3.02	0.18	3.10	0.18	*3.06*[1]
	Without Emoji	2.74	0.18	2.46	0.16	*2.59*[2]
	Total	*2.88*[a]		*2.74*[a]		*2.81*
Trust						
	With Emoji	3.59	0.21	3.59	0.22	*3.59*[1]
	Without Emoji	3.61	0.21	3.17	0.19	*3.37*[1]
	Total	*3.60*[a]		*3.36*[a]		*3.47*
Word Of Mouth						
	With Emoji	3.29	0.22	3.27	0.22	*3.28*[1]
	Without Emoji	3.36	0.23	2.90	0.21	*3.10*[1]
	Total	*3.32*[a]		*3.07*[a]		*3.19*

Note. Means in the same line - [a,b] (means associated with main effect of scenario valence) - and means in the same column - [1,2] (means associated with main effect of emoji presence) with identical superscripts did not differ significantly.
Note. Quality of service, Warmth, Competence, Social Presence and Trust were measured with more than one item.

As shown in Table 5.3, in contrast to Experiment 1, we observed statistically significant main effects of emoji use in a few variables. Specifically, in conditions where emoji was used participants perceived service providers having more quality of service (M = 3.29, SE = .12) than participants in conditions where emoji was not used (M = 2.9, SE = .12), $F(1,207) = 4.09$, $MSE = 6.12$, $p = .049$, $\eta_p^2 = .019$. Also, participants in conditions where emoji was used perceived the language used as being more informal (M = 4.31, SE = .17) than participants in conditions without emoji (M = 3.70, SE = .16), $F(1,207) = 7.16$, MSE = 19.60, $p = .008$, $\eta_p^2 = .001$. The same pattern can be seen regarding the perception of fun language, with participants of the emoji condition perceiving the language funnier (M = 3.41, SE = .14) than participants in conditions without emoji (M = 2.78, SE = .13), $F(1,207)$ = 10.58, MSE = 20.66, $p = .001$, $\eta_p^2 = .049$.

Importantly, social presence was perceived as higher by participants that saw an emoji (M = 3.06, SE = .13) when compared to participants in conditions without emoji (M = 2.59, SE = .120), $F(1,207) = 6.95$, $MSE = 11.12$, $p = .009$, $\eta_p^2 = .032$. In conditions were emoji was used, service providers were perceived as being warmer (M = 3.55, SE = .13) than the ones in

conditions without emoji (M = 3.03, SE = .12), $F(1,207) = 8.43$, MSE = 13.70, p = .004, η_p^2 = .039.

As for the perception of service providers adequateness of the language used, service providers competence, trustworthiness and consumers intention to recommend, there were no statistically significant interaction, all *ps* > .232, or main effects of product scarcity, all *ps* > .294 and emoji use, all *ps* > .279.

In sum, no statistically significant interaction nor significant product scarcity main effect, was found in any of the dependent variables, all *ps* > .063 and all *ps* > .139 respectively. Noteworthy, the interaction between product scarcity and emoji use in the perception of the service providers warmth was marginally significant, $F(1,207) = 3.49$, MSE = 5.66, p = .063, η_p^2 = .017.

5.3.3. Post Hoc Analysis

As in Experiment 1, further analysis were conducted regarding participants expectations regarding online ticket platforms, intentions to reuse it in future ticket purchases, attitude regarding completing an online purchase in the next six months, and attitudes towards the use of emoji by brands in different contexts. Specifically, we explored if these variables were influenced by emoji use and product scarcity. Results are presented in Table 5.4.

Table 5.4

Post Hoc Descriptive Results (*M and SE*) *according to Product Scarcity and Emoji Use*

		Product Scarcity		**Product Availability**		
		M	***SE***	***M***	***SE***	***Total***
Probability of, in the future, buying tickets for shows:						
Using this method						
	With Emoji	3.96	.28	4.32	.29	*4.13*[1]
	Without Emoji	3.96	.28	3.98	.26	*3.97*[1]
	Total	*3.96*[a]		*4.13*[a]		*4.05*
Using other method						
	With Emoji	5.27	.22	5.02	.24	*5.15*[1]
	Without Emoji	5.48	.22	5.18	.21	*5.32*[1]
	Total	*5.38*[a]		*5.11*[a]		*5.24*
Online ticket selling Platforms are:						
Useful						

	With Emoji	5.65	.20	5.77	.22	*5.71*[1]
	Without Emoji	5.71	.20	5.68	.19	*5.70*[1]
	Total	*5.68*[a]		*5.72*[a]		*5.70*
Safe						
	With Emoji	4.69	.21	4.74	.22	*4.72*[1]
	Without Emoji	4.58	.21	4.57	.19	*4.57*[1]
	Total	*4.63*[a]		*4.64*[a]		*4.64*
Their target audience is young people						
	With Emoji	4.33	.24	4.19	.25	*4.26*[1]
	Without Emoji	4.67	.24	4.38	.22	*4.52*[1]
	Total	*4.50*[a]		*4.30*[a]		*4.40*
Overall, I consider that it is adequate to use emoji in:						
Social Media Publicity Posts						
	With Emoji	5.42	.21	5.43	.22	*5.42*[1]
	Without Emoji	5.44	.21	5.15	.19	*5.29*[1]
	Total	*5.43*[a]		*5.27*[a]		*5.35*
in a direct reply to a consumers social media post						
	With Emoji	4.37	.25	3.87	.26	*4.13*[1]
	Without Emoji	4.06	.25	4.43	.23	*4.26*[1]
	Total	*4.21*[a]		*4.19*[a]		*4.20*
in a direct reply to a consumers service request						
	With Emoji	3.35	.24	2.98	.25	*3.17*[1]
	Without Emoji	3.25	.24	3.53	.22	*3.40*[1]
	Total	*3.30*[a]		*3.29*[a]		*3.29*
in a new product release communication						
	With Emoji	4.50	.23	3.83	.25	*4.18*[1]
	Without Emoji	4.23	.23	4.48	.22	*4.37*[1]
	Total	*4.37*[a]		*4.20*[a]		*4.28*
in a defective product recall						
	With Emoji	2.75	.25	2.60	.26	*2.68*[1]
	Without Emoji	2.94	.25	2.70	.23	*2.81*[1]
	Total	*2.85*[a]		*2.65*[a]		*2.75*
in commercial transactions that involve money values						
	With Emoji	2.56	.23	2.74	.25	*2.65*[1]
	Without Emoji	2.75	.23	2.68	.22	*2.71*[1]
	Total	*2.65*[a]		*2.71*[a]		*2.68*
Using the internet to shop online in the next 6 months is a:						
Wise Idea						
	With Emoji	5.15	.23	5.21	.24	*5.18*[1]
	Without Emoji	5.42	.23	5.90	.21	*5.14*[1]
	Total	*5.29*[a]		*5.04*[a]		*5.16*
Good Idea						
	With Emoji	5.12	.20	5.45	.21	*5.27*[1]
	Without Emoji	5.65	.20	5.18	.19	*5.40*[1]
	Total	*5.38*[a]		*5.30*[a]		*5.34*
Positive Idea						
	With Emoji	5.10	.19	5.57	.20	*5.32*[1]
	Without Emoji	5.46	.19	5.05	.18	*5.24*[1]
	Total	*5.28*[a]		*5.28*[a]		*5.28*

Idea that I Like						
	With Emoji	5.06	.21	5.43	.22	*5.23*[1]
	Without Emoji	5.52	.21	5.17	.19	*5.33*[1]
	Total	*5.29*[a]		*5.28*[a]		*5.28*

Note. Means in the same line - [a,b] (means associated with main effect of product scarcity) - and means in the same column - [1,2] (means associated with main effect of emoji presence) with identical superscripts did not differ significantly.

There was no significant main effect of product scarcity, all *ps* > .224, or emoji use in any of the items, all *ps* > .261.[1]

5.3.4. Discussion

Firstly, considerations regarding the manipulation checks must be addressed. Both scarcity and importance manipulation check questions proved that manipulations were successful, with participants clearly identifying ticket scarcity or availability. Indeed, participants in scarcity scenarios considered that purchasing the ticket was of high importance. However, participants in ticket availability scenario, unexpectedly also considered the ticket purchase important. This result may be justified due to the description of the scenario postulating that S. Santos' was buying tickets to see his/her favorite band, which may have lead to participants inferring that the ticket was a desired object for the customer, and thus an important one, regardless of being scarce.

As for the results regarding the dependent variables, our findings show that overall, there is no significant interaction between product scarcity and emoji use. Also, product scarcity by itself does not have an impact on brand evaluation, quality of service perception or consumers intention to recommend.

One consideration regarding the lack of impact of ticket scarcity on service quality that can be made is that in concerts with high ticket demand, not being able to buy the ticket may not always be considered the service providers fault. Product scarcity implies competitiveness (Aggarwal, 2011) and the existence of other consumers wanting the product. Hence perception of the quality of service of the provider may be unaffected by product

[1] However, we found three significant interactions. The interaction between emoji use and product scarcity, influenced participants perception of using an emoji in a new product release communication as adequate, $F(1,207) = 3.91$, $MSE = 11.15$, $p = .049$, $\eta_p^2 = .02$. Emoji use and product scarcity also influenced participants attitudes towards using the internet to shop online in the next 6 months. Specifically, on participants perception of it being a good idea, $F(1,207) = 4.02$, $MSE = 8.42$, $p = .046$, $\eta_p^2 = .02$, and a positive idea, $F(1,207) = 5.31$, $MSE = 10.36$, $p = .022$, $\eta_p^2 = .03$. There were no additional statistically significant interactions, all *ps* > .081.[1]

scarcity, since participants may consider that the fault of not being able to buy the ticket may be attributed to factors pertaining to other consumers (e.g., being faster).

However, contrasting to Experiment 1, the use of emoji by the service provider did impact a few variables. Consumers perception of the service providers' quality of service was positively impacted by emoji use, confirming our initial hypothesis. Taking into account the two experiments, we assume that the primed sense of urgency, along with the presentation of a simple message, lead to consumers not having the necessity of making an elaboration effort, and instead relied on affect heuristics to make an evaluation of the service quality. Hence, we suggest that emojis served as an emotional cue that lead to an increase of consumers perception of the service providers quality of service. However, it is not clear if this increase is due to participants relying on peripheral heuristics (Petty & Cacioppo, 1986), if it is because consumers perceive the provider as more empathic, or if it is due to providers signaling emotion work when using emoji (Riordan, 2017).

As expected, and as in Experiment 1, emoji use positively impacted the perception of language informality. Also as in Experiment 1, adequateness of language was unaffected by emoji use. However, in Experiment 2, using emoji impacted language funniness. Given that participants in both studies found that emoji use in written communication was the same amount of fun, we suggest that primed sense of urgency activated a peripheral route of decision making, and lead to an intensified susceptibility to feelings promoted by the emotional cue, i.e., the emoji.

As previously reviewed, warmth judgments are primary, preceding judgments of competence and having greater impact in affective and behavioral reactions (Cuddy, Fiske & Glick, 2008; Fiske, Cuddy, & Glick, 2006). Thus, as expected, and as opposed to Experiment 1, using emoji while communicating with the consumer, lead participants to being perceived as warmer, regardless of product scarcity. Therefore, it seems that emoji might have an important use in signaling service providers warmth during service failure conditions. This finding is important from a managerial point of view, because signaling warmth may provide a buffer effect against service failure as well as improve satisfaction and loyalty (Bolton & Matilla, 2015). However, emoji use did not impact perception of competence. Managers should keep in mind that perceiving others as warm but not competent may elicit paternalistic stereotypes (e.g., perceiving the elderly as nice but incompetent, Fiske, Cuddy, et al. 2002). Still, assuming the existence of a service failure, being perceived as warm but not competent may prove to be better for a brand reputation than being labeled with a parasitic stereotype

(not warm and not competent, Fiske, Cuddy, et al. 2002). Thus, e-commerce managers should be careful and consider possible implications regarding the overall image that emoji use in service failure situations might communicate about the brand. Further studies are necessary to clarify how emoji use by brands, and service failure may influence different warm and competence stereotypes.

Additionally, in line with what our first hypothesis, results show that emoji use lead to an increase in perception of social presence. Hence, we suggest that emoji use may prove to be useful if brands and service providers want to improve the sense of social presence in websites or while communicating with consumers, when a peripheral route of decision making is activated.

Emoji use did not impact participants perception of the providers trustworthiness. These results are aligned with the results from Experiment 1. From a managerial point of view, as far as impacting trust goes, emoji use is of no use and service success is paramount.

As with Experiment 1, in Experiment 2, intention to recommend was not affected by any of the manipulated variables, in this case being emoji use or product scarcity. We suggest a few ways of interpreting these results. One suggestion is that the presented situation may have been a narrow part of an e-commerce transactions, not allowing participants to develop a strong enough opinion of overall service, for them to have intentions to recommend the service provider. Another way to interpret this result is that emoji use may not have been considered enough of a differentiating factor in order for consumers to develop an intention to recommend. Finally, since participants did not interact directly with Webtickets, and only had contact with a single service that occurred with another person, they may have not have found it to be fair to recommend or not the provider, based on their knowledge.

VI. General Discussion / Conclusion

The present work aimed to study how emoji use in an e-commerce transaction, could impact consumers perception of service providers brand, quality of service and intention to recommend.

Overall, both studies provided interesting insights. Firstly, the main conclusion one can make of Experiment 1 is that providing a successful online service is paramount for brand and quality of service evaluation. E-commerce managers should ensure that their websites and e-commerce platforms are adequately functioning, since service failure may cause a lower evaluation of the brand. This insight is not only important for the daily operations of e-commerce, but can be specially important during seasonal e-commerce sales, when it is common to see an increase of users in e-commerce sites and apps , that can lead to websites slowing down or crashing (Joshi & Domb, 2017). Therefore, guaranteeing adequate IT infrastructure might be important not only in a financial (e.g., loss of sales), or operational (e.g., efficient logistics) point of view but also from a branding point of view.

Secondly, results from Experiment 2 suggest that emoji can influence consumers perception of a brand, and service quality when cognitive resources are reduced. Specifically, we suggest that when facing a product scarcity situation, primed feelings of urgency lead to people using a peripheral route of decision making, and thus were more susceptible to emotional cues such as emoji, affecting brand/service provider perception.

When considering both studies, we can observe differences in the perception of providers warmth and competence. In Experiment 1, service success impacted competence and warmth perception while emoji use did not impact neither competence nor warmth. On the other hand, in Experiment 2, where service success was not a factor (all conditions had failure scenarios) emoji use did impact the perception of warmth. Based on these results, it would seem that manipulating sense of urgency was a factor in participants information processing, and has according to the Elaboration Likelihood Model, lead them to use a more peripheral route of decision making. However, the relationship between these two results can be further explored. In order to allow direct comparison and fully comprehend the influence of the different variables on brand and quality of service perception, we suggest a future study that considers an experimental condition with three manipulated variables - valence, scarcity and emoji.

Common to these two studies was that emoji use influenced providers perception of language informality. Ergo, it appears that brands that use emoji while communicating with

the consumer, on e-commerce contexts, can lead to consumers evaluating the brand as informal. A second common finding to these studies is the fact that emoji use did not influence consumers intention to recommend. We propose that the use of emoji was not enough of a differentiating factor for consumers to develop sufficient arousal and interest in recommending. On the other hand, we suggest that service success was always the expected outcome. Thus, it can be considered more of an hygienic motivation factor, rather than a motivating factor of recommendation.

In conclusion, we consider that the present study has contributed to the literature of two presently important concepts: emoji, and e-quality of service. Specifically, to our knowledge, Experiment 1 is the first to study e-quality of service from an experimental point of view. Regarding emoji literature, the present work seem to be the first to study the practical applicability of emoji in e-commerce contexts.

Because of the growing importance of e-commerce and emoji in our society, additional studies should further expand this area of knowledge. Limitations and future studies suggestions are presented below.

VII. Limitations and future studies

Some limitations of these studies can be identified. In general, although there are benefits of collecting data through online platforms (e.g., increased sample collection speed and access to participants otherwise not accessible), certain socio-demographic characteristics (e.g., age, gender) are impossible to verify. Guaranteeing that participants were not distracted while answering the questionnaire is also not possible. In the future, experiments in a controlled setting are suggested. Also, regarding participants of the study, our sample is mostly composed by young and educated participants, which may not accurately represent the general Portuguese population. Hence, in the future, higher diversity in samples are needed to understand the broadness of the findings.

Another limitation is that adopted measures of service quality, competence, warmth, social presence, overall trust and intention to recommend, were not validated as a scale for the Portuguese language. Hence, using validated scales in the future may provide more reliable insights regarding the different constructs.

Some considerations can be made about the experimental manipulation. In order to allow the comparison between both studies, the presented situations ended abruptly, therefore they may not have been as realistic as possible. Indeed, the importance of service failure recovery strategies for customer satisfaction and retention is highlighted in customer complaints analysis (both offline and online), as well as in interviews with managers and consultants (Fan, Miao, & Wu, 2014). Taking this into account, as well as the fact that both experiments did not presented information regarding the follow up steps taken (if taken) by the service provider in order to provide service recovery (e.g., a message or e-mail, with a support contact number, a real time chat available, Sousa & Voss, 2009), the experimental manipulation might have lost authenticity. Thus, in the future, replicating these studies while adding service recovery information, can provide additional insights regarding emoji use in failed e-commerce transactions.

Also, the experimental situation did not contemplate an online interaction between a brand representative and a consumer, but rather the automatic presentation of an emoji by the platform. Hence, consumers perception of emoji use by the brand to communicate emotion could be considered unauthentic. Future studies could replicate these experiments except instead of the emoji being presented automatically in a pop-up window, consumers would receive a message containing an emoji by chat, for example.

Likewise, both of our experimental scenarios did not allow participants a direct interaction with the service provider, but instead provided a description of a situation regarding an e-commerce transaction that involved a third party (S. Santos). Therefore, in order to understand how emoji use may influence actual consumers brand, quality of service perception, and intention to recommend, future studies, experimental manipulation should be designed in order to allow participants themselves to experience an e-commerce interaction where a service provider uses emoji.

Another aspect to consider, is that in Experiment 2, we assume that emoji use will influence participants perception of the service provider through a peripheral route of decision making. Additionally, in the same experiment, even though participants voluntarily participated in the study, their motivation regarding the ticket purchase may not be high. In fact, since the provided scenario was a description of a situation that did not directly involve the participant, motivation to process information might have not been high. Hence, results suggest that facing this particular situation of product scarcity, participants processed information heuristically. However, no real measures were made regarding how information was processed nor participants motivation to interpret the message. Therefore, future studies should also include measures capable of assessing the information process route. Also, future experimental scenarios should be constructed in order to allow participants to assume the role of the consumer themselves, instead of reading a description of an abstract e-commerce transaction.

Part of our study is based on the argument that assessing the changes in variables such as quality of service and warmth, may translate changes in the perception of empathy, without measuring it directly. In future studies, understanding how empathy can be conveyed through text-based online communication and how can it be adequately measured as a construct may prove to be interesting. Specifically, future experiments regarding emoji and empathy, could study how the use of emoji with a message that clearly transcribes empathy and support (e.g., "We apologize for the inconvenience. We understand if you might feel disappointed, but we will do our best to solve this problem" or "Your purchase is complete. Congratulations, we are happy for you") may influence brand and quality of service perception. Also, measuring different variables that may more accurately measure emotional concepts such as using a specific scale to measure empathy or emotional intelligence in online brand-consumer communication may provide insights in this regard. Furthermore, in order to understand how emotional cues affect recovery situations, using emoji in service

recovery contexts is also a possible direction for e-commerce studies that follow. To this extent, researchers must consider that although being a direct attempt to address customers needs, psychological recovery efforts such as empathic and apologizing approaches, may increase the negative experience if used inappropriately (Miller, Craighead, & Karwan, 2000). Indeed, a non-empathetic apology may be worse than no apology at all (Miller, Craighead, & Karwan, 2000). Hence, how emoji use in service failure recovery can be perceived as empathic can too be the focus of future studies. Future studies can also explore the effects of emoji use on different severities of service failure since more severe service failures are associated with less emotional coping (Gabbot, Tsarenko, & Mok, 2011).

Another limitation of this study may be that it represents a very specific of e-commerce situation. There are several types of e-commerce that include several service encounters where emoji may not have expressiveness (e.g., logistics, billing), these two experiments may provide to be very specific. Due to EMC and emoji being ever more prevalent in our personal and professional lives, we suggest that future research should attempt to understand how emoji use impacts brand/service provider in different online scenarios used in daily business where there may be a consumer-brand relationship (e.g., Social Media, e-mail marketing).

In summary, understanding how emotion might be conveyed in new forms of online brand-consumer interaction, such as social or e-commerce platforms, is a vast unexplored field of research, that can benefit from scientific studies.

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Appendix

Appendix A - Experiment 1 Full Questionnaire

Informed Consent

Thank you in advance for your cooperation.

This study is being conducted by a team of ISCTE-IUL researchers. We are interested in written communication between consumers and brands. We ask you to read the description of an online shopping experience and to answer a set of questions about the idea you retained from that experience.

Your participation is very important because it will enable researchers to better understand the characteristics of written communication.

Your participation is voluntary and your answers will be anonymous. If you decide to end your participation before completing the questionnaire, simply close your browser window and your answers will not be recorded. This questionnaire is intended for citizens of Portuguese nationality or residing in Portugal for at least 5 years. In accordance with the rules of the Data Protection Commission, the data collected are anonymous and may only be published in specialty journals. We ask you to respond to this questionnaire in one go, without interruption. The estimated time to complete this task is about 10 minutes.

Before you begin, please confirm the following information:

1. I am aware that my participation is voluntary and I can interrupt at any time by simply closing the page;
2. My answers will be anonymous and no one will be able to access my identity;
3. My answers will be used exclusively for research purposes and accessed only by the researchers involved in the project;
4. I am of over 18 years old.

Having read the available information about the study, I declare that:

- o I agree to participate
- o I do not agree to participate

Socio-Demographic questions

Before we begin, please answer a few socio demographic questions.

Sex

- Man
- Woman
- Other

Age

_____

Academic Qualifications

- First Cycle (4th year of education completed)
- Second Cycle (6th year of education completed)
- Third Cycle (9th year of education completed)
- High School (12th year of education completed)
- Bachelor Degree
- Master Degree
- Doctoral Degree

Current Occupation

- Student
- Independent Worker
- Working for others
- Retired
- Unemployed
- Other

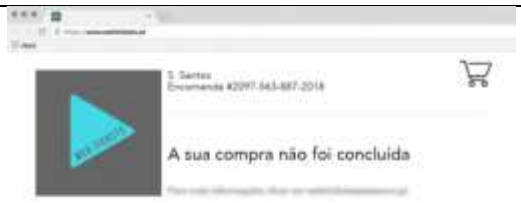
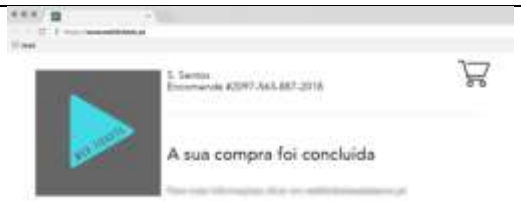
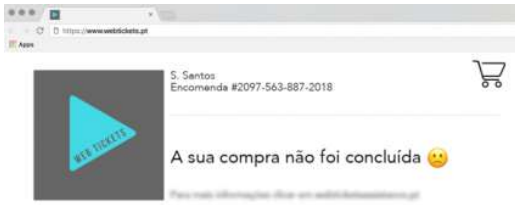
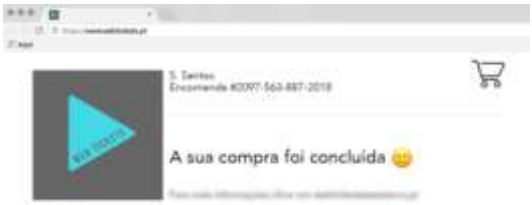
Instructions

Next, we will describe an online shopping experience. Please read the experiment description carefully in order to answer the questions that follow.

Scenario Description

"S. Santos is a frequent internet user and in recent months has made online purchases. After being informed that his/her favorite band would give a single concert in Portugal, six months from that day, he decided to buy a ticket for the concert. In order to do it, he/she accessed the official online ticket sales platform - Web Tickets. At Web Tickets, S. Santos explored all the ticket options and eventually chose the standing audience. After adding a ticket to the virtual shopping cart and confirming the payment details, S. Santos clicked on "Finish Purchase". Then, a new pop-up window appeared on the screen, with the following message:"

Experimental Manipulation (Emoji Presence X Scenario Valence, Only one of the following were presented to participants)

	Service Failure	Service Success
Emoji Absent		
Emoji Present		

1. Please indicate your opinion regarding the way the **Web Tickets** website interacted with the client. Specifically, to what extent do you consider that the **language** used by the website was ...

1	2	3	4	5	6	7	
Formal							Informal
Boring							Fun
Inadequate							Adequate

2. Now, please tell us your **general opinion** about Web Tickets:

1	2	3	4	5	6	7	
Not competent at all							Very competent
Not effective at all							Very effective
Not thoughtful at all							Very thoughtful
Not helpful at all							Very helpful

3. Imagine that the situation described had happened to you and indicate to what extent you agree with the following statements:

	Totally Disagree (1)	2	3	4	5	6	Totally Agree (7)
The interaction with the service provider through the ticket selling platform made me sense a human touch							
I feel that the interaction with the service provider / platform was friendly							
The interaction with the online ticket selling platform made me sense a feeling of inclusion and belongingness							
Interacting with the service provider through the website allows the possibility of social interaction							

4. Please indicate now to what extent you agree with the following statements:

	Totally Disagree (1)	2	3	4	5	6	Totally Agree (7)
I like to trust this online vendor							
I find this online vendor trustworthy							
I like the reliability of this online vendor							
I value the trustworthy characteristics of this online vendor							

5. What is the probability of recommending the use of this digital ticket selling platform - **Web Tickets** - to a friend, colleague or relative?

1	2	3	4	5	6	7	
Not Likely							Highly Likely

6. Please indicate now the likelihood of in the future buying tickets for shows using...

	Not Likely 1	2	3	4	5	6	Highly Likely 7
this method (online ticket platform)?							
... another method (face-to-face)?							

7. Based on the situation presented, indicate your expectations about the platform, through the degree of agreement with the following statements:

	Totally Disagree 1	2	3	4	5	6	Totally Agree 7
Online ticket sales platforms are useful.							
Online ticket selling platforms sales are secure.							
The target audience of this sales channel (online ticket sales platform) are young people.							

8. Recall now the situation described to answer the following questions:

	Very Bad 1	2	3	4	5	6	Very Good 7
Overall, the quality of the S. Santos transaction with digital platform to buy tickets - Web Tickets - was ...							
Overall, my opinion about the services provided by the digital platform to buy tickets - Web Tickets - is ...							

9. Did the customer (S. Santos) manage to buy the ticket at the Web Tickets?

1	2	3	4	5	6	7	
I am sure he did							I am sure he did not

10. Did the message in presented in the popup window by Web Tickets include any emoji?

1	2	3	4	5	6	7	
I am sure it did							I am sure it did not

11. Webtickets used a:

- Happy Emoji
- Sad Emoji
- Did not use an Emoji

Finally, we ask you to answer some questions about the written communication platforms you use in your everyday life.

12. How often do you use online platforms to book services or buy products?

1	2	3	4	5	6	7	
Rarely							Frequently

13. How many times have you used ticket sales platforms online?

- Zero
- One to Five times
- Six to Ten times
- More than Ten times

14. Using the Internet to make purchases in the next 6 months is...

	Totally Disagree 1	2	3	4	5	6	Totally Agree 7
... a wise idea.							
...a good idea.							
... a positive idea.							
... an idea that I like.							

15. Do you use emoji in your daily conversations?

1	2	3	4	5	6	7	
Rarely							Frequently

16. Do you consider that the use of emoji in written communications (e.g., computer, mobile phone, tablet or other devices) is:

1	2	3	4	5	6	7	
Useless							Useful
Not interesting							Interesting
Boring							Fun
Hard							Easy
Informal							Formal
Bad							Good
Inadequate							Adequate

There are many brands today that use emojis to communicate with consumers.

17. To what extent do you consider this use of this emoji to be appropriate in the following scenarios:

	Not adequate at all 1	2	3	4	5	6	Totally Adequate 7
Advertising posts on social networks (e.g., Facebook, Instagram, etc.).							
Commercial transactions involving monetary values.							
in defective product collection announcements.							
In new product releases.							
In direct response to a service request.							
In direct response to a consumer comment on social networks.							

18. What equipment did you use to answer this questionnaire?

- o Computer
- o Tablet
- o Smartphone
- o Other _____

Thank you for your participation!

In this study we are interested in understanding how new technologies can influence communication in written message format, specifically at the level of communication between brands / services and consumers.

If you are interested in contacting the research team, please send an email to **nebmm@iscte.pt**.

Appendix B - Experiment 2 Full Questionnaire

Informed Consent

Thank you in advance for your cooperation.

This study is being conducted by a team of ISCTE-IUL researchers. We are interested in written communication between consumers and brands. We ask you to read the description of an online shopping experience and to answer a set of questions about the idea you retained from that experience.

Your participation is very important because it will enable researchers to better understand the characteristics of written communication.

Your participation is voluntary and your answers will be anonymous. If you decide to end your participation before completing the questionnaire, simply close your browser window and your answers will not be recorded. This questionnaire is intended for citizens of Portuguese nationality or residing in Portugal for at least 5 years. In accordance with the rules of the Data Protection Commission, the data collected are anonymous and may only be published in specialty journals. We ask you to respond to this questionnaire in one go, without interruption. The estimated time to complete this task is about 10 minutes.

Before you begin, please confirm the following information:

5. I am aware that my participation is voluntary and I can interrupt at any time by simply closing the page;
6. My answers will be anonymous and no one will be able to access my identity;
7. My answers will be used exclusively for research purposes and accessed only by the researchers involved in the project;
8. I am of over 18 years old.

Having read the available information about the study, I declare that:

- o I agree to participate
- o I do not agree to participate

Socio-Demographic questions

Before we begin, please answer a few socio demographic questions.

Sex

- Man
- Woman
- Other

Age

_____

Academic Qualifications

- First Cycle (4th year of education completed)
- Second Cycle (6th year of education completed)
- Third Cycle (9th year of education completed)
- High School (12th year of education completed)
- Bachelor Degree
- Master Degree
- Doctoral Degree

Current Occupation

- Student
- Independent Worker
- Working for others
- Retired
- Unemployed
- Other

Instructions

Next, we will describe an online shopping experience. Please read the experiment description carefully in order to answer the questions that follow.

(Only one of the following descriptions and only one of pop-up windows were presented to participants)

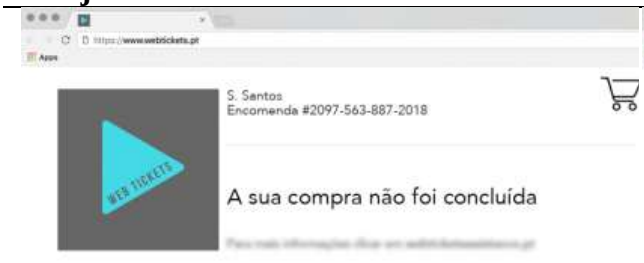
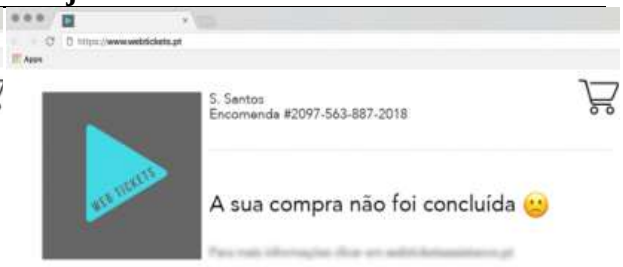
Ticket Availability Manipulation - Most of the tickets available

"S. Santos is a frequent internet user and in recent months has made online purchases. After being informed that his/her favorite band would give a single concert in Portugal, six months from that day, he decided to buy a ticket for the concert. In order to do it, he/she accessed the official online ticket sales platform - Web Tickets. At Web Tickets, S. Santos explored all the ticket options and verified that there still was 95% of tickets left for the concert. After adding a ticket to the virtual shopping cart and confirming the payment details, S. Santos clicked on "Finish Purchase". Then, a new pop-up window appeared on his screen, where he/she verified the following message:"

Ticket Scarcity Manipulation - Most of the tickets sold

"S. Santos is a frequent internet user and in recent months has made online purchases. After being informed that his/her favorite band would give a single concert in Portugal, six months from that day, he decided to buy a ticket for the concert. In order to do it, he/she accessed the official online ticket sales platform - Web Tickets. At Web Tickets, S. Santos explored all the ticket options and verified that there still was 5% of tickets left for the concert. After adding a ticket to the virtual shopping cart and confirming the payment details, S. Santos clicked on "Finish Purchase". Then, a new pop-up window appeared on his screen, where he/she verified the following message:"

Emoji Presence Manipulation

Emoji Absent	**Emoji Present**
	

1. Please indicate your opinion regarding the way the **Web Tickets** website interacted with the client. Specifically, to what extent do you consider that the **language** used by the website was ...

1	2	3	4	5	6	7	
Formal							Informal
Boring							Fun
Inadequate							Adequate

2. Now, please tell us your **general opinion** about Web Tickets:

1	2	3	4	5	6	7	
Not competent at all							Very competent
Not effective at all							Very effective
Not thoughtful at all							Very thoughtful
Not helpful at all							Very helpful

3. Imagine that the situation described had happened to you and indicate to what extent you agree with the following statements:

	Totally Disagree (1)	2	3	4	5	6	Totally Agree (7)
The interaction with the service provider through the ticket selling platform made me sense a human touch							
I feel that the interaction with the service provider / platform was friendly							
The interaction with the online ticket selling platform made me sense a feeling of inclusion and belongingness							
Interacting with the service provider through the website allows the possibility of social interaction							

4. Please indicate now to what extent you agree with the following statements:

	Totally Disagree (1)	2	3	4	5	6	Totally Agree (7)
I like to trust this online vendor							
I find this online vendor trustworthy							
I like the reliability of this online vendor							
I value the trustworthy characteristics of this online vendor							

5. What is the probability of recommending the use of this digital ticket selling platform - **Web Tickets** - to a friend, colleague or relative?

1	2	3	4	5	6	7
Not Likely						Highly Likely

6. Please indicate now the likelihood of in the future buying tickets for shows using...

	Not Likely 1	2	3	4	5	6	Highly Likely 7
this method (online ticket platform)?							
... another method (face-to-face)?							

7. Based on the situation presented, indicate your expectations about the platform, through the degree of agreement with the following statements:

	Totally Disagree 1	2	3	4	5	6	Totally Agree 7
Online ticket sales platforms are useful.							
Online ticket selling platforms sales are secure.							
The target audience of this sales channel (online ticket sales platform) are young people.							

8. Recall now the situation described to answer the following questions:

	Very Bad 1	2	3	4	5	6	Very Good 7
Overall, the quality of the S. Santos transaction with digital platform to buy tickets - Web Tickets - was ...							
Overall, my opinion about the services provided by the digital platform to buy tickets - Web Tickets - is ...							

9. Did the customer (S. Santos) manage to buy the ticket at the Web Tickets?

	1	2	3	4	5	6	7	
I am sure he did								I am sure he did not

10. Did the message in presented in the popup window by Web Tickets include any emoji?

	1	2	3	4	5	6	7	
I am sure it did								I am sure it did not

11. Webtickets used a:

- o Happy Emoji
- o Sad Emoji
- o Did not use an Emoji

12. In your opinion, how important was it for the customer (S. Santos) to secure the purchase of the ticket on this occasion?

	1	2	3	4	5	6	7	
Not Important								Very Important

13. The tickets for the concert in were:

	1	2	3	4	5	6	7	
Almost sold out								Almost all available

Finally, we ask you to answer some questions about the written communication platforms you use in your everyday life.

14. How often do you use online platforms to book services or buy products?

	1	2	3	4	5	6	7	
Rarely								Frequently

15. How many times have you used ticket sales platforms online?

- Zero
- One to Five times
- Six to Ten times
- More than Ten times

16. Using the Internet to make purchases in the next 6 months is...

	Totally Disagree 1	2	3	4	5	6	Totally Agree 7
... a wise idea.							
...a good idea.							
... a positive idea.							
... an idea that I like.							

17. Do you use emoji in your daily conversations?

	1	2	3	4	5	6	7	
Rarely								Frequently

18. Do you consider that the use of emoji in written communications (e.g., computer, mobile phone, tablet or other devices) is:

	1	2	3	4	5	6	7	
Useless								Useful
Not interesting								Interesting
Boring								Fun
Hard								Easy
Informal								Formal
Bad								Good
Inadequate								Adequate

There are many brands today that use emojis to communicate with consumers.

19. To what extent do you consider this use of this emoji to be appropriate in the following scenarios:

	Not adequate at all 1	2	3	4	5	6	Totally Adequate 7
Advertising posts on social networks (e.g., Facebook, Instagram, etc.).							
Commercial transactions involving monetary values.							
in defective product collection announcements.							
In new product releases.							
In direct response to a service request.							
In direct response to a consumer comment on social networks.							

20. What equipment did you use to answer this questionnaire?

- o Computer
- o Tablet
- o Smartphone
- o Other _____

Thank you for your participation!

In this study we are interested in understanding how new technologies can influence communication in written message format, specifically at the level of communication between brands / services and consumers.

If you are interested in contacting the research team, please send an email to **nebmm@iscte.pt**.

Appendix C - Constructs, Original and Adapted Items

Construct	Original Item	Adapted Item
Overall Service Quality (Bauer, Falk & Hammerschmidt, 2006; Lee & Lin, 2006)	“The overall quality of my transaction with this online retailer is excellent” ("overall service quality measure was assessed as agreement to a one-item statement" - pp.869)	No geral, a qualidade da transação do S. Santos com plataforma digital para comprar bilhetes - Web Tickets - foi…
	"My overall opinion of the services provided by the online bookstore is very good"	No geral, a minha opinião acerca dos serviços providenciados pela plataforma digital para comprar bilhetes - Web Tickets - é...
Warmth (Bolton & Matilla, 2015)	"How would you rate the hotel/restaurant as caring"	"No geral, considero a plataforma de venda de bilhetes (1- Nada Atenciosa; 7 - Muito Atenciosa)
	"How would you rate the hotel/restaurant as helpful"	No geral, considero a plataforma de venda de bilhetes (1- Nada Prestável; 7 - Muito Prestável)
Competence (Bolton & Matilla, 2015)	"How would you rate the hotel/restaurant as capable"	No geral, considero a plataforma de venda de bilhetes (1- Nada Eficaz; 7 - Muito Eficaz)
	"How would you rate the hotel/restaurant as competent"	No geral, considero a plataforma de venda de bilhetes (1- Nada Competente; 7 - Muito Competente)
Social Presence (Zhang, Lu, Shi, Tang & Zhao, 2012)	"There is always a sense of human touch whenever I interact through the online store."	A interação com o prestador de serviço através da plataforma de venda de bilhetes transmite-me a sensação de existir uma dimensão / sensibilidade humana
	"There is always a possibility of social networking through the interaction with the online store."	Sinto que a interação com o prestador de serviço / plataforma foi amigável.
	"There is always a sense of friendliness whenever I interact through the online store."	A interação com a plataforma de venda de bilhetes online sugere-me um sentimento de inclusão e de pertença.
	"There is always a feeling of belongingness whenever I interact through the online store."	A interação com o prestador de serviço através deste website possibilita estabelecer interações sociais.

Overall Trust (Palvia, 2009)	"I like to trust this online vendor"	Eu gosto de confiar nesta plataforma de venda de bilhetes
	"I find this online vendor trustworthy"	Eu considero esta plataforma de venda de bilhetes como sendo de confiança
	"I like the reliability of this online vendor"	Eu gosto da fidedignidade desta plataforma de venda de bilhetes
	"I value the trustworthy characteristics of this online vendor"	Eu valorizo as características de confiabilidade desta plataforma de venda de bilhetes
	"I like the trustworthiness of this vendor compared to other online vendors"	*Dropped* (as in Oliveira, Alhinho, Rita & Dhillon, 2017)
Intention to Recommend (Finn, Wang & Frank, 2009)	"Would you recommend this site to a friend?"	"Qual é a probabilidade de recomendar o uso da plataforma digital para comprar bilhetes a um amigo, colega ou familiar?"