

Hyperconnectivity in action: users of mobile social networks and new technologies

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Received 16 March 2021
Revised 20 August 2021
29 November 2021
Accepted 22 December 2021

Abstract

Purpose – The aim of this research is to identify the characteristics that give rise to motivations to use social apps in light of behavioral concepts related to consumers' desires and emotional values.

Design/methodology/approach – Netnography is used as the main methodology to analyze and categorize user profiles of online social networks. These profiles are presented through conceptual headlines, which highlight the main characteristics of each user group.

Findings – The results of the study show that many users have become dependent on the WhatsApp application, either for technological reasons or for social reasons related to fashion and status.

Research limitations/implications – Few consumers actually explained the ways they use mobile social networks in the context of the procedures and level of communication performed. However, the influence of social contexts in the consumer environment is changing perceived values focusing on prestige and status to technological elements that the majority of consumers use.

Practical implications – Practical implications are directly related to forming business connections in a less formal and more hedonic environment, improving market results while fostering user enjoyment. In addition,

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This article is based on Juliana Miranda's bachelor's dissertation. Emílio Arruda Filho and Everaldo Marcelo Costa worked on planning the research design to develop a robust manuscript based on the study, which was analyzed and discussed by the three authors throughout the entire review process (two rounds). We would like to thank the editor, Dr. Adriana Marotti de Mello, for overseeing the process and for his important feedback on the research, as well as the two reviewers for their valuable comments, suggestions and requirements, which guaranteed a better final manuscript. We would also like to thank the University of Amazon (UNAMA) and Federal University of Pará (UFPA), for their support throughout the research, and express our gratitude for the financial support received from the Brazilian Government via the following institutions: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) and Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq).

Funding: This work was supported by the Conselho Nacional de Desenvolvimento Científico e Tecnológico – CNPq [Grant number: 405220/2018-9] and Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – CAPES [Grant number: 15004015005P3].



the ongoing updates to WhatsApp have brought new functionalities and improvements to previously weak features.

Originality/value – Although other applications offer means by which to talk and send messages, WhatsApp continues to be (as of early 2021) the most used platform for conversation in Brazil. The sovereignty of WhatsApp is directly linked to its social value, which is related to the number of consumers who daily interact via the network.

Keywords Technological convergence, Mobile social networks, Usage behaviour, Social value, Netnography

Paper type Research paper

1. Introduction

The new generation of smartphones has been the main contributor to the significant boom in the mobile phone market. According to [Carbonell, Oberst and Beranuy \(2013\)](#) and [Russo, Bergami and Morandin \(2018\)](#), this growth has been taking place since the beginning of the twenty-first century and today we are experiencing an era of great technological innovations and many attributes incorporated into mobile phones. These multifunctional trends have been fundamental to the growing popularity of smartphones ([Lavière et al., 2014](#)), which has led to the formation of diverse characteristics of use in the current market ([Suki & Suki, 2019](#)).

Mobile technology devices are becoming increasingly present in the reality of individuals exposed to the technology market ([Russo et al., 2018](#)) and hold a very important place in the daily lives of these technology consumers ([Dastan & Gecti, 2014](#)). This is especially true among young people ([Enck et al., 2014](#)), although older people also use the services offered by mobile technologies ([Ho & Yang, 2018](#); [Hollebeek & Macky, 2019](#); [Guo, Lu, Kuang & Wang, 2020](#)).

The development and expansive dissemination of such devices has had a significant influence on the increase in online activities, mainly through virtual social networks ([Krasnova, Spiekermann, Koroleva & Hildebrand, 2010](#); [Ho & Yang, 2018](#); [Stockdale & Coyne, 2020](#)). This has facilitated the creation of a multifunctional environment, which has in turn increased the hyperconnectivity of consumers ([Smith & Kidder, 2010](#); [Matthes, Karsay, Schmuck & Stevic, 2020](#)). The possibility of being able to access different functions through the same product or service increases consumers' usage and thus keeps them more connected in real time.

This technological environment has allowed virtual social networks to become a phenomenon of integration of people and technology ([Krasnova et al., 2010](#); [Oh, Ozkaya & Larose, 2014](#); [Miranda, Corradi, Vieira & Cal, 2017](#); [Dahdal, 2021](#)). The popularity of applications that provide access to mobile social networks is an example of this integration and is proportional to the advancement of technological convergence with multifunctionality, which brings diversification into services in a single device ([Zhou, Lin, Li & Zhang, 2020](#)). With this, the increased frequency of access to social networks has stimulated greater use of mobile communication applications, such as Facebook and Instagram, which are utilized by many technology consumers ([Moore & Craciun, 2021](#)).

Moreover, due to the public's great interest in virtual social networks, the application market has become more innovative and has created real-time communication programs, known as mobile virtual social networks, that enable individuals to communicate in real time, via a phone call or an SMS message ([Zhou et al., 2020](#); [Huang & Miao, 2021](#)).

This scenario of an extremely connected or always-online environment instigated the researchers to choose the WhatsApp messaging application as the object of study to understand the decisions made by users in the high technology scenario experienced in the years 2014–2019. The study analyzes the characteristics of the social network technology, which influences (positively or negatively) users' decisions related to social values, including their usage behavior in relation to their desires ([Hollebeek & Macky, 2019](#)).

For a long time (2009 to 2012), WhatsApp was not the application that offered the largest number of services on the market; however, it was the preference of the majority of the

world's population in that period (Exame Magazine, 2017). This led to its purchase in 2014 by the organization responsible for Facebook. WhatsApp underwent several changes over the years, creating new options and services in order to retain its market share. Currently, the application has functions similar to Instagram and Snapchat, in addition to the message exchange service for which it was created.

Target users of this application have diverse profiles in terms of both social group and age (Ho & Yang, 2018). Based on the behavioral concepts involved with respect to innovation and the use of communication applications, in addition to technological scenarios regarding new products related to social connectivity, the present article details a qualitative study, in which netnography is used as a methodological approach for collection and analysis of data on consumers' preferences. It details a content analysis of discussions by specific profiles of users via a mobile social network and evaluates the characteristics that motivate consumers' interests, describing them according to their values, intentions and priorities of use and consumption.

The various profiles of WhatsApp users are presented in the form of headlines, which can be satirical, directly or indirectly critical or even questioning the proposed context. Some irony is presented in the evaluated consumers' discussion, providing characteristics and behaviors that highlighted contrary descriptions of the identified interest these consumers have.

2. Mobile technology and immediate communication

Due to the functionality offered by the technology, its popularity has been increasing, ensuring its expansion in the market of communication and information technologies (Bass, 1969; Rogers, 1995; Lavière *et al.*, 2014). Every day the number of users of technological devices is growing and this has led to the rising of several types of users of these products who all have diverse tastes and needs. This indicates that there is a need to create new characteristics that satisfy consumers (Kimura, Basso & Martin, 2008; Li & Xie, 2020; Stockdale & Coyne, 2020).

The convergence presented by mobile technology devices has been a key driver of consumer enthusiasm for smartphones (Gill, 2008; Van Kleek *et al.*, 2017). Convergences include programs integrated into the device, such as video camera and photo services, along with other services called applications, which, in addition to augmenting video and photo services, facilitate access to the Internet (Kim, Lee & Koh, 2005; Suki & Suki, 2019) and social networks, among others. Thus, the hardware integration connected with converged services is the main cause of the increase in consumer desire to obtain new technological devices, since explicit multifunctionality increases consumers' perceptions of benefits.

Within this environment of multifunctional technology giving support for the hyperconnectivity of users, individuals find sources of pleasure and fun in the diversity of services provided by these devices. Thus, their usage patterns reveal several behavioral factors based on perceived usefulness (Arruda Filho, 2008; Zhou *et al.*, 2020), a social value and self-affirmation function (Katz & Sugiyama, 2006; Belk, 2013) and a contextualization of satisfaction (Hirschman & Holbrook, 1982; Okada, 2005; Choi, Li, Rangan, Chatterjee & Singh, 2014; Hollebeek & Macky, 2019).

Usage based on characteristics related to pleasure or technological functionality is directly connected to applications that give access to social networks through the mobile phone. These technological devices provide the individual with means of social interaction, as well as other functionalities. In this context, users make choices with reference to the attributes incorporated into the device, according to hedonic (pleasure and satisfaction) and/or functional (Gill, 2008; Palazon & Delgado-Ballester, 2013) aspects, or transferred to the social

context of status, fashion and prestige associated to the use (Katz & Sugiyama, 2006; Li & Xie, 2020).

Hyperconnectivity is generated from consumers' desire to be online 24 hours a day (Kimura *et al.*, 2008; Matthes *et al.*, 2020; Guo *et al.*, 2020). This is made possible primarily through social networks (Smith & Kidder, 2010), a capability that is offered by most technological mobile devices, especially those connected to different device communications available in the market. Internet access anytime, anywhere, along with a device that features multiple functionalities, leads consumers to look for alternatives that bring diversified features to their handsets (Heath & Soll, 1996; Arruda Filho, Cabusas & Dholakia, 2010; Moore & Craciun, 2021).

Due to these factors, mobile technologies have become a means by which users express themselves, and their technological devices form part of their interests, as well as complement their clothes and accessories, which contribute to their social characteristics (Katz & Sugiyama, 2006). In this way, mobile technological devices such as smartphones and tablets gain a social function (Fortunati, 2002), in addition to the other functions they provide, which reveals several aspects about the preferences of the individual (Smith & Kidder, 2010; Hollebeek & Macky, 2019) and their usage behavior with respect to the technology.

The online social networks available today are diverse; however, their services can resemble each other most of the time. So, some factors and services in certain networks can be important differentials when users are choosing a social network. These factors may be related to instrumental motivations related to work and study (Smith & Kidder, 2010; Dahdal, 2021), to social interests and self-assertion of individuality (Arruda Filho, 2008; Katz & Sugiyama, 2006) or to a mix of these due to the necessity to justify use (Okada, 2005).

In the context of online interactivity, it can be said that social networks have become important in the lives of people who use technological devices. These individuals identify with the technology (Belk, 1988, 2013), which could explain their need for hyper connection (access to, use of and interest in the various functionalities). This hyper connection also integrates people, or groups of people, who use both technological devices and social networks for experiential purposes, though they justify this use based on the functional values on service (Okada, 2005; Palazon & Delgado-Ballester, 2013; Suki & Suki, 2019).

Due to all these connectivity relationships, for most of the public that uses digital social networks, individuality is a factor of extreme importance when choosing a particular service (Yong & Quan-Haase, 2013). Because of this need for information, along with the diversification of style among earlier social networks such as Facebook, which led to a boost in the general sharing of personal information, WhatsApp was launched with the proposal of enabling personal or group sharing, while offering the advantage of protected data (Matthes *et al.*, 2020; Agrawal, 2021).

The service provides a certain level of individuality, because in order to share and communicate with someone, it is necessary to know their cell phone number. This point has been cited in relation to various security and privacy contexts discussed on Facebook pages as responsible for people migrating from online social networks to mobile-only social networks (Social Apps) such as WhatsApp (Stockdale & Coyne, 2020).

However, even with this increased security provided by the privacy of the mobile phone number, users do not have complete control over how and where this sharing takes place (Moore & Craciun, 2021). Mobile social networks in general, compared to common social networks, have provided greater security, control and limits with respect to social interactions, since it is only possible to receive and write messages from/to mobile contacts, or via the email address in the case of Skype. This interaction is just possible when the individual chooses and has details of the respective person to contact. This privacy makes people feel secure and facilitates their use of mobile virtual networks.

3. Research method

To accomplish this research's objective, theories related to social networks, technological convergence and diffusion of innovation were analyzed in detail. After several months of studying the literature and analyzing the usability of mobile virtual social networks, the authors decided to use the WhatsApp messaging application as a starting point (research object) for the research. However, in the course of the research it was noted that although WhatsApp is very popular, this is not the only app available and desired in the market, since these consumers also use other apps for immediate communication, such as Viber, for example.

Mobile networks are part of the daily lives of most people who have smartphones, so they are constantly the target of news and discussions in online forums. These forums contain data that show diverse characteristics, which must be understood in order to better identify market trends and new products in this context. Based on these characteristics of usage by consumers, a content analysis of comments extracted from social networks and online conversation platforms was carried out.

Based on the current high-tech environment and context of convergence, netnography was used as the main methodology for this study. This method consists of a qualitative analysis in which information is extracted from blogs and online discussion forums on topics of particular interest (Kozinets, 2002), where the subject usually is social or cultural. The method aims to analyze the behavior of consumers, who may frequently use discussion groups or be non-regular participants in search of information and interaction.

Netnographic analysis develops in the same way as ethnography, but the virtual environment is used as the field of research. Thus, after the data collection, the data were coded and interpreted according to the literature, in order to compare the findings with the concepts that explain consumers' interest and behavior (Kozinets, 2009; Arruda Filho & Ferreira, 2021). In this way, groups of users are identified, analyzed and compared with theoretical studies of behavior, which provides a description of the perceived values and characteristics that influence and motivate these users.

Based on the concept of observation in netnography described by Langer and Beckman (2005), the data are analyzed over a certain period of time, without the intrusion of the researcher, making possible to download more discussions than those participated and lived, using information from a prior long period of time. Belk and Kozinets (2017) presented this nonparticipatory form of data collection as an extension of the method (new possibility to collect data from a longitudinal perspective), which opens discussion and understanding of the thoughts and feelings beyond face-to-face interviews, allowing the researcher to access information from a large historical part of the whole specific blog or site used for analysis.

It should be emphasized that the sites chosen for data collection must be highly reliable, so that the credibility and legitimacy of the participants' comments are more adequate. The netnography method aims to evaluate the interests and desires of the participants of networks in a free space, in which consumers can demonstrate their satisfaction or dissatisfaction with their decision to buy or use a certain product. This enables the researchers, besides identifying and interpreting acceptance and adoption (Van Der Heijden, 2004), to analyze the subject under discussion to understand the decision-making process and behavior in the field.

The sites chosen for data collection were tecmundo.com.br and techtudo.com.br. These sites are managed by large Brazilian content and Internet services companies (UOL for Tecmundo and Globo in the case of Techtudo). These sites allow participants to express their doubts and opinions about the objects used, as well as to post news about technological innovations and improvements to existing products.

First, a general reading of the discussions on the sites was carried out, in which comments were collected for initial recognition analysis. A more detailed survey was then conducted after which some new data were added to, and less relevant data removed from, the analysis.

In the transcripts of comments for this article, slang words, as well as abbreviations, are included. The identity of the commentators is kept confidential, revealing only gender.

The material used for collection totaled a 31-page Word document, in Arial font size 12, justified and organized for interpretation of the results collected from the specific websites seen in Complementary Material (CM1).

For analysis, the data were arranged to occupy two-thirds of each page in the Word document, leaving one-third for coding and categorization of the search results. For content analysis, three researchers individually conducted manual codification and categorization of the posted comments. The researchers then evaluated the initial results obtained to establish which behavioral categories intersected or were supported concerning the same concept. In this way, the final categories were defined based on shared understandings and on theory (Denzin & Lincoln, 2011; Smith & Smith, 2018).

No automated system or program was used to collect or analyze the data; rather, this was done manually. The discussions conducted during the netnography evaluated consumers' values related to technological characteristics that the social network offered for each group of participants (Kozinets, 2009). Information and images were derived from the keywords used in the search for discussions. The keywords used were "WhatsApp," "mobile social network," and "messaging app." An outline of the data collected is presented as Complementary Material (CM1), which details the site searched, the research period and the discussions analyzed. The data informing the characteristics of the content used for the study with details about posters and participants for specific discussion are also seen as complementary material in CM2.

4. Users of mobile networks and their preferences

Users of mobile social networks are becoming increasingly demanding regarding the services available in the market and frequently present their opinions on online discussion forums. In the present study, we analyzed several comments from users of mobile social networks posted on technology discussion sites. After a detailed analysis of these comments and the ways in which consumers use mobile social networks, headlines were created, similar to those existent in the general newspapers found in the market, carrying an ironic and sarcastic symbolism, but with an academic context based on the categories of evaluated users. This enabled the authors to understand the diversities and symbolic meanings regarding the use and motivation to use the technology, in addition to describing controversies detailed by the participants of the networks.

The headlines aim to highlight certain types of use of mobile networks, as well as the motivations of users, so that an analysis could be conducted based on the discussed literature. In the following sections, user comments are displayed according to the topic shown in the headline, followed by the page number (P) of the netnographic material in which the commentary is detailed and lines (L) of the comment as stored in the database collected for the analysis.

4.1 *Virtual vice: a reality harmful to WhatsApp users*

This headline represents the intensity of users who have some level of devotion to (derive social value from) WhatsApp (Pimentel & Reynolds, 2004; Hollebeek & Macky, 2019). These users are loyal to the services offered by WhatsApp and are often not interested in trying other services because of the great relationship and gratitude they have with the WhatsApp brand or product (Mohammadian & Karimpour, 2014; Arruda Filho & Ferreira, 2021).

(. . .) Viber has been around for years, it was the first messaging app. I've never tried it and I know it's not even close to threatening WhatsApp

(. . .) Why replace what is the best? Is there a research that has no purpose???? P 20, L 5–8

The comments show the individual's affection for the WhatsApp application, as they consider it to be the best option in the market without even having tested other options. The social value and meaning assigned to the product are similar to an ideological devotion (Pimentel & Reynolds, 2004; Samarão, 2017) in which members of one or more interest groups create a certain bond and identify with one another by virtue of similar thoughts and ideologies (Pimentel & Reynolds, 2004; Pichler & Hemetsberger, 2007; Silva & Piedras, 2017). This sentiment is clear in the user's relationship with the WhatsApp brand, which has led them to purposely ignore other services.

It's a practically essential application nowadays (. . .) guys have developed a brilliant app that helps a lot of people's lives (. . .) I would not mind even if I had to pay to use it (. . .) have to let go of being a penny-pincher of wanting only to have an advantage in all things and to give prestige to the people who work on things like WhatsApp. P 25, L 1–17

WhatsApp is infinitely better. In functions, in design. The only thing I perceived as an advantage of Viber was that it synchronizes with its application on the PC. [This is] something that WhatsApp didn't have in the past, but that [it] recently included [making it] equal to Viber, so, anyway, it's always superior. P 8, L 22–26

The first comment above demonstrates gratitude and satisfaction from the user regarding the service provided by WhatsApp. The user in question refers to a feeling of satisfaction with and honor to use the service, indicating that they would be willing to pay for it (Batra, Ahuvia & Bagozzi, 2012) even though there are other free options in the market. Their devotion to the application is so great that they see paying for it not as an inconvenience but as a fair reflection of the quality of the product (Hollebeek & Macky, 2019). Even if the product is not equal to, or does not have the same characteristics as, others in the market at launch, consumers are often willing to wait for future updates, which enhance the app's functionalities and user focus (Agrawal, 2021; Arruda Filho & Ferreira, 2021).

Consumers seem driven to try to justify why WhatsApp is better. Users are addicted to participating in their social groups, not caring for small concerns (things that are not important to their online relationship); anyway, WhatsApp will always support consumers' needs concerning their social values (Carbonell *et al.*, 2013). Complementary Material CM3 describes the loneliness that the user claims they would feel in case WhatsApp social network were to end, leading him to compare his life with an apocalyptic world without any kind of communication beyond that offered by the application.

The social network is already considered so important to this subject that it is not only part of his/her life but an extension of it (Belk, 1988, 2013), such that a world without that network would be a world without communication, in which interaction outside the digital environment is not even conceivable by the user (Moore & Craciun, 2021).

4.2 It's not nerdy stuff! the renewal of technology is critical

Innovation and technology are themes that coexist and are almost always intertwined. Mobile devices are a constant subject of discussion around the world, and new developments in the field of mobile technologies are emerging every day (Song, 2014) in order to offer users more comfort and easier access to services (Suki & Suki, 2019).

It is perceived that these innovations in the lives of consumers using mobile devices are part of their daily journey, which have to be up-to-date and fashionable. Other users, however, believe that they should always be "plugged in" to the news, and that technologies should always be tested. These are called high-tech users, and they often make a point of acquiring appliances due to their technological know-how (Lima & Arruda Filho, 2011; Huang & Miao, 2021).

I do not know why all this euphoria about WhatsApp, we already have applications like Viber and LINE that beat WhatsApp hands down (. . .) No connection can be made by WhatsApp (. . .) that app is weak! (. . .) LINE app has even desktop version (. . .) it's time for the guys to stop choosing an app just because it is easy to tweak and go for options that offer more opportunities to use. P 22, L 15–23

Can you stop wasting time with *wapp*, right? Let's all migrate to Viber that has the link option and is much more detailed and fuller of options than WhatsApp (. . .) I think as soon as Viber gains popularity the *wapp* will fall into disgrace! P 23, L 1–5

WhatsApp users can interact with all contacts they have in their mobile, but in the case of Hangout, this scope is even greater. (. . .) I really liked it, so I practically didn't use WhatsApp (. . .) My WhatsApp [is becoming obsolete], and according to the comments on Google Play, many people who have Hangout have [deleted WhatsApp]. P 10, L 12–30.

The first two comments above are from two different users who are looking for an application that, in addition to offering more features than WhatsApp, still presents service options that they believe are better and feature more technology than WhatsApp. The main influence on these types of users is technology (Batra *et al.*, 2012; Matthes *et al.*, 2020), rather than fashion trends or brands, in which some groups try to create their new environment and become part of something new without being sure it will work.

Different information than that available in WhatsApp is displayed in other apps, supporting people who want to interact with the most innovative social networks (Guo *et al.*, 2020). Users utilize social media in order to differentiate themselves from other users and to show themselves as being up-to-date concerning technology: even with WhatsApp being a little behind its competitors, in a few months it ends up updating itself (Stockdale & Coyne, 2020).

The last poster states that some users are looking for characteristics that are more extensive, better and different from those available on WhatsApp because technological users want to be part of something new and different that separates them from the main group and stimulates new people to follow them, creating a different profile of expert user (Ho & Yang, 2018; Huang & Miao, 2021).

4.3 *Mobile as a tool for work: aid or distraction?*

This headline satirizes the way some users justify their use of WhatsApp. These individuals claim that their use of the application is directly related to functionality, such as work and study aspects (Smith & Kidder, 2010), as well as communication with members of their family (Lima & Arruda Filho, 2011; Li & Xie, 2020; Zhou *et al.*, 2020). Despite this, these same consumers use the service to share photos, news and other types of media related to pleasure and enjoyment, even justifying their use with utilitarian reasoning (Okada, 2005; Palazon & Delgado-Ballester, 2013; Huang & Miao, 2021).

WhatsApp is awesome to communicate on the go! It saves a lot of time (. . .) I downloaded it because I needed it for the job, but I use it to talk to my girlfriend and friends, nobody is perfect (. . .) lol. P 29, L 12–17

The participant's description suggests that they believe they use the application for reasons only of necessity. However, the individual reports that they also use the service for social communications. The statement "nobody is perfect" can be related to a feeling of guilt that may be intrinsic in the subject, as it justifies the use of the application for nonwork purposes. One can notice similar sentiments in other comments.

(. . .) it's really good this WhatsApp thing, my boss told everybody in the company to use this stuff (. . .) I spend the day using the stuff (. . .) I get a lot of funny stuff (. . .) now my friends will not let me work (. . .) I only use it at work and look at it!!! P 30, L 11–15

I like WhatsApp because it is restricted to contacts in your calendar. I don't have [Facebook] and I never will, just like [Google+], which I still can't know for sure to what extent [it supports] your work

and privacy. So, I think WhatsApp suits my profile, and that of many who don't [want to] expose themselves on social networks. P 19, L 18–24

In the first comment presented, the participant contradicts themselves by saying that they use the application all day for funny things and then ends by saying that use only happens at work, which is not the entire day (Moore & Craciun, 2021). It is believed that, dominated by guilt, the consumer seeks to justify the use of the application in a way by stating that the service is necessary for their work and that any other type of use is acceptable, since the main objective is being performed simultaneously (Huang & Miao, 2021).

The second comment highlights privacy concerns for the user, though it is unclear whether these concerns are related to the user's personal interests or to their work and rational context (Yong & Quan-Haase, 2013). WhatsApp is compared to other social networks, but various usage preferences are noted concerning entertainment and professional environment, making it unclear whether the user is seeking the former, the latter or both (justification of use) (Okada, 2005).

It is important to note that many of the concerns or difficulties described by consumers are no longer relevant, since WhatsApp has addressed them through updates. Examples of such updates include privacy controls, a desktop option and specific business functions for professional groups (Dahdal, 2021; Arruda Filho & Ferreira, 2021).

4.4 Digital emotions: technology that enables connection and integration

One of the biggest advantages in using mobile social networks is that they enable immediate communication in real time (Matthes *et al.*, 2020). Many people explain that being able to use these services for conversations among family and friends is a huge advantage, especially when it comes to reducing distances, and keeping in touch with loved ones who live far away.

The app might be great, but as long as most of my friends are using WhatsApp, I'll have to be connected with it. It's no good at all to migrate to another application of the genre and my friends do not. P 8, L 23–27

The user in question is resistant to changing the instant messaging service they use, because of the number of friends they have who use WhatsApp. For users of this type, it is not advantageous to use applications that friends do not, since the choice of mobile social network is made according to interaction with their social group (Katz & Sugiyama, 2006; Hollebeek & Macky, 2019), where the main objective is to communicate with them.

The biggest advantage of WhatsApp is that it's restricted to the contacts in your calendar, I like to keep privacy. P 9, L 23

I ended up with my FB about 2 years ago, so no one could mess around with my life, and I was super happy to just use WhatsApp. . . P 18, L15–18

Users of the application worry about who they will communicate with, preferring to exchange messages only with friends, family and acquaintances. The fact that WhatsApp restricts communication by phone number generates confidence in individuality (Yong & Quan-Haase, 2013). These users claim to feel more secure by using a social network that restricts communication with friends and acquaintances.

Here, privacy is discussed in a different way compared to the previous category; that is, in relation to personal relationships (Dastan & Gecti, 2014). People want to participate in real-time communication but also to decide with whom they will interact, searching for a strong hedonic connection (Palazon & Delgado-Ballester, 2013; Stockdale & Coyne, 2020).

5. Discussion and final considerations

With the technological advancement and popularity of smartphones and tablets, social networks have gained significance in most people's daily lives. This success has generated demand for the creation of new service styles that provide comfort and security for users. Mobile social networks have gained popularity as their usability has improved (Kunrath, 2017).

WhatsApp, the chosen focus of this study, is a network that enables the exchange of messages, audio, images and videos. This exchange, however, can only be made if the user has the cell phone number of the individual with which they wish to exchange messages. The forms of use of immediate communication applications are enabled by the multifunctionality generated by the technological convergence therein (Kunrath, 2017; Matthes *et al.*, 2020), which directs behaviors according to the desires and personal interests of the individuals. These interests are classified according to the functional characteristics of the product that pertain to instrumental, experiential and social factors (Okada, 2005; Katz & Sugiyama, 2006; Hollebeek & Macky, 2019).

In this context of hyperconnectivity, this study analyzed the technological characteristics that motivate mobile social network users concerning various values and desires. Using the netnographic method, it was possible to identify the new ways in which people use the technology, and the characteristics that lead users to choose and use certain services. Through analyses of satirical and ironic discussions, very clear positions of the users are perceived with respect to social factors, in which the preference is not for a particular functionality itself but to communicate with family, friends, etc., which provides the pleasure of interaction, fun and status for each individual.

In the course of the research, individuals who fiercely defended WhatsApp were identified (Truong, Klink, Simmons, Grinstein & Palmer, 2017) being reluctant and even outraged at the suggestion of attempting to use another service (Suki & Suki, 2019). These users claim to be extremely satisfied with the service and do not see any need to use another. On the other hand, users with a passion for new technologies were also found, positioning themselves as high-tech users and attempting to force others to change their current application, though such changes are frequently not made due to a lack of evident social value.

Some individuals justified the use of the service with reference to work, stating that the application is necessary for communicating with colleagues and service providers (Matthes *et al.*, 2020). However, these same individuals confessed that they use the mobile network outside of the work environment and attempted to justify the usage of the applicative concerning the guilt associated with pleasure and procrastination (Okada, 2005; Lee, Lee & Garrett, 2013; Zhou *et al.*, 2020; Arruda Filho & Ferreira, 2021). Other users stated that the choice of mobile social network is directly linked to their network of friends and said that they do not care which service they use as long as their friends are on it.

The study presented that social networks' users have a great dependence on WhatsApp. It is believed that because of the large amount of content shared throughout the day, users have become more and more adept at using WhatsApp, without even looking for a second choice of communication application.

Although other applications offer means by which to talk and send messages, WhatsApp continues to be, as of early 2019, the most used platform for conversation in Brazil. The sovereignty of WhatsApp can be directly linked to its social value, which is related to the number of consumers who use the network daily. Furthermore, the WhatsApp platform is frequently updated, so that most of the concerns considered here have since been addressed. Such updates improve the social app and support consumers' needs through new solutions related to privacy, business use, desktop options, security of information and so on.

The netnographic approach was of fundamental importance for the accomplishment of this study, although it presents certain limitations related to the specific participation of

individuals (Kozinets, 2009). Difficulties were encountered in the data collection, as participants of online discussions did not specify how they use the network, but merely commented on defects and difficulties encountered with certain services. Few consumers actually explained the ways they use mobile social networks in the context of procedures and the level of communication performed. In addition, the netnography methodology used does not enable the collection of demographic information; including such data could enhance the interpretation concerning the understanding of specific groups of users.

Theoretical implications of this research concern the influence of social contexts in the consumer environment, where perceived values change from primarily rational usage to that related to prestige and status derived from being part of and/or having access to technological elements that “everyone” is currently using. Practical implications are directly related to the influence that this kind of social network has concerning the hyperconnectivity provided by the social app, which can be used to form business connections while maintaining a less formal and more hedonic environment, improving market results while fostering user enjoyment. In addition, the ongoing improvements to the platform maintain the quality of the app and improve the level of satisfaction among users concerning new features and services included therein.

This study thus presented an initial understanding of the technological and market trends, and the perceived values involved in this current scenario. It is important for future research to extend to virtual fields in the international scenario, correlating usability to technological devices, in order to obtain results from a more global analysis in a multicultural context.

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