Internet and Emotions: New Trends in an Emerging Field of Research

Internet y emociones: nuevas tendencias en un campo de investigación emergente

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ABSTRACT

Emotions have become increasingly important in our time, in all realms of social reality. This revaluation of the affective dimension of the person is revealed in its common presence as subject of research in many fields of knowledge. Also in Media and Communications studies, and specifically in relation to the use of digital technology, there is an academic interest in emotions. This paper maps the field of study where emotions and digital technology converge, specifically in the use of the Internet. There appears a vibrant, wide and complex field of study in which come together approaches of different types, both on the theoretical plane and on the methodological one. The article provides an overview of research carried out in this subject, which includes the study of social media as spaces of interaction where emotions are displayed, the massive-scale emotional contagion or the sentiment analysis in the digital platforms, among other topics. We conclude that the Net not only arouses emotions in users and serves as a channel for the expression of affection, but also influences the way in which this affection is modulated and displayed, as well as the configuration of the personal identity of the users of the Internet.

RESUMEN

Las emociones han adquirido una importancia creciente en nuestra época, en todos los ámbitos de la sociedad. Esta revalorización de la dimensión afectiva de la persona se ha reflejado, a su vez, en su inclusión como objeto de estudio en investigaciones de numerosas ramas del saber. También dentro de los estudios en Comunicación, y en concreto en relación con la tecnología digital, existe un interés académico por las emociones. Por medio de una profunda revisión bibliográfica, en este trabajo se traza un mapa del campo de estudio en el que convergen las emociones y la tecnología digital; más concretamente, en el uso de Internet. En él se advierte un campo de investigación vibrante, amplio y complejo, en el que confluyen aproximaciones de diferente tipo, tanto en el plano teórico como en el metodológico. El artículo presenta un panorama de las investigaciones realizadas en esta materia, que abarca desde el estudio de las redes sociales como espacios de interacción en el que las emociones son expresadas, el contagio emocional a gran escala o el análisis de sentimientos en las plataformas digitales. Se concluye que la Red no sólo despierta emociones en sus usuarios y sirve de cauce para la expresión de los afectos, sino que también influye en el modo en que dicho afecto se modula y despliega, así como en la configuración de la identidad de la persona.

KEYWORDS | PALABRAS CLAVE

Emotion, Internet, technology, emotional contagion, emotional identification, social networks, multiscreen society.
Emoción, Internet, tecnología, contagio emocional, identificación emocional, redes sociales, sociedad multipantalla.

1. Introduction

Unlike previous eras, where the affective dimension of the person was usually left in the background and confined to the context of private life, today we are immersed in a strong emotional culture, one that permeates all realms of social life (Bendelow & Williams, 1998). Although throughout the Western tradition the reflection about the nature of human affection has always been present –from the writings of Aristotle, and more recently in Descartes, Spinoza or William James and others (Solomon, 2003)– an «affective turn» has taken place also in academia in recent decades (Clough & Halley, 2007), in the sense that emotions have become the object of study of different scientific disciplines (such as anthropology, economics, linguistics, computer engineering, etc.). Moreover the progress made by neuroscience has contributed to highlight the role that emotions have in mental processes and their importance in the development of brain functions (Ferrés, 2014).

There are, therefore, various theoretical approaches on emotions, which are conceptualised and explained both from neurobiological and sociocultural approaches. In this regard, it should be noted that it does not seem feasible to understand emotions, their experience, expression and communication without taking into consideration the social context in which they are manifested; consequently, one of the most fruitful theoretical approaches is the one developed from the «sociology of emotions» (Turner & Stets, 2007). Conversely, the complex reality of this facet of human nature makes it an object of interdisciplinary study, albeit one about which there is still no comprehensive vision, capable of bringing together and integrating all these different disciplines. There is also no conceptual and terminological consensus about phenomena covered here, such as affection, emotions, feelings or passions.

Parallel to the rise of the affective dimension in social life and in academia in the last two decades, we have also witnessed the growing social acceptance of Information and Communication Technology (ICT). Technology is fully integrated into our daily lives and the adoption, pervasiveness and ubiquity of digital devices are not a mere quantitative issue, because their «wide distribution, customization, and the possibility of permanent connection that they create, contribute to reconfigure various aspects of everyday life and of processes of contemporary subjectivation and socialization» (Lasén, 2014: 7).

There is no doubt, therefore, that today people relate in both offline and online environments; furthermore, social relations are already hybridised into both contexts. At the same time, the digital realm has its own peculiarities, which come from its electronic nature, and that in turn affect the emotional dimension of the person. The traditional social life, which is slower and localised, coexists with the (faster and uprooted) digital social life. Thus, these are two space-time regimes; and each is accompanied by a corresponding emotional regime. The technological emotional regime is primarily a regime of emotional intensities, in which the amount of emotion matters, while in the traditional regime, it is primarily a regime of emotional qualities. Although it does not seem feasible that the technological regime may someday nullify the traditional regime –since the latter is the condition of possibility of the former– it is indisputable, however, «that the coexistence of both emotional regimes generates interference between emotional logic of each system» (González, 2013: 13-14). Such coexistence, moreover, makes the field of analysis of digital technology and emotions broad and complex, as it is to address the implications derived from it both in physical and in the digital world.

2. Material and methods

From a historical perspective, we can say that the relationship of the western world with technology has always been highly emotional. Since technology is always in the realm of novelty, its emergence opens the question of how the new flows into the old, of what is known. This process, as noted by Fortunati and Vincent, «is played in a binary way between the pole of curiosity, rarity, new risk and uncertainty on the one hand, whilst on the other it includes old habits, stability certainty, security and safety» (2009: 6). Additionally, there is the series of meanings, symbols, values associated with technology. Therefore any technological innovation, especially in the beginning, raises a debate between enthusiasts and sceptics or, to put it in terms of Umberto Eco, between «the apocalyptic and the integrated» (Eco, 1964).

Nowadays the coexistence, on one hand, of the growing importance of the affective dimension in social life and, on the other hand, of the role acquired by technology and particularly Internet in everyday interactions, has allowed the field of research at the intersection of both realities to become very abundant and varied. This is true both in terms of theoretical frameworks and methodologies, and in the issues, emotions, social groups or specific technological devices that are the subject of the various studies and publications to this day.

The goal of this paper is to provide, within media and communication studies, an overview of the field of research on Internet and emotions, showing the different areas of study and the most relevant authors and publications in each of them. It´s beyond the scope of this paper to discuss studies focused on the emotional investment that people put in digital technology, especially mobile phones.

Through a comprehensive literature review, I will map this field of research in the following pages. To do this, I will take as reference the academic literature that has explicitly explored emotions in relation to the new field of socialization and emotional projection that is the Internet. First I present a framework with the main theoretical and methodological issues involved in the study of the Net, and have been faced from different disciplinary traditions. Next, I will explore in more detail the expression of emotions in social networks, both at micro level (of interactions between users) and at macro level (the phenomenon of emotional contagion, also known as emotional identification in the field of neuropsychology).

important demographic information about the authors of the data such as gender, education or online behaviour» (2014: 6).

This unique character of the Internet as an object of study in relation to emotions has produced abundant and varied literature. Without taking into consideration the studies on the search for affective relationships through Internet (love, as the emotional state par excellence, has been examined in the digital dimension (Ben-Ze'ev, 2004; Kaufmann & Macey,

> The technological emotional regime is primarily a regime of emotional intensities, in which the amount of emotion matters, while in the traditional regime, it is primarily a regime of emotional qualities. Although it does not seem feasible that the technological regime may someday nullify the traditional regime –since the latter is the condition of possibility of the former– it is indisputable, however, «that the coexistence of both emotional regimes generates interference between emotional logic of each system».

3. Analysis and results
3.1. Theoretical and methodological issues

The analysis of the online realm as a space in which emotions are activated and expressed is an extensive and complex area, as it encompasses many different phenomena and congregates studies from different theoretical trends and disciplines. As Benski and Fisher point out, the Net is a unique laboratory for the analysis of emotions for two main reasons: «First, the Internet is a fertile ground for a huge diversity and amount of communication of all sorts and from a large and diverse group of people. Much of that communication is emotional, reflecting immediate feelings, sometimes as they occur –most use of social media such as Facebook and Twitter is now occurring on mobile devices. Second, these communication acts are all registered (…) When communication data become available, it is relatively easy to analyze since it is likely to be relatively complete and includes meta-data such as time and location, and at times other pieces of

2012), some studies focus on the analysis of a particular emotion, such as:

• Empathy (sympathising with the tragedies of others, producing videos on YouTube) (Pantti & Tikka, 2014).

• Annoyance (which children and adolescents admit to experience when they find inappropriate content on the Internet) (Livingstone & al., 2014).

• Envy or jealousy (when reading Facebook status updates of contacts) (Muise, Christofides, & Desmarais, 2009; Sagioglou & Greitemeyer, 2014).

• Resentment (of workers in precarious job, who let off steam in the forums) (Risi, 2014).

• Hope (that fosters interactions on dating websites) (Fürst, 2014).

• Hatred (often under anonymous cover that the Net can provide) (Perry & Olson, 2009).

• Grief or mourning expressed online when a loved one dies (Walter & al., 2012; Jakoby & Reiser, 2014).

There are studies that focus on the expressive

capabilities of a particular channel of communication such as Skype (Chiyoko-King-O'Riain, 2014) or email (Kato, Kato, & Akahori, 2007); while others focus on specific groups whose activities have a strong emotional charge, such as feminists (Reestorff, 2014), political activists (Knudsen and Stage, 2012) or migrants (Fortunati, Pertierra, & Vincent, 2012). From the point of view of disciplinary traditions, digital emotions have been approached from Cultural Studies (Karatzogianni & Kuntsman, 2012), Screen Studies (Garde-Hansen & Gorton, 2013), Digital Literacy (Moeller, Powers, & Roberts, 2012), Domestication of

disciplines, are: first, how emotions can emerge and be measured in the Internet (Küster & Kappas, 2014) and, second, the differences and similarities between the expression of emotions in face-to-face relationships and relationships mediated by digital technology (Boyns & Loprieno, 2014). Regarding the first, there are «three areas of emotions measurement, each requiring its own unique methods, and each revealing a different facet of the intersection of the Internet and emotions. First, we can investigate large amounts of emotional content readily available online (through qualitative or quantitative content and data analysis).

> Becoming aware of the capabilities of the digital realm as a space and channel for the expression of emotions involves considering the Internet and its applications not as an instrument that we use, but as a place of experience and subjectivity; rather than a means of communication it is a space that we inhabit and that it inhabits us.

Second, we can inquire into the subjective emotional experience of users (using self-reporting, through interviews or questionnaires). And third, we can record bodily responses indicating emotional states in real-time Internet use» (Benski & Fisher, 2014: 8).

In terms of emotional expression in computer-mediated interactions, we must start from the realisation of the peculiarities of the digital environment, where there is no corporeality that accompanies physical relationships, and the communication be-

Technology (Schofield-Clark, 2014), Risk Studies (Roeser, 2010) or Queer Studies (Cefai, 2014), among others.

As noted above, the aim of this paper is to map the state of the field within Media and Communication Studies. Therefore, we will not dwell on works that discuss the subject from other approaches such as Engineering and Computer Science. In this regard, we simply indicate the importance of Affective computing, where computer science, psychology and cognitive science converge, and which studies how to design computers that are able to recognise, interpret and even simulate emotions in order to improve interactions between people and computers (Picard, 2003). Also from an approach of computational linguistics, sentiment analysis is increasingly gaining importance, that is, the type of sentiment (positive, negative or neutral) that a person might feel or try to express when writing some information, and which in the digital realm is applied especially in social networks like Twitter or Facebook.

Two of the background theoretical issues that mark the debate about emotions in the online realm, in both Media and Communication Studies and related

tween participants is not necessarily synchronous. Since affection has a bodily foundation and it is more difficult to control emotions face to face, the absence of both factors might lead one to believe that the digital realm is emotionally colder, and that it impairs or restricts the expression of emotions. However, in an extensive literature review on this issue, Derks, Fisher and Bos (2008: 780) conclude that «CMC is not characterized by a lack of emotions, on the contrary (…) positive emotions are expressed to the same extent as in F2F interactions, and that more intense negative emotions are even expressed more overtly in CMC».

When the interaction mediated by technology is textual and not visual (and therefore there are no non-verbal cues, which are certainly an element of richness for the expression and interpretation of the affective dimension), Internet users can offset such absence by using emoticons (Jibril & Abdullah, 2013). If the digital interaction through video, and there is therefore mutual facial recognition, expression and interpretation of emotions becomes –in principle– easier (Kappas & Krämer, 2011). Indeed, each of the technological devices, applications or communication channels (video call, instant messaging, etc.) carries with it

a particular «affective bandwidth» (Lasén, 2010), i.e., they allow certain amount of emotional information to be transferred. In this sense, the Internet in turn encompasses different socio-technical environments that allow emotions to surface in varying degrees; therefore, the affective dimension is not revealed equally in all interactions and communicative situations taking place in the Net. There are, therefore, some «emotionality factors» (Gómez Cabranes, 2013: 219-223), such as:

• The expressive possibilities of each of those environments (it is not the same if it is a blog, a chat, a social network (and which one in particular), etc.

• Themes and topics around which the interaction revolves.

• The context and purpose of use of people.

• The degree of anonymity or self-revelation in interactions.

• The investment of time or frequency with which users connect to the digital domain.

Thus, although the digital emotional regime is primarily a regime of emotional intensities, these do not occur equally in all applications and contexts of the digital environment, but they are conditioned by the above factors, among others.

3.2. Emotions in social networking sites

Becoming aware of the capabilities of the digital realm as a space and channel for the expression of emotions involves considering the Internet and its applications not as an instrument that we use, but as a place of experience and subjectivity; rather than a means of communication it is a space that we inhabit and that it inhabits us (Lasén, 2014). This is especially evident in, but not limited to, social networks, which are specifically designed to create and maintain links with others, making these sociability platforms one of the most representative examples of Web 2.0. The way in which this design is realised is not an emotionally iniquitous decision, but it conditions the expressive capacity of the user. Such is the case, for example, of Facebook and its single «Like» button, preventing users to express other negative feelings (dislike, anger, grief, etc.) as easily (Wahl-Jorgensen, 2013). The implications of this «emotional architecture of social media» transcend this context, because (as clearly argued by Peyton, 2014), the notion of «liking» has experienced a semiotic change, as it has moved from the intimate and emotional realm of individuals into the public realm. Rather than a feeling, it is now is an action, since «instead of being tied to an internal sensation that reacts tacitly to an external stimulus, to 'like'

now becomes a conscious rationalized action that connotes an external tag of connection between an individual, a discursive element, and a social stance» (Peyton, 2014: 113).

Within the digital realm, the emotional dimension is closely linked to the configuration of the identity of the person. In social networks, it is worth noticing in the processes of recognition and status negotiation, because as Svensson points out «the more someone links to you, likes you, thumbs up your postings, and comments on them, etc., the higher you will be ranked and listed in the different SNS, news feeds, and tables of suggested links and readings (...) That increase in status is linked to feelings of satisfaction and well-being. Indeed, positive emotions emerge when individuals are able to reaffirm their self-conceptions» (2014: 22). Emotions online are in this way used as resources in the identity work of the user; in a digital medium, marked by interconnectivity and where the person cannot reaffirm self-conceptions without being visible for others.

Moreover, if we consider the habits of news consumption, it is easy to observe that emotions are also on the basis of the act of sharing content and news in the digital environment (Hermida, 2014). Although the emotional component has always been present in the use of mass media and how people process different media messages, whether news or fiction, the novelty is that today, on platforms such as Twitter, the timeline on certain events of political or social nature is a mixture of information, opinion, interpretation and emotions, repeated and amplified by the network itself, giving rise to what Papacharissi (2014) qualifies as «affective news streaming». As seen in the case study of the resignation of Hosni Mubarak as president of Egypt in February 2011, «prominent and popular tweets were reproduced and endorsed, contributing to a stream that did not engage the reader cognitively, but primarily emotionally. Frequently, the same news was repeated over and over again, with little or no new cognitive input, but increasing affective input» (Papacharissi & Oliveira, 2012: 278).

3.3. Emotional contagion

As noted above, the Internet allows researchers to investigate huge amounts of content readily available online. Since sharing emotions is essential for creating and maintaining social ties, somehow the status of social networks revolves around the emotions and feelings that users express about themselves, but at the same time find resonance among their circle of contacts. Therefore, other areas of abundant research and

growing importance are those related to the study of emotional contagion through social networks and the viral spread phenomenon.

Recently, in a controversial experiment carried out by researchers from Cornell University with the assistance of Facebook programmers (Kramer, Guillory & Hancock, 2014), the feed of 690,000 users was manipulated for a week. A user group received positive news, while another group were given news full of negative connotations. One of the conclusions was that people who watch less negative stories in their feed are less likely to write a negative post (and vice versa). The study indicates that emotions expressed by others through Facebook influence the emotions of the user; and that for emotional contagion to occur, face-to-face contacts (with non-verbal cues that accompany such interaction) are not essential.

Another research has analysed a period of over two years the status updates on Facebook of about one million users; also noting that both negative and positive posts had some impact on other members of their social circles. The peculiar characteristic of this research is that, starting from the premise that atmospheric phenomena can influence mood, they analysed the correlation between weather reports from different cities and the status updates of users who live in them, and confirmed that on rainy days the number of Facebook posts containing positive expressions declined 1.19%, while the negative posts increased by 1.16%. According to the authors, «For every one person affected directly, rainfall alters the emotional expression of about one to two other people, suggesting that online social networks may magnify the intensity of global emotional synchrony» (Coviello & al., 2014). Ultimately, the research on this subject concludes that the decision of users to update their status is influenced by what happens to their contacts in their social circle.

Large-scale emotional contagion in the digital realm has another focus of interest in the viral spread of content. This is one subject that has been researched especially in the field of advertising and marketing (Dobele & al., 2007; Eckler & Bolls, 2011) where the authors agree that generating emotions –and among these, especially surprise and joy– is a requisite so that a video can be shared in the digital realm. As explained by Dafonte, «the decision to share a viral video is caused, on the one hand by motivations that have to do with the psychological or emotional needs of the user potentially sharing the clip, and on the other, with the motivations related to the viral video itself. The decision to share a viral video ad stems from

the meeting of both these spheres in the individual» (2014: 202).

Beyond the strictly advertising realm, there is increasing attention being paid to the phenomenon of memes, that is, contagious images, videos and ideas that circulate virally on the Internet, mobilising the emotions of users both horizontally (through blogs, YouTube, Facebook, Twitter) and vertically, when traditional media also echo the emotional resonance they acquire. Understanding and attempting to predict the dissemination process of this type of content has been analysed by scholars (Sampson, 2012; Spitzberg, 2014).

4. Discussion and conclusions

The popularisation of digital technologies has made them a constant presence with the person; so much so that the sensory contact is the first step to elicit an emotional relationship between the user and the device. The digital sphere –the realm that is accessed through the screens– is also a space where the affective dimension of technology users emerges and is expressed. In other words, Internet is an «affective technology», in the sense that it is a channel for the expression of emotions and it participates in the constitution of subjectivity of the individual. It enables the fixing of emotions, transforming them into «digital inscriptions» (Lasén, 2010), into objects that can be stored, managed, viewed, compared, shared, etc.

An approach from the point of view of emotions, understood as a predominant value of contemporary society, allows us to map, as I have done throughout these pages, a vibrant, broad and complex field of research as part of Media and Communications Studies, where different theoretical approaches converge: from digital literacy to cultural studies, through film and gender studies. Whether at the micro level of interactions across different platforms (social networks, blogs, forums, etc.) and macro (through large-scale emotional contagion), it is clear that Internet not only arouses emotions in users and serves as a channel for the expression of affection, but also influences the way in which this affection is modulated, played out and displayed. From the methodological viewpoint, the challenge of combining qualitative and quantitative techniques to measure and compare emotions in the offline and online worlds still remains.

The convergence of the face-to-face and digital realms (with their respective time-space and emotional regimes), socio-cultural practices associated with the use of technology (along with the technical, legal and market-based conditions), the variety of technological

devices (with different emotional potential) or the peculiarities of computer-mediated interactions versus face-to-face contact are some of the issues that articulate the studies on this subject. In this sense, the contributions of research from neuroscience continue shedding light for a more accurate understanding of emotions.

Finally, the recent emergence of wearable devices –which is a step closer towards the bodily adaptation and integration of technology into the user–, advances in the design of social robots (facilitating a more 'natural' interaction with humans) and the growing expansion of the so-called 'Internet of things,' which are making the presence of technology in daily life more ubiquitous and immersive, are some of several future lines of research that emerge as subjects of interest in the study of emotions in the use of digital technology.

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