

THE PERTINENCE OF STUDYING MEMES IN THE SOCIAL SCIENCES

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Recibido: 10/3/2020; Revisado: 24/2/2021; 22/4/2021; Aceptado: 22/4/2021

Abstract

Memes are cultural replication units that utilize humor to become viral online. Internet memes legitimize socio-political and psychological discourses. Research demonstrates underlying neural systems in social media usage (e.g., emotion, reward, motivation). Studies suggest that the most shared memes of Facebook are self-defeating. One hypothesis is that individuals share memes online to cope with their psychological tensions. Currently, there is scarce information about meme-sharing and its psychosocial and neurocognitive processes. Therefore, this bibliographic essay promotes the study of memes in the social sciences and the creation of a working model to study meme-sharing in *The Emerging Neuroscience of Social Media*.

Keywords: memes, social media, humor, psychological well-being, cognitive neuroscience

Resumen

Los memes son repeticiones culturales que utilizan humor para volverse virales. Estos legitiman discursos sociopolíticos y psicológicos. Estudios demuestran sistemas neuronales subyacentes al uso de redes sociales (e.g., emoción, recompensa, motivación). Además, estudios sugieren que los memes más compartidos en Facebook son contraproducentes. Es hipotetizado que se comparten memes en-línea para lidiar con tensiones psicológicas. Actualmente, hay pocos estudios sobre los procesos psicosociales y neurocognitivos de compartir memes. Este ensayo bibliográfico promueve estudiar los memes en las ciencias sociales y la creación de un modelo de trabajo para estudiar el intercambio de memes en *The Emerging Neuroscience of Social Media*.

Palabras clave: memes, redes sociales, humor, bienestar psicológico, neurociencia cognitiva

Introduction

Contemporarily, social media has become as common as reading your morning newspaper. As social media emerges, new modalities and behaviors rise with it. In social media, the custom of sharing “memes” has become massively popular. Memes are usually humorous images shared massively in social media that contain a satiric repertoire and a social critique. These images are user-generated and are created specifically for a target audience that could only understand that “inside joke.” As meme-sharing gains popularity in social media, contents regarding socio-political and psychological discourses are also shared. Therefore, social sciences and other areas are studying the social phenomenon which is sharing memes on the internet. As technology emerges, studies in the social, psychological and behavioral sciences are pertinent to understand its underlying cognitive and social processes.

Statistics of Social Media Use

According to Hootsuite’s Global Report in 2019, there are 4.388 billion internet users, which is 57% of the world’s population, having an annual growth of 9.1% (367 million). From these, 3.484 billion are active social media users, which is 45% of the population, which increased 9% (288 million) since the last year. From this statistical data, it is evident that more than half of the world’s population uses the internet and its use has become crucial in our modern reality. Also, the worldwide average of daily time spent using the internet is six hours and forty-two minutes, according to this survey. Nonetheless, this time spent decreased by 1.7% from last year’s stats. Although there was a decrease in time spent using the internet, the global average time of mobile internet users increased by 4.3% (three hours and fourteen minutes). Therefore, internet use has become part of our daily routines.

Most social media users fluctuate from ages 18-24 (27%) and 25-34 (32%), which means its audience is mainly youth bringing a total of 59%. Knowing that social media’s audience is very young, these users can be classified in the Millennial generation.

The global daily time spent in social media is two hours and sixteen minutes, which has grown 0.7% from last year. Hence, social media is used daily and it is part of

one's daily routine. The top three most used social platforms are Facebook (2,271 million), YouTube (1,900 million), and WhatsApp (1,500 million). Specifically, Facebook's users increased by 9.6% from last year's numbers. Interestingly, these top three social networks offer services to (a) connect with others, (b) watch videos, and (c) instant messaging.

According to the 2018 stats recompiled by Hootsuite, in Puerto Rico, 83% of the population (3.05 million) are internet users and 53% (1.90 million) are active social media users. Nonetheless, active social media users decreased by 14% (300 thousand) since last year. Also, the total number of monthly Facebook active users in Puerto Rico is 1.90 million, which decreased 14% since its last year, and 95% access it through mobile. Although social media use is widespread in Puerto Rico, studies exploring this area are very scarce, especially those about meme sharing. Also, due to the political instability in the Island ever since Hurricane María, and its historical colonial status, meme sharing has been prevalent. Humor and its online expression have been critical factors for protests and social movements such as feminism, the LGBTQ+ community, causing the resignation of the ex-governor Ricardo Roselló, and many other actions. From these social movements, one observes how humor and satire are used not only for socio-political criticism but also for releasing the psychological tensions that are caused by the instability in the island.

Memes: A Transdisciplinary Concept

But what is a meme? The term meme was introduced in 1976 by British evolutionary biologist Richard Dawkins in his work *The Selfish Gene*. The word meme comes from the Greek *mimēma* which means 'that which is imitated' (Oxford University Press, 2019). According to Dawkins (2006), memes are a cultural parallel to biological genes. Dawkins calls memes selfish genes because they are in control of their own reproduction and thus serving their own ends. They act just like genes, but in culture: they carry information, are replicated, are transmitted from one person to another. Also, they can evolve, mutating at random and undergoing natural selection, with or without impacts on human fitness such as reproduction and survival.

Following Dawkins, in culture, memes can be an idea, a skill, a behavior, a phrase, or a fashion. These are copied and transmitted through social interactions when one person copies a unit of cultural information comprising a meme from another person. Memes are transmitted and replicated through all forms of communication: verbal, visual, or electronic transmission. When Rogers (2019) examines Dawkins, he

expresses that those memes that are most successful in being copied and transmitted become the most prevalent within a culture.

Now, Dawkins (2006) establishes three different types of natures for memes, which are harmful, benign, and beneficial. Those which are harmful are compared to parasites or viruses of the mind; once assimilated into the human mind, their chief purpose becomes their own replication, with humans having little or no control over them. On the other hand, benign memes can become dangerous because, after they have been seeded in the human mind, they lend themselves to being misused or abused. Rogers (2019) offers an example through memes associated with religious or political ideas. These memes may benefit the people who carry them; but, those same memes, when imposed on people whose religious or political memes are different, may cause harm, such as through the loss of religious traditions or social or political stability. Memes associated with religious or political ideas may also be abused, as in the case of religious cults or extremist groups, which can result in the death of individuals. Third, beneficial memes could include those that promote human health and survival, such as memes associated with hygiene.

Internet Memes

In the early 21st century, Internet memes, gained popularity, bringing renewed interest to the meme concept. Internet memes are spread from person to person through imitation, typically by social media, and various types of Web sites. These are replicated through pictures, videos, or other media containing cultural information that, rather than mutating randomly, have been deliberately altered by individuals. These images of humorous content represent the pop culture of the moment. For example, if a national event occurs, internet users utilize humor to congregate the masses to be either in opposition or in favor of the event in question, and facilitate a sense of community (e.g., the resignation of ex-governor of Puerto Rico, Ricardo Rosselló).

According to Rogers (2019), their deliberate alteration violates Dawkins's original conception of memes, and, for that reason, Internet memes are considered by Dawkins and other scholars to be a different representation of the meme concept. Therefore, the modern definition of a meme is "an image, video, piece of text, etcetera, typically humorous in nature, that is copied and spread rapidly by Internet users, often with slight variations" (Oxford University Press, 2019). Slowly, these images evolve and adapt to our sociocultural and historical context (see Figure 1). Thus, memes are massively shared in social media and are referred to in daily life.

Memos are utilized in classrooms for presentations, lectures, and syllabi to add a humorous, yet relevant, tone in the aula. Additionally, these images are used in propaganda, commercials, and ads for products. Furthermore, references to memos are also included in movies and series in popular culture.



FIGURE 1: MEME TIMELINE AND EVOLUTION

NOTE. IMAGES, NAMES AND DATES WERE CONFIRMED BY WEBPAGE AND MEME DATABASE KNOW YOUR MEME, FOUNDED IN DECEMBER OF 2008.

SOURCE: KNOW YOUR MEME DATABASE, [HTTPS://KNOWYOURMEME.COM/](https://knowyourmeme.com/)

Memos in Psychology

The psycho-social implications of sharing memos are just starting to be studied. Nonetheless, there are studies regarding the cultural effect and impact of memos in the human being. Among these, there are studies about memos and mental illnesses, Facebook use and well-being, and the types of humor that are used and shared on Facebook. According to the literary revision, it has not been studied about meme sharing and psychological well-being. Therefore, there is a necessity to research more information about the psychological mechanisms that underlie the practices of sharing memos in social media.

Among these studies, it has been researched how memes (from Dawkins's biological perspective) affect mental illnesses. Specifically, Hoyle Leigh (2010) explains in his book, "while memes enter the brain through physical sensations, memes are bits of information, and like all information, a meme can be transcribed and translated into different languages and physical sensations" (p. 21). Leigh explains in his book that memes work like epigenetics because these are environmental factors that influence one's gene expressions over time.

There is previous research about social networking and its interactions with human social relations. Kross and colleagues (2013) studied how Facebook use predicts declines in subjective well-being in young adults. Even though it was implied that there would be a negative psychological effect on using this social network, they explain that "direct social network interactions led people to feel better over time" (p. 4). According to their results, they clarify that "Facebook use continued to predict significant declines in well-being when controlling for loneliness (which did predict increases in Facebook use and reductions in emotional well-being)" (p. 4). From this study, it can be determined that Facebook use may cause a decline in well-being, but it can reduce tensions and lead to more use. Therefore, it can be questioned how Facebook use can decline well-being yet be used to reduce tensions.

Youth, or usually called Millennials, have a constant challenge of time management in the modern world. Nonetheless, they continuously look for bettering themselves and fulfilling their needs through social networking. Botterill and colleagues' (2015) study done with undergraduate college students in Canada found that participants' interest in socialization surpassed their use of media for individualized pursuits such as self-expression, self-improvement, or competitive gameplay. The authors concluded that "the extensive use of social media by millennials is a symptom of the challenge of social synchronization in fragmented times" (Botterill et al., 2015, p. 549). By this, they mean that due to the rush of modern daily life, youth rely on social media to battle these challenges.

Another study (Taecharungroj & Nueangjamnong, 2015) found that the most shared memes on Facebook are those that are self-defeating. According to the author, these "memes have a distinctive ability to meet the need of the people to communicate and express one's own thoughts and feelings" (p. 300). These types of memes are shared in search of liberating psychological tensions by joking about it. By sharing humorous content about a topic that causes emotional distress, one can feel better about the issue and also feel identified with others that are going through similar situations. Relating this to Puerto Rico, sharing jokes and satirical images about the

political problems of the island promotes talking and debating about the current problematics thus searching for a possible solution.

Memes are humorous images that are shared in social media. It is hypothesized that by sharing this humorous content, there can be a relief of psychological tensions. The relief theory states that people experience humor and laugh because they sense stress has been reduced in a certain way. Humor use results as a release of nervous energy. This tension reduction may engender humor by lowering the state of arousal (the “jag” theory) or increasing the arousal (the “boost” theory), depending on the perspective. Some elaborations of the relief theory hold that humor may result from releases of energy that subconsciously overcome sociocultural inhibitions (Meyer, 2000).

According to our hypothesis, the release of these psychological tensions will lead subsequently to psychological well-being. There are six distinct components of psychological well-being. Self-Acceptance can be defined as the positive evaluations of oneself and one's past life. Second, Personal Growth is a sense of continued growth and development as a person. Third, Purpose in Life is the belief that one's life is purposeful and meaningful. Fourth, Positive Relations with Others is the possession of quality relations with others. Fifth, Environmental Mastery is the capacity to manage effectively one's life and the surrounding world. Lastly, Autonomy is the capacity that one a have sense of self-determination (Ryff & Keyes, 1995).

The process of internet use is not merely social; it is also biological. These online social interactions utilize various neurological mechanisms and promote its recurrent use. Especially when we talk about sharing memes online, there is a reward mechanism by using humor for the release of emotional stress. These processes need to be studied more in the social sciences because of the historical and political situations happening worldwide. Memes are more than just a simple joke; they carry social critique, political discourses, and are a tool for many social movements. By analyzing online meme sharing, social scientists can recompile rich data about many social dynamics and criticism.

The Brain and Social Media

Although social media can elicit positive consequence, exploring the effects of social media on the brain is especially relevant considering that social media use can

develop into behavioral addiction, and can contribute to poor academic performance, job loss, and declines in wellbeing (Meshi et. al., 2015).

The Emerging Neuroscience of Social Media is a framework proposed by Meshi et al. (2015) to study social media through the perspective of the neurocognitive sciences. These researchers explain that people use social media for two primary reasons: (i) to connect with others; and (ii) to manage the impression they make on others. By social networking, one interacts with others and create groups. According to the authors, these groups increase the potential not only to survive, but also thrive. Inside these groups strong social bonds are made and subsequently enhance psychological wellbeing and protect individuals from feelings of loneliness and depression (Meshi et. al., 2015).

Social media provides a platform for people to satisfy fundamental social drives. It allows us to connect with others and groom our reputation via at least five key behaviors (see Figure 2). The modern human can attempt to satisfy basic social needs through social media via five key behaviors. These behaviors rely primarily on three domains: social cognition (i.e., mentalizing), self-referential cognition, and social reward processing (see Figure 3).

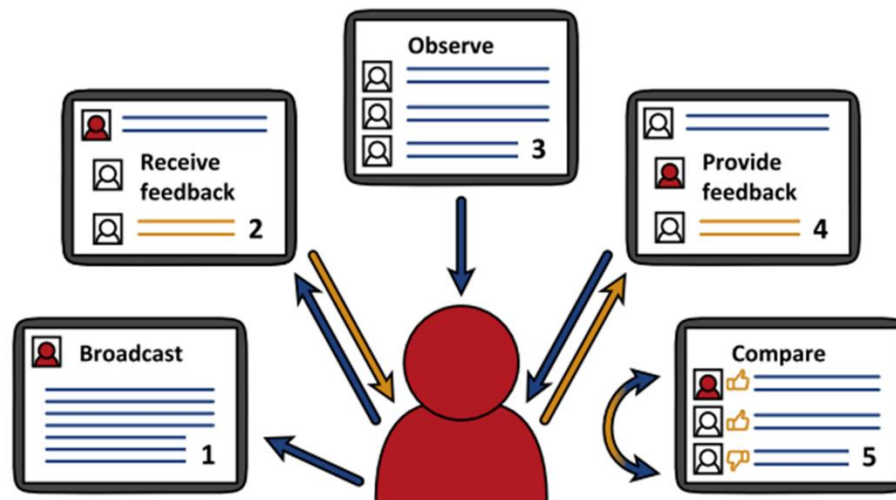


FIGURE 2: FIVE KEY SOCIAL MEDIA BEHAVIORS

NOTE. SOCIAL MEDIA USER CAN: (1) BROADCAST INFORMATION; (2) RECEIVE FEEDBACK ON THIS INFORMATION; (3) OBSERVE THE BROADCASTS OF OTHERS; (4) PROVIDE FEEDBACK ON THE BROADCASTS OF OTHERS; AND (5) COMPARE THEMSELVES WITH OTHERS.

SOURCE: ADAPTED AND REPRODUCED, WITH PERMISSION (MESHI ET AL., 2015).

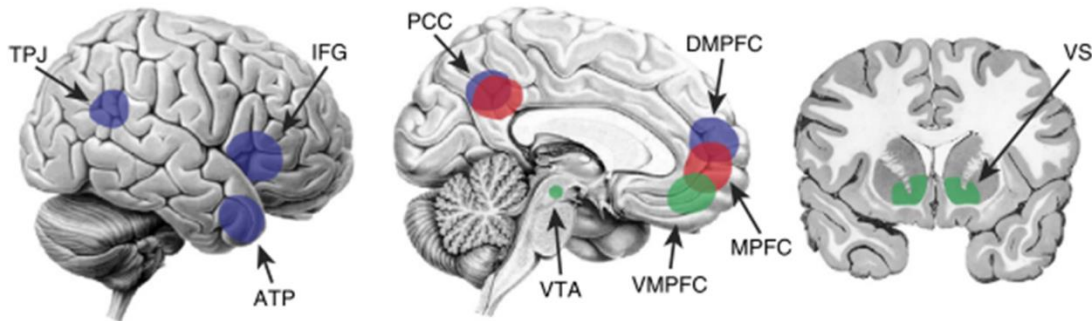


FIGURE 3: PROPOSED BRAIN NETWORKS INVOLVED IN SOCIAL MEDIA USE

NOTE. (I) THE MENTALIZING NETWORK (BRAIN REGIONS IN BLUE); DORSOMEDIAL PREFRONTAL CORTEX (DMPFC); TEMPOROPARIETAL JUNCTION (TPJ), ANTERIOR TEMPORAL LOBE (ATL), INFERIOR FRONTAL GYRUS (IFG), AND THE POSTERIOR CINGULATE CORTEX/PRECUNEUS (PCC); (II) THE SELF-REFERENTIAL COGNITION NETWORK (BRAIN REGIONS IN RED); MEDIAL PREFRONTAL CORTEX (MPFC) AND PCC; AND (III) THE REWARD NETWORK (BRAIN REGIONS IN GREEN); VENTROMEDIAL PREFRONTAL CORTEX (VMPFC), VENTRAL STRIATUM (VS), AND VENTRAL TEGMENTAL AREA (VTA).

SOURCE: ADAPTED AND REPRODUCED, WITH PERMISSION (MESHI ET AL., 2015).

A Society Full of Memes

Examining memes from a transdisciplinary approach is necessary to expand current research about modern societal values, cultures, and interactions. Memes as a coping mechanism in tragedies or times of uncertainty have been studied (Flecha Ortiz et al., 2020; Gil-Rodríguez, 2018; Ríos Picorelli, 2020; Rodríguez, 2018; Rodríguez Soto, 2020), especially in Puerto Rico. These studies compound research about how Puerto Rican individuals come together in times of austerity, colonialism, political injustice, corruption, and uncertainty. Humor, across the literature, is exhibited as a coping mechanism and liberation of psychological tensions. Furthermore, creating, sharing, and interacting with these political and humorous memes strengthens the sense of community in Puerto Rican culture.

Future Research

For future studies, it is recommended to look further into the mechanisms embedded in the social interactions that is sharing memes online in social media. Instead of focusing in pathologizing internet and social media use behaviors, it would be interesting to explore the positive health behaviors inside social media use. Additionally, looking at the political heuristics of meme usage as a form of resistance

across movements such as Black Lives Matter, political parties, the LGBTQ+ community, and raising awareness of the gender equality movement. Also, examining rising social media apps such as TikTok and how it has impacted the conceptualization of memes is also recommended. Lastly, it would also be interesting to examine how these virtual social interactions have facilitated to raise awareness of social issues and stigmas such as mental health, the gender binary and norms, and racial awareness.

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