Leveraging the power of internet memes for emotional contagion as effective strategy for environmental communication / Использование возможностей интернет-мемов для эмоционального заражения в качестве эффективной стратегии экологической коммуникации

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Аннотация: Предметом данного исследования выступают вопросы и возможности

Аннотация: предметом данного исследования выступают вопросы и возможности эмоциональной коммуникации с окружающей средой, взаимодействие между эмоциями, проэкологическим поведением и коммуникацией. Роль эмоций в современной экологической коммуникации особенно важна, поскольку они могут уникальным образом влиять на мысли и действия, часто дополняя когнитивное восприятие. Понимая взаимосвязь между эмоциями и экологической коммуникацией, исследователи и практики могут разрабатывать более эффективные стратегии для решения экологических проблем и поощрения проэкологического поведения. Цель статьи – восполнить пробел в исследованиях в области экологической коммуникации путем интеграции достижений в области наук об эмоциональном заражении для понимания механизмов и путей через социальные сети, с помощью которых эмоции влияют на проэкологическое поведение. Методология работы – обзор исследований эмоций в кризисных ситуациях и экологической коммуникации, роли социальных сетей и интернет-мемов в продвижении проэкологического поведения посредством эмоций и эмоционального заражения. Результаты сгруппированы по трем направлениям: теории эмоционального заражения; анализа основных факторов, влияющих на эмоциональное заражение; изучении эмпирических данных о стратегиях коммуникации. В статье делается вывод о том, что эмоциональное заражение интернет-мемами является правильной стратегией, особенно для новых поколений, в условиях кризиса и экологической коммуникации. Предлагается вирусный эмоционально-экологический дискурс, особенно интернет-мемы в экологических коммуникациях и кампаниях в социальных сетях, в качестве эффективной коммуникационной стратегии, которая может усилить социальные чувства, углубить эмоции, воспитать чувство общности и создать коллективные эмоции, которые могут привести к проэкологическому поведению и совместной деятельности. Это исследование вносит вклад в науку, подчеркивая значительную роль эмоционального заражения и интернет-мемов в экологической коммуникации, подчеркивая их потенциал влиять на общественное отношение и поведение по отношению к экологическим проблемам и обеспечивая всестороннее понимание того, как эти факторы могут быть использованы для разработки эффективных коммуникационных стратегий, которые приводят к экологическим действиям, предлагая ценную информацию для исследователей и практиков в области экологической коммуникации и антикризисного управления.

Ключевые слова:

Introduction

Environmental challenges are a growing concern for the planet that have serious consequences for human health and the environment [1]. Large challenges like these will need the assistance of millions of individuals, as well as different expertise. As a result, environmental rehabilitation is rapidly becoming a communication and rhetorical challenge as much as a technical one. It is important to raise awareness of these issues and to find solutions to reduce their negative impact.

From the perspective of social psychology, environmental problems are more behavioral and cultural than the result of technological development and the industrialization of societies [2, p. 201]. Certainly, these advancements have played a role in the destruction of the

environment, but the individuals' beliefs and values, cultural norms, and social institutions that guide these activities are more significant. Millions of decisions made at the individual, organizational, and national levels by customers, engineers, managers, and others are the root cause of land degradation. Some argue that environmental issues stem from a conflict between personal and communal interests, a concept known as «public tragedy». However, this is not the entire picture because, in many circumstances, individual and community interests are intertwined. Most individuals appear to be concerned about their environmental effects and usually think that the land should be handed down as well as they have inherited it to future generations. Nevertheless, their individual and collective behavior contradicts this belief. Despite widespread concerns about the environment, human behavior remains destructive. That is, regardless of knowing and believing what they «should» do, individuals ultimately make decisions based on what they «want», which may harm the environment. Thus, there seems to be a gap between what they «want» to do and what they think they «should» do. While they know exactly what to do, when they have to make a decision, they show behavior that may be contrary to their values [3].

Several studies have suggested possible solutions to the conflict between individual desires and environmental actions. Appealing to anticipated emotions, increasing self-control, considering the role of emotions, promoting pro-environmental attitudes, providing information, and creating a positive environment are some of the answers [4, p.83],[5]. As stated by Turunen and Halme, at least two major approach may be used to explain how sustainability information turn to decisions. The first is to provide more information and understanding about sustainability, which might elicit cognitive reactions. The second approach is to appeal to emotions, which can activate emotional components that lead to sustainable behaviors [6].

Corral-Verdugo noticed that emotions influence pro-environmental behavior more than intentions, while both accounted for over half of the diversity in pro-environmental behavior [2]. As a result, recognizing the significance of emotions in determining attitudes and behaviors toward the environment is an important aspect of responding to environmental challenges. Hence, more empirical research is needed to understand how environmental emotional messages impact attitude and behavior, as well as to identify strategies to elicit public opinion that lead to actions on environmental issues.

The media can be a powerful tool for shaping emotions and influencing behavior, as it can construct and normalize emotions, shape public opinion, create culturalization, meet educational needs, and influence how individuals perceive and express their emotions [7, p.25]. As it stands, media is an effective tool for regulating pro-environmental behavior and transmitting cultural habits and values that are compatible with the environment via affecting emotion and intentions by using words, music, color, and so on [8, p.38]. Baudrillard's attention to the new dimensions of society and power seen in media and signs is significant [9, p.84]. Social media has become an integral part of the media sphere and is now considered a form of mass communication. It has enabled users to connect with people from all over the world, creating a sense of global community. Social media has emerged as a powerful tool for shaping public opinion on a wide range of issues, from politics to social and environmental issues [10]. Social media influences political opinions, tastes, preferences, cultural standings, and changes in collective behavior, which of course can affect pro-environmental emotions and behavior as well [11, p.3]. Studies have shown that social media can increase conservation funding, incite policy changes, and lead to beneficial

outcomes by promoting pro-conservation human behavior [12, p.15],[13, p.377]. It could additionally be deployed to promote ecological campaigns and link individuals locally and worldwide on environmental concerns [14]. By sharing information about campaigns and events, social media can help mobilize people to take action and participate in pro-environmental activities. Social media can also be used to build social relations around environmental issues, connecting people who share a common interest in protecting the environment [15, p.140],[16].

On social media, internet memes have become a common practice to convey ideas and emotions [17, p.751-752]. Internet memes, a popular kind of social media posts that usually consist of humor with catchy photos and words, have the ability to become viral rapidly, which makes them an especially effective tool for spreading awareness of environmental issues [1]. Internet memes that have taken over social media often act as a gateway for the citizen to involve in controversial issues. They are able to condense complex issues into manageable portions, and thereby creating chances for public discussion and help public process serious environmental threats, such as climate change, by making light of the situation and providing a way to manage emotions. Internet memes play a crucial role in environmental communication by educating and shaping perspectives, fostering social interactions and empowerment, and mobilizing users for social action [17, p.759],[18, p.234].

Considering the role and potentials of social media and internet memes as a means of informing and modifying attitudes, emotion and behaviors, and according to the key role of emotions in pro-environmental behavior, we claim that, in order to properly leverage the potential of social media to mobilize pro-environmental action, we need to pay close attention to the mechanisms underpinning emotion elicitation as well as their influence on human mental processes and behavior through these media. This includes expanding our knowledge about the mechanisms and pathways via social media by which emotions impact pro-environmental behavior. Since social media post such as memes can be a channel for emotions to influence pro-environmental attitudes and actions [17-19], digital emotional contagion has been proposed as one of the key social media mechanisms through which emotions impact behavior [20, p.316]. Emotional contagion as an effective and appealing communication approach and its influence on group behavior have been studied in various disciplines [21, p. 2312] [22, p. 6028],[23]. However, most of the relevant research regarding digital emotional contagion has been done outside the context of environmental communication. We argue that research in the emotional contagion sciences has made considerable progress over the last decades, which has yielded important insights into this mechanism, and that the field of environmental communication could benefit from integrating these advances to a greater extent. Though, due to the specific nature of environmental communication, particularly in social media, the emotional contagion and its impacts may differ from those elicited in other domains. Therefore, before applying these insights to the design of large-scale behavioral interventions, more topical digital emotion contagion research in the environmental communication domain is needed. In short, in this paper, we address this research gap and, via an exploratory review of previous research, demonstrate how social media campaigns and communication strategies particularly internet memes, through emotions and emotional contagion, can improve our environment.

Pro-environmental behavior and emotion

There are several terms in the literature that are equivalent to pro-environmental behavior, such as «pro-ecological behaviors », «environmentally friendly behavior », «green behavior

», and «sustainable behavior », all of which have shared characteristics in numerous aspects and there doesn't appear to be an explicit dispute or argument amongst researchers over its meaning. The prior and commonly employed definition refers to behavior that minimizes the detrimental influence of individual actions on the environment and later expanded to limit environmental harm and even benefit it. Further, considering the standpoint of sustainability, the definition updated to activity that promotes the environment's sustainability by preserving and protecting it [24]. Various approaches have been employed to classify pro-environmental behaviors, such as private and public-sphere pro-environmental behaviors, low and high effort pro-environmental behaviors, on-site and off-site pro-environmental behaviors, and place-specific and general pro-environmental behaviors [24, 25]. Kollmuss and Agyeman introduced a classification for pro-environmental behavior. They identified two types of pro-environmental behavior: direct (recycling, driving less, purchasing organic food) and indirect (money donations, political activity, and educational outreach) [26, p.240].

Environmental behavior is affected by a wide range of factors. External and internal elements, notably demographic and psychological factors, have important influences on pro-environmental behavior. Researchers have presented several categories of factors affecting environmental behavior. Stern proposes four types of causal variables affecting environmental behavior: attitudinal factors, including norms, beliefs and values: these factors provide a general background for pro-environmental intention, which in turn can influence all environmental behaviors of a person. Contextual factors, including interpersonal influences, community expectations, advertising, government laws, other legal and institutional factors, costs and temporary incentives, physical difficulty of some behaviors, capabilities and limitations provided by technology and the artificial environment, the amount access to facilities required for behavior, and various characteristics of the broad social, economic and political context. Personal capabilities including knowledge and skills: having enough time to perform behavior, general capabilities and resources such as literacy, money and power and social position, demographic variables such as age, education, race and income can be good indicators for these personal capabilities. Habit and behavior: habit to the standard performance method is a key factor affecting meaningful and organized environmental behavior [26, 27].

Environmental sociologists and psychologists continuously propose models to explain environmentally responsible behaviors that consider various factors to explain these behaviors; paying attention to emotions and its connection with environmental values is a new issue that has been addressed in some researches [28]. While Ajzen's planned behavior theory (PBT) and the theory of norm activation as the most dominant theories about pro-environmental behavior, propose that attitudes, subjective norms, and perceived behavioral control are the main determinants of behavior [29], Duran et al. Argue that emotional aspects should also be included in the theory. They found that anger was a more important predictor of low usage of vehicle than perceived behavioral control. This suggests that emotional aspects should be considered in addition to the constructs of PBT [30]. Corral-verdugo noticed that emotions influence pro-environmental behavior more than intentions, while both accounted for over half of the diversity in pro-environmental behavior [2].

In short, several studies investigations have emphasized the significance of emotions in pro-environmental behavior [2,4,5,30-36]. Guilt, empathy, and anger are some of the emotions that have been found to be positively associated with pro-environmental behavior

[5],[33-35]. Group emotions and moral beliefs can also influence pro-environmental behavior by creating a shared identity and sense of responsibility among individuals [36]. However, rather than seeing emotions as simple behavioral levers that directly influence behavior, it is necessary to understand the underlying mechanisms in order to leverage emotions via pro-environmental communications to achieve the intended pro-environmental actions.

Emotion, Emotional Contagion and Digital emotional contagion:

Emotions are grounded on values and concerns [37, p.76]. Behaviors rooted in emotion and feeling. Emotion may have considered as a form of language that's extensively spoken and understood. An emotion is an internal and physical state associated with a wide variety of internal or external sense and actions [38, p.76]. An emotion is a physical stimulation with cognitive extent that depend on a particular terrain. As a process in which understanding a series of stimulants allows a cognitive assessment to name and identify a particular state of feeling which lead to emotional, physical and behavioral responses. Emotions are powerful, transitory reactions to certain stimuli in one's surrounding. As a result, in order to experience emotion, something in the environment, such as a natural catastrophe, must have occurred or altered [38]. Emotions, according to scholars, comprise six domains: subjective experience, physiological, neurological, expressiveness, cognition, and motivation, which all alter depending on the emotion [38]. All of this can explain why one of the most significant indications of emotions is their contagiousness, which leads to the transfer of similar feelings and demeanors, a phenomenon known as emotional contagion [20, 22, 39, 40, 41].

In fact, this phenomenon explains that exposition to the other people's emotion could lead to emotional propagation and affects people by the same emotion [39]. Some researchers have likened emotional contagion to contagious of diseases that spread in social networks over a period [42]. One of the important factor in emotional contagion study is that emotional contagion most frequently occurs at a significantly lower consciousness, grounded on automatic processes and physiological responses. In other words, according to what Hatfield has defined« emotional contagion is a process in which through the conscious or unconscious induction of emotion and behavioral, a person or group influences the feelings or demeanors of another person or group» [43]. Hatfield argue, the degree to which emotional contagion occurs is intermediated by attentional processes, with lesser contagion being when further attention is allocated [43]. another important factor mentioned in emotional contagion study is that, there's strong substantiation to anticipate the degree of emotional contagion by two dimensions of emotion, that are, emotional valence (pleasure-displeasure) and emotional arousal (high-low activation/calming-arousing) [20]. There are emotional factors such as intensity, arousal, and pleasure can influence ad sharing intention [44].

In other words, people not only observe others emotions, but those emotions also affect their own emotional expressions and emotional state. Thus, emotional contagion is a type of social influence that can occur between two persons but also in larger groups and social networks. Because emotions impact how people think and behave, emotional contagion has effects that go beyond how individuals feel [45]. Purpose of research on emotional contagion is to explain how emotions are disseminated among people in social interactions and how catching another person's emotions affects the dynamics of the social interaction.

Studies show that emotion on online media such as social media, like in the offline world, can spread from one person to another, which is known as digital emotional contagion [46,20]. Thus, social media platforms contribute to transmit of emotion online and posterior emotional contagion. This digital emotion contagion occurs when a perceiver's feelings come more similar to an expresser's feelings over time due to the influence of expresser's feelings [45]. It should be noted that digital emotion contagion should be understood as intermediated emotion contagion, where the digital media companies serve as its intercessors that lead individualities to be exposed to further intense feelings at an advanced frequency [20]. This additionally pertains to the revenue models of digital media corporations and how their social media systems are structured. For instance, it's legitimate for digital businesses to encourage greater vocalization of emotions since doing so keeps users on the platforms longer, providing more opportunities to display promotions and information collection [20]. A key factor in the explanation of why content charged by emotion spreads quickly on social media is the process by which that emotion attracts attention [47]. It has suggested that ruling of the emotional intensity is vital in the technology emotional system, whereas in the conventional system, emotional traits dominate over all other factors [48].

Social media can facilitate emotional contagion by allowing individuals to share emotional content, such as internet memes, with a large audience. With the rise of user-generated content on social media expressing emotion becoming more intense and on a much wider level, and due to the contagiousness of emotions, faster and on a broader scale of emotional contagion also occurs.

Theoretical Perspectives

As articulated by Habermas, environmental policy, are motivated by both interests and values. Fear of environmental devastation and the decline in the level of well-being are examples of interests. Ideals and moral claims might include a better future for new generations. Furthermore, reciprocal linkages between interests and ideals, culture, and social structure are significant in determining the trajectory of environmental policy [28, p.112]. As a matter of fact, interests and values have the ability to ideologically impact and change moral claims; yet, the advancement of knowledge and ethical concerns might result in a clear redefining of interests and values. This is also true for environmental concerns [49]. From the standpoint of modern social theory, environmental degradation is seen as a critical issue. How humans value, utilize, and think about the environment is becoming a more prominent and significant component of modern social theory. Therefore, in the modern social theory, environmental conservation is only viable if we understand how and why the environment is destruct. To put it another words, in order to intervene and avoid environmental catastrophe, one must understand the conditions under which environmental regulations have been effectively deployed, as well as the constraints and restrictions that have been imposed. One of the conditions that every environmental policy must meet is the presentation of appealing and realistic social and economic alternatives [49].

The media has the ability to influence the people. In other words, through delivering news, the news media influences what the public thinks about. Lippmann (1965) stated that mass media shapes «the images in our minds» [50]. The media, by their persuasive power, are capable of developing and cementing the ideological system in society to the point that the communication elites may be called the producers of the dominant ideology. Indeed,

through conceptualizing and comprehending the dynamics of culture, as well as its interaction with environment and society, the media contribute to the construction of social perceptions and the cognitive process of information. In this regard, conceptualization and role-play through the media involves advancing the society's common values and thoughts, as well as the religious and ideological foundations in the society's belief system, which take place through the processes of construction and production (as a cultural-media action), transfer and distribution (via education), and receiving and consumption of knowledge and thought [51]. As an educational tool along with a special educational method, the media can enhance public knowledge, awareness, empowerment, and information literacy, while conserving the core of culture, promote its sub-layers and build an information society by outlining the skills and capacities required for conscious and independent growth in the new communication environment (digital, global, and multimodal) [52]. The media has a significant impact on people's interpretations of acceptable and unacceptable behavior, their perception of the social and physical environment, and society's attitude regarding moral, emotional, and spiritual values in general, as well as on orienting them toward social judgments and criteria based on roles (gender, age, and status) and behavioral rules [53, p.160]. Such manipulation of public opinion in order to ideologically steer the societal knowledge and the internalization of social values with the aim of creating identity and semantics is a descriptive and interpretative media strategy. As a result, given the importance of the environment and its place in public and social culture, the media strives to teach the necessary skills to protect the environment, as well as how to use and apply new techniques to preserve the ecology, along with helping to form social practices and actions concerning the environment. They encourage people to gain the skills necessary to conserve the environment in their daily lives. By employing art and depending on new cultural foundations, the media foster public interest and excitement for learning, presenting a vision of a better world to the audience and therefore making people believe in their power via education [53, p.178].

The media, according to Gerbner's cultivation theory, fosters and reinforces a culture's attitudes and values while also preserving and promoting these values among its members. They also link these principles together. The media shapes people's opinions and perceptions of the truth in this way. The influence of the media message on the audience is emphasized by cultivation theory. Gerbner thinks that study signs and symbols, as well as how to mix them, offers the foundation for conveying meaning in many social circumstances. Media impacts (the study of behavior and social interaction by exposing the public to messages and altering perceptions, insights, beliefs, attitudes, ideas, and actions) are well known [54]. The cultivation theory idea has also been used to the study of new media. According to Morgan and Shanahan, by changing media technology, classic cultivation analysis approaches need to be adjusted but is still relevant [55]. In addition to their point of view, technologies for pro-environmental action model (TPAM) that was proposed by Ballews et al. Explains how social media's different roles (i.e., informative, social, and immersive) motivate individuals to participate in environmentally responsible behaviors while coordinated with individuals' personal, social and contextual systems [56]. This statement could be conceptualized by Ajzen's theory of planned behavior, whereas, intentions impact behaviors, which are influenced by attitudes, subjective norms, and perceived behavioral control. It is considered that the greater a person's desire to undertake a specific behavior, more success is likely [57]. Therefore, social media by fostering and reinforcing a culture's attitudes and values toward environment could impact intentions and behaviors.

Media could potentially consider to be «affect generators » as well as organizations that develop «feeling rules» [58]. Simultaneously, they generate emotional dynamics that are contagious which in marketing terminology called viral. Emotions are evidently employed to garner attention in public communication, whether in journalism, marketing communication, or any diplomacy. The online interaction, with its dynamics and intensities, is best characterized in terms of «affective flows» [58, 59]. This affective flow could be explained by emotional contagion theory as a specific example of emotional sharing theory [60]. When an emotional experience is shared with a group of individuals, it becomes part of that group's common knowledge, according to the phenomenon of social sharing of emotions [60]. Secondary and tertiary social sharing can spread knowledge of an event experienced by a single person to many others, resulting in the event being a shared part of a rather large group of people. When an event is highly severe or many individuals are experiencing it at the same time, an event can be extended to even bigger groups of people, possibly even nations. This is especially true for emotions spread by mass media, and the internet. In this scenario, shared memory is no longer limited to a particular population, but might extend to a regional, national, or even worldwide scale. As stated by Van Kleef according to social information theory applied to information processing, people interpret the emotions associated with content, which impacts their behavior indirectly [61]. According to these views, humans absorb both information and emotions at the same time through interaction.

Therefore, based on reviewed studies and a theoretical framework, we propose that planning communication based on emotional contagion can lead to a higher speed of message propagation, a wider range of influence, and a more intimate sense of communication. By planning for emotional contagion in communication, a layer deeper than the message is added. This layer contains information about how the sender feels about the message and how the receiver ought to feel as a result. This communication requires the matching of specific words and contents with emotions, which could drive this contagion process.

Emotional contagion in pro-environmental communication

Pro-environmental behaviours, like any other social behaviour, are affected by social interactions. The important function of emotional contagion is that it smoothens social interactions and facilitates mutual involvement and emotional closeness, because it helps to synchronize and coordinate the interaction. Hence, using emotional contagion in communication act as catalyst which can lead to contagion of pro-environmental behaviour.

Since emotional contagion imbue a community's socially shared beliefs and values [62], such as pro-environmental principles, with affective meanings, thus making these values salient in everyday life. Emotions have a profound impact on how people think and behave, thus, emotional contagion can have long-term effects on environment. On the other hand, collective emotions resulting from emotional contagion are hypothesized to sustain themselves for longer periods than purely individual emotional reactions [63]. Thus, they may have a more prolonged impact on the behavior of individuals and groups that can be very important for sustainable environment. In a nutshell, emotional contagion lead to collective emotion which is different from individual emotions in terms of their level of analysis, appraisal process, salience, duration, and perceived emotional synchrony [63]. While individual emotions occur within a single person, collective emotions emerge from the emotional contagion among individuals who are responding to the same situation. Overall, a critical part of communicating environmental issues is framing, which includes not only the

message's substance but also the tone of voice and manner of communication [64]. Hence, pro-environmental communication tries to evoke emotions that can motivate people to take action towards a sustainable future [65]. However, the specific emotions used may vary depending on different variables such as target audience or cultural context [39].

In our present day, social media sites such as Facebook and Instagram include discussion sites, and Internet memes prevail in how people acquire, use, and spread content. Hence, digital emotional contagion can be a powerful tool for promoting pro-environmental behavior through this digital media platform. By understanding how emotions spread through these platforms, we can design interventions that use emotional contagion to encourage positive changes in pro-environmental behavior [66].

One of the factors that should be considered in crisis and environmental communication is the valance of emotions in emotional contagion. It was found that the presence of emotions and valence of the messages had a diffusion effect on user comments and engagement [66]. As suggested by Hatfield, positive emotions, such as awe, compassion, gratitude [67, 68], foster prosocial behaviors [69] in which empathy play a mediating role [70]. The studies suggest that usage of positive emotions can be motivational and engaging [71]. Furthermore, self-transcendent emotions, as well as, pleasant emotions can cause pro-environmental behavior [72]. Negative emotions, in contrast, also are infectious and can cause negative emotional contagion on social media [23]. But there are some disputes about the impact of negative emotions. According to some researches, negative emotions make people less optimistic about the possibilities of combating climate change and hence less willing to participate in climate action [70]. One the other hands, there are amount of studies, proved that negative emotions cause more emotional contagion than positive ones [21, 70]. Environment-related tweets are found to engage with collective action, with negative mood resulting from seeing negative tweets making participants more likely to report higher action [71]. Climate fear has been shown to be associated with pro-environmental behavior [72]. Sadness-inducing advertising has been shown to promote the urge to take pro-environmental action more than non-emotional commercials [73]. Emotional contagion strategies based on fear that create urgency and are memorable can be successful at motivating target action [74]. However, fear-based emotional contagion ads can have a detrimental impact on audience behavior if they are very intense or irrelevant to them, or they might interfere with mental health and promote improper conduct [75, 76].

Moreover, there is evidence that more complex emotions such as pride and guilt influence pro-environmental decision-making [5, 34]. According to Ferguson and Branscombe reading that global warming is caused by humans that is preventable to some degree, boosted feelings of collective guilt, which increased stated willingness to perform energy-saving actions and pay green taxes [34]. Pride and guilt are both emotions triggered by feelings of responsibility for an act, where pride can lead to positive feelings of worth and guilt lead to negative feelings of apprehension and tenseness [76]. Also, fear and hop has been studied by some researchers [77]. While fear can be used to communicate the urgency of the climate crisis and motivate people to take action, hope can be used to inspire optimism and a sense of possibility for a better future [78, 79].

Second factor that is determinant in crisis and environmental communication considering

emotional contagion is emotional intensity. Emotional intensity is a measure of arousal that is strongly related to emotional contagion. Emotional arousal is a physiological state that causes intense emotions like anger and fear and influences our behavior. This notion underpins most of the literature on emotional contagion [23]. Emotional contagion campaigns have been demonstrated to be effective on social media platforms, as users are more inclined to engage with information that elicits powerful emotions. [80]. Several academics have claimed that high-arousal emotions, such as surprise and excitement, have a stronger effect on online content sharing than low-arousal emotions, such as satisfaction and happiness, because they elicit a strong emotional reaction from the audience [81, 82]. Previous studies have shown that strong emotions expressed in comments of online news articles and product reviews can positively influence others' judgments and behaviors [83, 84].

Third important factor that should be considered is that, emotional contagion should be tailored to different target audiences by identifying the emotions that resonate with them [39]. Emotional contagion campaigns can be tailored to specific target audiences based on their age, gender, educations, culture, and other demographic factors [85-87]. There are several examples of emotional contagion campaigns that have successfully targeted specific demographics; For example, a study identified different emotional appeals that were effective for different age groups [87]. While, younger audiences responded better to excitement and adventure, older audiences responded better to nostalgia and sentimentality. another study found that younger adults were more likely to experience emotional contagion while watching happy videos, while older adults were more likely to experience emotional contagion while watching sad videos. By tailoring emotional contagion campaigns to specific target audiences, marketers can increase their effectiveness and engagement, leading to positive outcomes and increased brand loyalty. Differences in emotional contagion, interpersonal relationships, and social rewards have been found between males and females, indicating that gender can also affect social connectedness and, therefore, emotional contagion [86, 88]. According to Feldman et al., among people with low education, searching for information about environmental issues alone is more challenging and boring than people with high education, and therefore humorous content and news have a positive effect on their attention to these issues [89]. Cultural differences in emotional expressions and responses can influence empathic accuracy and physiological linkage, potentially affecting the degree to which emotional contagion occurs in intercultural interactions [85, 86]. It worth mentioning that the effectiveness of emotional appeals may depend on the individual's level of concern for the environment. Overall, emotional appeals can be effective in pro-environmental campaigns, but the specific emotions and their timing may need to be carefully considered.

In a nutshell, we can claim that social media campaigns that use emotional contagion to promote pro-environmental behavior are effective, but the specific factors that contribute to their success may vary depending on the context and target audience. It should be noticed that if the emotional response is too intense or not relevant to the audience, it could also be risky. So, it is important to be aware of the potential negative effects of emotional contagion. Therefore, the role of social media as the fastest and most accessible medium for emotional contagion campaigns that can create a strong emotional response in their audiences, leading to behavioral synchrony and positive outcomes, is undeniable.

Empirical Evidence: Emotional contagion and the power of internet memes and

Hashtags in social media environmental campaigns

Emotional contagion facilitates in Social media by allowing individuals to share emotional content, such as internet memes, with a large audience. Studies have shown that emotional content and internet memes in social media posts can influence the emotional state of individuals who read them, increasing the possibility of pro-environmental behavior [32]. In times of crisis, internet memes are employed as a vital practice to emotionally negotiate the crisis [90]. Viewing online memes related to COVID-19 increases positive emotions and could lead to effective action during a natural crisis [91, 92]. Additionally, another survey found that viewing memes about COVID-19 increased people's positive emotions and confidence in their ability to deal with the pandemic [93]. Memes have a way of connecting people with the same interests, allowing the construction of collective identity and norms [93] around environmental issues and leading to effective pro-environmental actions. The findings of Zhang & Pinto (2021) indicate that exposure to memes related to climate change raises people's desire to participate in online pro-environmental engagement related to climate change by mediating the role of empathy [17]. Also, a study on emotional framing in online environmental activism found that tweets with emotional content were more likely to be shared and had a stronger impact on public engagement with activist information campaign [71]. Therefore, social media campaigns, with emotional content particularly internet memes, can promote a variety of pro-environmental behaviors by triggering emotional responses in individuals via emotional contagion. These behaviors can range from recycling to conservation of natural resources and can be influenced by positive or negative emotions, as well as group emotions.

Contagious of positive emotions such as optimism, confidence, humor, and enthusiasm by social media contents could inspire others to take action. Spreading positive emotions lead to collective emotion, enable user to create a sense of community [94] and encourage others to join in their cause [95]. Campaigns against climate change frequently include animal images in their communications and memes because they may arouse emotion and strengthen citizen support for environmental activism. Memes used animal photographs that viewers may find charming and solicit sympathy from its viewer [17]. The prominent example is the world wildlife fund (wwf) that has been known for its effective campaigns that use emotional appeals to raise awareness about environmental issues [96]. In 2015, with the heating of various hashtags and popularity of social media, the world wide fund for nature (wwf) launched a campaign with the hashtag #endangeremoji to encourage audiences to save the lives of endanger species. This campaign has been successful in generating a lot of buzz on social media. The use of emojis as a way to grab people's attention and make them curious about the campaign were significant. In the text of the ad, showing animal emoji, states that «17 emoji animal are in danger», help them by re-tweeting this post." and invited the crowd to assist out by retweeting and registering. For every hashtag #endangeremoji posted on twitter, the institute is offering € 0.10 to support the species. Emoji characters are used over 202 million times on the social networking platform. The wwf sought to dedicate this popularity to environmental beneficially. Therefore, campaign planners came up with the idea of using 17 endangered emoticons to support wildlife and to save the lives of millions of monkeys, dolphins, pandas and so on [97]. This campaign provided a way to inspire the next generation to get involved. Using one of the largest social platforms, and highlighted the life of endangered species leaded to a lot of help be given to support and raise awareness. This is an example on how planning emotional communication via social media spread the message and by triggering emotional responses

engage people in the cause can lead to great contagion which result in environmental support and awareness. Emotional contagion is used in this campaign to activate interpersonal communication and fostering a sense of community to encouraging to get involved. There are other successful examples for this strategy: the #plasticfreechallenge [98] and #meatlessmonday [99] are two social media campaigns that encourage individuals to reduce their use of single-use plastics and meat. Additionally, the trashtag challenge encourages people to clean up littered public and natural spaces and share their before-and-after photos on social media using the hashtag #trashtag. The challenge encourages people to take action and contribute to a good cause [100]. These examples, shed light the impact that emotional contagion on social media has to increase positive mood, leading to greater cooperativeness and getting communities together to contribute to pro-environmental behavior.

Another process in which emotional contagion via social media help environment is creating a sense of urgency. Emotional contagion can also be used to create a sense of urgency and motivate people to take action. Lots of memes generated during COVID-19 that arise sense of urgency and encourage people to follow the rules. For example, during the COVID-19 pandemic, fear of viral infection put individuals in a sensitive state, which used to motivate people to take action to prevent the spread of the virus [62]. Urgency can be created by emphasizing the limited availability of a product or service, or by highlighting the negative consequences of not taking action [23]. For instance, a campaign might emphasize the negative consequences of not taking action to address a social or environmental issue. The #climatestrike [87], #beatplasticpollution [98], and #climateemergency are three social media campaigns use emotional contagion by fear and using a sense of urgency to encourage individuals and organizations to protect the environment. The fishman ad and the toilet bowl ad are examples of how the wwf uses fear and disgust to create an emotional response in people. These campaigns are designed to shock and scare people into taking action to protect the environment. One of its most horrifying campaigns was the 2010 series of print advertisements that showed an image of a shark, a snake, and a tarantula crawling out of a toilet bowl. The message conveyed was that the world's ecosystems are so fragile that even the most unlikely creatures can be affected by human activities. The campaign aimed to shock and scare people into taking action to protect the environment. The fishman ad by the wwf is another example of an emotional appeal that uses fear as potential driving forces that can make people change. The ad shows a man with a fish head, which represents the frightening consequence of climate change. The goal of creating the poster was to attract the attention of people and have them examine the variety of climate change issues discussed by the fund. Upon seeing the poster, a person was supposed to develop a strong emotional response and thus become more interested in looking up what the wwf has to propose in terms of reducing the negative effects of climate change. The fishman ad, uses disgust and fear to create an emotional response in people. Disgust is linked to fear in the wwf's ad in a sense that fear-driven behaviors are aimed at avoiding frightening consequences. The fishman represents a frightening consequence of climate change, and the ad is designed to make people feel disgusted and afraid. The wwf's campaigns show that emotions can be a powerful tool in raising awareness about important issues.

Beyond the prevalent technique of fear and shock, researchers and communication strategist are looking for new emotional approaches to convey environmental issues. One such option is to use humor. Humorous communication has lately acquired appeal as an emotional approach to addressing environmental challenges such as climate change. Humor

in social media can be an effective tool for promoting environmental awareness and inspiring pro-environmental behavior. Studies have shown that humor can stimulate a reaction to a pro-environmental message on social media, leading to a share or a declared intent to change behavior [101]. Pro-environmental humor is largely successful in influencing proximal cognitive outcomes such as attention, comprehension, and recall [102]. In the Kaltenbacher and Drews review study, humor such as internet memes has been demonstrated to improve message perception by encouraging participation, as a learning tool for disinterested audiences, and as a genuine environmentally important behavioral change. It can also alter people's perceptions of the human causation of climate change and may be used to pull away barriers, break down taboos, and promote awareness. But on the other hand, it may distract from important information or undermine the legitimacy of serious topics [92]. Overall, humor in social media can be a powerful tool for promoting environmental awareness and inspiring pro-environmental behavior. But since, humor can lessen anxiety and risk perceptions, it can limit intentions to engage in risk mitigation measures. Therefore, communicators must be mindful of the risks of utilizing humor and consider the type and communication forms, as well as the intended audience, for the successful application of humorous communication [92].

Furthermore, creativity have a significant positive link with emotional appeal. It means that content that are unique, surprising, unusual, artistic, and interesting had a substantial influence on generating emotional appeal from audiences. Unexpected and surprising content, such as internet memes, are more likely to trigger curiosity and engagement, which might generate positive emotions and motivate people to be more attentive [103]. Therefore, it can be claimed that sharing creative content generate positive emotional contagion and engagement that play an important role in durability of environmental messaging effects.

Based on our review, memes as creative multimodal communication technique that allows users to present and share their emotion, ideas and stories through visual images, which may also be humorous seems to be an effective tool for emotional contagion [22] in environmental communication. Internet memes have known templates that were familiar to its users. Their image, humors and creativities all has a tremendous influence on creating emotional appeal from audiences and engagement that might lead to generate positive emotions and since memes are potentially viral and contagious these positive emotions get contagion. Many studies have demonstrated the importance of visual environmental communication and memes as well, as essential themes for environmental conversation. Through memes, image remixes into cartoons and animations cultivated new audiences and reanimated a classic visual for new generations. Each sort of meme sends a different message to different audiences [104]. These emotional contagious phenomena proved particularly useful in igniting dialog and as a resource for influencing narratives about environmental challenges. The simplicity of developing and distributing material via memes makes it easier and more viable to engage in many types of environmental conversations and debates [105]. For instance, climate-related memes are becoming increasingly popular on Instagram. To raise awareness of systemic climate change challenges, these accounts utilize trendy meme forms with climate change-related messaging. Their anonymous authors try to make the material palatable for an audience unfamiliar with the issue. They recognize that comprehending the context might leave viewers feeling nervous, unhappy, or despairing. These authors feel it exists in the grey region between humor and sorrow, grabbing the public's attention and encouraging them to think about climate change. Their

objective is to overcome indifference and open up the conversation, while also ensuring that the information is easily digested by a larger audience. Users clearly had an emotional reaction to real-world imagery included in memes, however, the perception of these memes was dependent on users' sense-making processes. Users identified portions of the meme to which they related based on their own personal experiences [106].

Discussion

The environmental crisis is a global challenge that cannot be overcome without the presence and assistance of the media. Studies have shown that emotions influence pro-environmental behavior more than intentions, while both account for over half of the diversity in pro-environmental behavior [2,3,4]. Hence, due to this ongoing crisis, there is a pressing need for greater comprehension of how emotions influence crises, particularly environmental communication effectiveness. Although there has been much discussion about the use of emotion and social media in environmental communication, research has yet to build a framework for efficiently using various tactics for pro-environmental objectives. Therefore, this paper, by providing an exploratory assessment of prior studies, discusses the potential of social media to mobilize pro-environmental action through emotion, and digital emotional contagion has been highlighted as one of the key social media mechanisms through which emotions impact behavior. Through reviewing empirical evidence, we have outlined some distinct paths for contagion emotional-environmental communication strategies, including positive emotion, humor, creativity, creating urges, and particularly internet memes. Finally, we have offered digital emotional contagion-environmental communication, and internet memes as tools for effective communication strategies to improve our environment by creating an emotional climate in society that environmental communication could benefit from.

Internet memes facilitate contagions of emotion in social media by allowing individuals to share creative, nostalgic, humorous content with a large audience and influence the emotional state of their target group. Internet memes under emotional contagion are a powerful tool for defusing and promoting positive environmental change on social media. By spreading positive emotions, promoting positive values and attitudes, and creating a sense of urgency via emotional contagion, a strong environmental cause can inspire action and encourage positive change. Emotional contagion by internet memes is initiated through the establishment of shared collective emotion regarding environmental issues, and collective emotion leads to pro-environmental actions. Collective emotions resulting from digital emotional contagion are different from individual emotions in terms of their level of analysis, appraisal process, salience, duration, and perceived emotional synchrony. This is where internet memes on social media are able to organize successful campaigns, increase awareness through eliciting emotions, amend environmental policies, and safeguard the environment. Hence, using internet memes in social media can mobilize pro-environmental action through emotional contagion, smooth social interactions, facilitate mutual involvement and emotional closeness, and increase awareness about environmental issues. Studies have shown that exposure to memes related to environmental issues can influence individuals' emotional states, leading to an increased desire to participate in pro-environmental engagement and actions. However, it is essential to be mindful of the risks of utilizing humor and consider the type and communication forms, as well as the intended audience, for the successful application of humorous and generally emotional communication. Overall, our review highlights the powerful impact of emotional contagion in social media on promoting pro-environmental behavior and increasing environmental awareness.

Environmental campaigns that use emotional contagion and particularly internet memes to promote pro-environmental behavior can create more engaging and effective communication strategies, but the specific factors that contribute to their success may vary depending on the context and target audience. The valance and arousal of emotions, also are determining factors in emotional contagion which should be considered for effective environmental communication. Emotional engagement with the audience is necessary to accelerate improvement of environmental problems [30, 70] since, people's influenced by their emotions and feelings, and until they aren't passionate about something they don't do any action [4]. We need feelings and emotions as human innate characteristics for every choice and collective behavior involves strong emotions [38]. Therefore, when an emotion is aroused and experienced, it can be used as a platform for promoting and securing influence and compliance by pro-environmental behaviors [4]. Hence, affecting a target's emotional state, in conjunction with an environmental message, could affect that subject's attitudes. Review of studies have shown that emotional content such as internet memes in social media posts can influence the emotional state of individuals who read them and increase the possibility for taking pro-environmental behavior. In this way, viral emotional-ecological discourse are effective attempts to accelerate the development of ecological civilizing processes and behaviors. Since, social media has a role of funneling emotions which bringing together individuals and intensifying these emotions so that a critical mass is reached that can lead to a pro-environmental joint action. Mass engagement in social media can be used to foster convergence, togetherness, and the strengthening of the collective spirit [107]. People on social media under the effect of perceived collective emotion may change their detrimental environmental behaviors by engaging with or learning about environmental issues. It could additionally be deployed to promote ecological campaigns and link individuals locally and worldwide on environmental concerns [14]. From a sociological perspective, mass engagement in cyberspace has contributed to the evolution of civil society. The sharing of ideas and information in this area has helped to educate and raise awareness about a variety of social, cultural, and even political topics. Such activities may also be used to foster convergence, togetherness, and the strengthening of the collective spirit. People on social media, under the effect of perceived collective emotion, might change their detrimental environmental behaviors by engaging with or learning about environmental issues.

This research contributes to the academic community by shedding light on the importance of emotional contagion, particularly through internet memes in social media, as a powerful tool for effective environmental and crisis communication. The study provides a general overview of how emotions through media affect environmental behaviors and examines the key factors in the spread of emotions in environmental communication, including the emotional arousal and intensity of emotions as well as demographic and social factors. Reviewing empirical evidence on the functions of contagious emotional campaigns confirms emotional contagion, particularly through internet memes, as a successful strategy in environmental and crisis communication that should be considered when designing environmental communication. By understanding the factors that contribute to the success of emotional contagion campaigns, researchers and practitioners can develop targeted approaches to promote pro-environmental behaviors and raise awareness about environmental issues. The study also discusses the use of internet memes in view of their increasing popularity in social media and among new generations and their effective functions in environmental and crisis recommendations. Overall, this research provides comprehensive insights into the role of emotional contagion and internet memes in

environmental communication and helps develop effective strategies for promoting pro-environmental behaviors and raising awareness about environmental issues that can serve as a basis for further research in this area.

This study opens the door for future research to delve deeper into the intricacies of emotional contagion and internet memes and their implications for crises and environmental communication. Emotional contagion in environmental communication is a rich area of research with numerous opportunities for further investigation. Future studies in the field of environmental communication could explore the long-term impact of emotional contagion through social media and internet memes on pro-environmental behaviors. This could involve longitudinal research to understand how emotional contagion influences sustained behavior change and the adoption of environmentally friendly practices. Additionally, future studies could investigate the ethical implications of leveraging emotional contagion in environmental communication, considering factors such as informed consent, privacy, and the potential for unintended emotional manipulation. Furthermore, research could focus on developing guidelines and best practices for the responsible use of emotional contagion and internet memes in environmental communication, ensuring that they are employed in ways that are transparent, respectful, and aligned with the principles of ethical communication. Also, a study on the role of memes in raising awareness about environmental issues and promoting behavior change in different cultural and social contexts is useful.

Conclusion

The environmental crisis is a global challenge that cannot be overcome without the presence and assistance of the media and effective communication. Given the urgent need for public awareness and education in order to adopt appropriate environmental practices, strong professional communication is indispensable to overcoming environmental challenges. While environmental communication and journalism play an essential role in raising awareness and enhancing public understanding of environmental issues, there is an ongoing concern about how to convert this pro-environmental awareness and knowledge into action and behaviors. According to several studies, social media has been proven to be a key platform for culturalization as well as altering public perceptions about environmental concerns. On the other hand, emotions have been demonstrated to play an important role in pro-environmental communication due to their influence on attitudes, intentions, and behavior. But, the present environmental concerns require more than just views and hits; they require active participation. As a result, an efficient strategy for how advocates communicate this information is essential, and emotional contagion and accordingly internet memes are practical option. While simple and quick messages spread quickly, emotional contagion messaging may result in more significant change in our environment. That can increase involvement while also establishing a feeling of community and motivating pro-environmental behaviors. Particularly, for digital natives, Internet memes under emotional contagion in social media is an excellent tool for quickly disseminating information, assist build a deeper understanding of crisis regarding environment and inspire users to take to take pro environmental action. But it also has the potential to make users not take problems seriously. Therefore, it is crucial to carefully consider the content and tone of the memes used to ensure that they are appropriate and effective. Overall, emotional contagion and internet memes can be practical options for crisis and environmental communicating and motivating behavior change, but their use should be approached with caution and consideration.

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Результаты процедуры рецензирования статьи

В связи с политикой двойного слепого рецензирования личность рецензента не раскрывается.
Со списком рецензентов издательства можно ознакомиться здесь.

Представленная на рассмотрение статья «Использование возможностей интернет-мемов для эмоционального заражения в качестве эффективной стратегии экологической коммуникации», предлагаемая к публикации в журнале «Litera» на английском языке, несомненно, является актуальной, ввиду рассмотрения особенностей мемов, которые в той или иной степени связаны с экологической повесткой. Ввиду того, что экологическая повестка становится все острее, а число людей, которые задумываются над сохранением окружающей среды увеличивается, что вызывает необходимость конструктивного дискурса в этой области.
Как известно СМИ являются инструментом влияния на умы людей, кроме того, благодаря

современным средствам связи информация быстро распространяется, а часть контента становится вирусным.

Статья является новаторской, одной из первых в российском языкознании, посвященной исследованию подобной тематики в 21 веке. Из текста статьи не совсем ясен практический материал исследования, а именно автор не указывает объем отобранного языкового корпуса, методологию выборки и принципы обора. В статье представлена методология исследования, выбор которой вполне адекватен целям и задачам работы. Автор обращается, в том числе, к различным методам для подтверждения выдвинутой гипотезы. Используются следующие методы исследования: логико-семантический анализ, герменевтический и сравнительно-сопоставительный методы. Исследование выполнено в русле современных научных подходов, работа состоит из введения, содержащего постановку проблемы, основной части, традиционно начинающуюся с обзора теоретических источников и научных направлений, исследовательскую и заключительную, в которой представлены выводы, полученные автором. Отметим, что вводная часть не содержит исторической справки по изучению данного вопроса как в общем (направления исследования), так и в частном. Отсутствуют ссылки на работы предшественников. Кроме того, не понятны задачи и цель исследования, что не позволяет соотнести их с полученными выводами.

Библиография статьи насчитывает 107 источников, среди которых теоретические работы исключительно на русском языке, в том числе переводные зарубежные издания.

Считаем, что обращение к оригинальным трудам на иностранном языке, несомненно, обогатило бы настоящую работу.

К сожалению, в статье отсутствуют ссылки на фундаментальные работы, такие как монографии, кандидатские и докторские диссертации. Технически при оформлении библиографического списка нарушены общепринятые требования ГОСТа, а именно несоблюдение алфавитного принципа оформления источников. Высказанные замечания не являются существенными и не умаляют общее положительное впечатление от рецензируемой работы. Опечатки, орфографические и синтаксические ошибки, неточности в тексте работы не обнаружены. Статья, несомненно, будет полезна широкому кругу лиц, филологам, магистрантам и аспирантам профильных вузов. Статья «Использование возможностей интернет-мемов для эмоционального заражения в качестве эффективной стратегии экологической коммуникации» может быть рекомендована к публикации в научном журнале.