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ABSTRACT

This research analyses crisis communication and intends to compare the content of the messages issued by environmental non-governmental organisations (N.G.O.s) in the context of natural disasters, to determine the way in which they manage communication in crisis situations. This includes the content analysis of messages posted on the social network Twitter in 2017, during the course of hurricanes Harvey, Irma and Maria, by environmental NGOs.

1. Introduction

The increasing frequency and severity of extreme weather events has increased over time and is causally linked with man-made climate change (Banholzer, Kossin, & Donner, 2014). One can reflect on the existence of a discourse adopted by various actors within the environmental sector, with the aim of modifying human processes that are taking their toll on the natural habitat. In this regard, non-governmental organisations (N.G.O.s), as key players on the fight for this cause, delve into their communication strategies, and conduct research on the various factors that motivate natural crises and possible ways to tackle them. Environmental N.G.O.s, which participate in the debate on climate change worldwide, carry out communication campaigns based on attributing extreme weather events to climate change, a strategy that should be explored in terms of its effectiveness for fulfilling the goals of the organisation, as these messages are often branded as sensationalist or lax. This approach is in stark contrast with the position that other organisations have with regards to man-made climate change, which differ in how they handle natural disaster communications: Environmental N.G.O.s, with content on public awareness, and social N.G.O.s, focusing on the protection of persons (Gough & Shackley, 2001). A question thus raises with regard to these practices: Should N.G.O.s look after their organisational mission in the context of extreme natural events or, conversely, be oriented towards

public utility communication, combining their efforts with governmental bodies and other issuers in emergency situations?

In situations of natural disasters, N.G.O.s join the initiatives carried out by governmental institutions and become loudspeakers and managers of crisis communication. The reason for this lies in their power of dissemination and visibility, as they are deemed effective channels to inform citizens about the potential dangers of the crisis and make recommendations for personal protection. One of the roles of these actors within the realm of a crisis is fulfilling the expectations and the needs of their audience or stakeholders (Heath, 2011). In this sense, non-compliance with their requirements may negatively affect the image and credibility of organisations.

This research aims to study communications posted by N.G.O.s on Twitter during the course of hurricanes Harvey, Irma and Maria. The context or frame of reference to be analysed is the hurricane period of 2017, when said hurricanes hit an important part of Central America and North America, the U.S. being one of the most affected countries. One of the goals of this research is getting to know the messages that this N.G.O. profile shared in social networks via Twitter.

Twitter is an ideal platform for the public crisis communication because, thanks to its label or hashtag functionality, messages can reach users who do not necessarily follow the account, thus contributing to increasing their visibility. This results in a greater dissemination of information among users of the platform, regardless of the links between them. These tags facilitate information search on a specific issue or event, and the management of relevant messages around it (Bruns & Moe, 2013). In addition to the exponential dissemination of information, this platform is also advantageous for crisis communication from a time-space standpoint. Time-wise, due to the emission of real-time information that Twitter allows. And space-wise, because thanks to its instantaneous nature in spreading messages about an event, as in the case of a natural disaster, the event may be geo-located and, in this way, contribute to a swift intervention by emergency services (Sakaki, Okazaki, & Matsuo, 2010).

Also, as Figure 1 shows, during the past few years, Twitter has become a communication channel that has experienced a remarkable increase in use (Statista, 2019).

2. Theoretical framework

2.1. Non-governmental organisations

Non-governmental organizations are defined as 'independent and non-profit organizations emerging from civil and popular initiatives, and are usually are linked to social, cultural, developmental or other projects that generate structural changes in certain spaces' (Rodríguez, 2017). Therefore, as pointed out by Giving International, the two fundamental aspects that define an entity as an NGO are: being non-for-profit and not receiving government aid. (Giving International, 2016)

Classifications of N.G.O.s based on different criteria are also interesting, although no specific criteria have been widely accepted by all researchers. This research will consider a classification based on the sector in which the N.G.O. operates, as well as the specialisation of environmental organisations on issues related to the care and
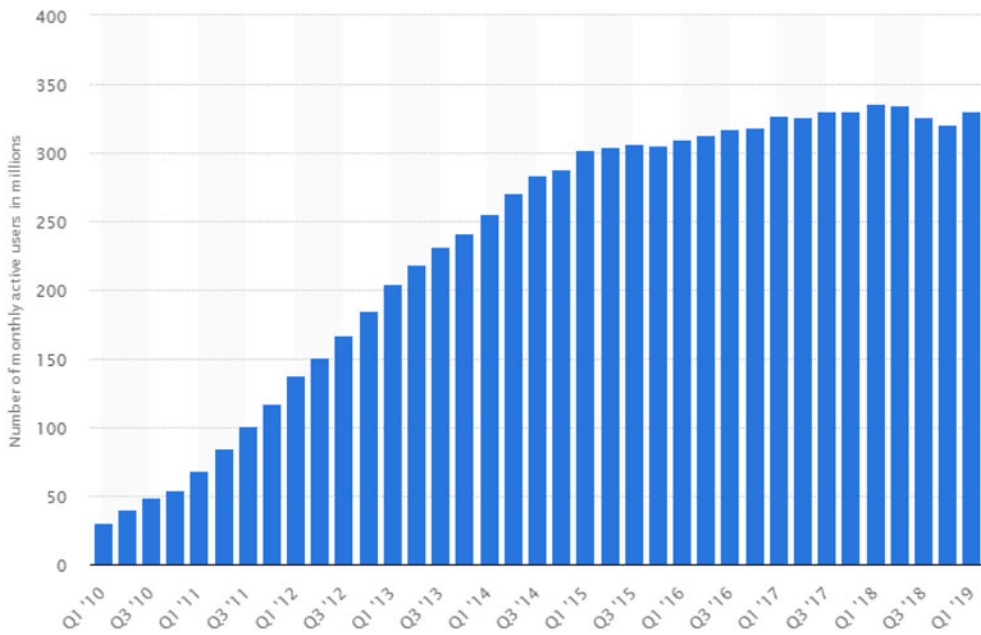
Figure 1. Number of monthly active Twitter users worldwide from the first quarter of 2010 until the first quarter of 2019 (in millions).
Source: Statista. 2019. Retrieved from https://www.statista.com/statistics/282087/number-of-monthly-active-twitter-users/. Thus, 2017 closed with 330 million active users in the social platform.

promotion of the environment as a limited resource. It will also bear in mind the specific mission of this type of organisations, which is not be extrapolated to other N.G.O.s focused on the protection and development of people. Through the International Classification of Non-Profit Organisations taxonomy developed by authors Salamon and Anheier (1992b), this research shall attempt to identify discrepancies between the various organisations that operate in the third sector globally. The grouping criteria to be used is the International Standard Industrial Classification of All Economic Activities, developed by the United Nations, and based on the main areas of economic activity of the entities. According to this classification, economic activities related to N.G.O.s include: culture and recreation, education and research, health, social services, environment, development and housing, law and policy, philanthropy and promotion of volunteerism, international activities, religion, professional associations and unions, among others.

The mission of environmental N.G.O.s is referred to above. Notwithstanding the foregoing, to describe the actions carried out by them in the context of natural crises, other sections of the classification, such as Health, in particular the sub-section devoted to emergency medical services; Social Services, specifically the prevention and control of disasters and emergencies; and International Activities, in particular the section corresponding to support in disasters at the international level, should also be explored. Environmental N.G.O.s do not carry out executive actions, but act rather as intermediaries. That is to say, they do not perform these activities in their organisation, but promote them and contact entities that offer this type of services with the public affected by the disaster and entities that help in their recovery (Towe, Acosta, & Chandra, 2017).**

2.2. Crisis and risk communication

A crisis is defined as the occurrence or manifestation of a risk (Heath, 2011). These events do not take place often, with regularity, cannot be accurately foreseen but, when expected, they tend to have a negative impact and generate uncertainty (Coombs, 2011). Crisis communication is defined as the collection and processing of relevant information in a crisis and risk situation for its dissemination, presented to be effectively received by the relevant target audience (Coombs, 2011).

Communicating crisis information to a target audience requires following a series of sequential stages aimed at avoiding or reducing both personal and material losses. Early stages include the dissemination of information on events that pose a threat to the lives of people, making sure that the public understands and is prepared properly for said events, such as hazard warnings, evacuation notices, among others, in addition to influencing communication channels and agents for getting further information and help, where necessary. It is not until the final or post-event stages that the possible causes or factors triggering the crisis are addressed (Reynolds & Seeger, 2005).

To define the concept of crisis communication, it is first and foremost necessary to differentiate between crisis and risk communication. Crisis and risk communications (Reynolds & Seeger, 2005; Veil, Reynolds, Sellnow, & Seeger, 2008) differ in that the former focuses on informational messages about the status of a specific event, such as its magnitude and duration, and its control. It is a type of communication that reacts or adapts to the events as they unfold, has a short life span and whose issuers are mainly managerial governmental bodies, depending on the scope of the crisis, as well as technical experts. Risk communication relies on persuasive messages that deal with the identification of a particular risk, their likelihood of occurrence and the procedures or behaviours that contribute to its reduction or elimination. This communication is based on scientific and experts' forecasts, is conducted prior to the crisis, is proactive, planned and has a long-term projection.

Crisis and risk communication in the context of natural disasters is initially carried out by municipal and state government bodies, together with other institutions involved in emergency management, through previously planned evacuation plans and declarations of emergency. Similarly, N.G.O.s are actively involved in the preparation and support in crisis situations as a result of natural disasters (Benson, Twigg, & Myers, 2001). One of the key practices of N.G.O.s' activities encompass communicating and reporting emergency cases deriving from the crisis, recommended actions in this type of cases, disseminating information on the status of recovery from the crisis, or informing the media about the status of the response actions to the disaster (Towe, Acosta, & Chandra, 2017).

Social networks are, together with other channels, an additional means to manage crisis and emergency communications. They are a tool that allows gathering information based on the feedback from users on territorial or public areas requiring special attention due to the situation of imminent danger or impact of the event in question on them. These data can also be used during the post-crisis stage, when assessing the crisis plan, to improve its management and communication (Panagiotopoulos, Barnett, Bigdeli, & Sams, 2016). Social networks are an improvement for crisis

communication with respect to traditional media due of their immediacy, which allows providing up-to-date information. In addition to their greater scope, the dissemination of messages grows exponentially thanks to the crowdsourcing power of the network (Panagiotopoulos, Barnett, Bigdeli, & Sams, 2016). Web 2.0. media are flexible tools for the dissemination of information during crisis situations that adapt to the changing nature of the event (Brengarth & Mujkic, 2016). This adaptability to unforeseen events is a key advantage in view of the high frequency of message broadcasting, as it keeps the public informed and answers their doubts and needs.

The types of uses given to social networks for managing and communicating a crisis situation arising from a severe natural event are (Houston et al., 2015): receiving requests for help or assistance, receiving information on the status and location of individuals affected by the crisis situation, disseminating information on the course of the natural disaster, providing information on ways to assist in disaster response, providing psychological support, expressing emotions and sympathy, and broadcasting and receiving information about disaster responses.

Crisis communication about natural disasters on social networks involves several actors (Houston et al., 2015): individuals, communities, organisations, governments and mass media. This research explores organisations, more specifically, non-profit organisations, and considers their activity in the context of crises arising from extreme events. In situations of crisis motivated by natural disasters, NGOs turn to Web 2.0 tools, in particular, to social networks, to communicate with the public. These tools allow NGOs to carry out communications and manage the emergency situation in conjunction with other agents involved, thanks to the diversity of capabilities that they provide (Takahashi, Tandoc, & Carmichael, 2015).

Twitter is a platform widely used in the context of natural crises by various governmental institutions, among others, with the objective of managing its crisis communication, due to its immediacy and scope (Chatfield & Brajawidagda, 2013). Its dissemination does not depend on the number of followers of the account in question, but on the interaction between users through retweets or likes, as the impressions of a tweet may generate for it to reach even higher numbers (Kwak, Lee, Park, & Moon, 2010).

2.3. Environmental communication

Environmental communication aims to raise awareness on the deteriorating situation of nature and the loss of flora and fauna as a result of human behaviour. This type of communication is performed through symbols, images or narratives that shape the imagination of the public with respect to nature and its interactions with humankind. This representation is used to evoke certain values, beliefs, attitudes and behaviours toward nature that contribute to alert, persuade and help solve environmental problems, placing them as a matter of relevance for the public and to negotiate with society on the response to implement (Cox, 2012). Environmental communication campaigns are defined as bidirectional multi-platform processes planned and designed to provide information on environmental issues and persuade the public to change its

attitude and behaviour toward them, as well as to raise awareness of the mutual impact to people and nature (Norton & Grecu, 2015).

The issues addressed by this type of communication can be grouped into the following categories: Air quality, water quality, heavy metals, biodiversity, forests, fisheries, weather, air pollution, water resources and agriculture (Wendling, Emerson, Esty, Levy, & de Sherbinin, 2018). Man-made global climate change is included in the category referred to climate. Climate change is defined as 'a change in weather, attributed directly or indirectly to human activity, that alters the composition of the atmosphere and which adds to the natural climate a variability observed over comparable time periods' (United Nations, 1992, p. 3). Communication on climate change and weather is responsible for explaining climate change, among other issues of this science, to society to raise awareness and understand its processes (Cox & Depoe, 2015). It is a question of allowing the public to process and internalise a series of key messages on the fact that a series of global alterations in the climate system have taken place over a short period of time, unlike other ages of the planet, as a result of human activity, which causes a higher incidence of greenhouse gas emissions, and that said alteration of the processes that define the climate is one of the factors that influence the frequency, intensity, duration and development of extreme natural events. However, it must be emphasised that it is difficult to attribute the occurrence of an extreme climate event exclusively to human action, as it is the result of a combination of a series of both natural and anthropogenic processes (Banholzer, Kossin, & Donner, 2014; Bindoff et al., 2013; Braconnot et al., 2007).

Environmental communication is implemented through several communication models, such as advertising or social marketing. Social marketing is defined as 'the design, implementation and control of programs created to influence the acceptance of ideas corresponding to social issues and which involve practices such as product planning, prices, communication, distribution and market research' (Kotler & Zaltman, 1971, p. 5). This communication is oriented to address socially-relevant behaviours of a target audience in matters such as public health, environment, education, violence, among others. This approach is not opposed, but rather complementary, to other types of actions, such as community mobilisation and transformation at the structural level, because the decision-making actors in these areas, namely activists and political bodies, are also part of the target audience of social marketing (Andreasen, 2002).

The creation and dissemination of user content is a key element in digital media (Kaplan & Haenlein, 2010). Interactivity makes digital media an ideal instrument for promoting advocacy actions or activism among citizens. The roles of social platforms are directly correlated with the execution of activist actions, such as the signing of public petitions, sending communications to politicians and media, mobilisations, among others (Valenzuela, 2013). Online applications generate and record a large amount of data corresponding to user activity through social media analytics programs, among other platforms, which allow for a multitude of information about the audience and the response to the social campaign or activist (Gandomi & Haider, 2015).

Activists have ceased to be dependent on traditional media, and take on the role played by the journalists, that is to say, intermediaries between citizens and the

political and corporate agents (Breindl, 2016). Thus, NGOs can, on the one hand, include issues on the public interest agenda and, on the other hand, 'frame' the news through favourable terms for the fulfilment of their communication goals. Internet is a medium where plurality of information exists, and differs from traditional media in the coverage of certain topics based on their characteristics, in the presentation or treatment of certain agents involved or liable, providing activists a channel in which they can publish information of greater diversity or more specialised (Breindl, 2016; Olteanu, Castlillo, Diakopoulos & Aberer, 2015).

3. Objectives

Prior to raising the objectives of this research, the following questions arise: Is the discourse of environmental NGOs in the social network Twitter, in the context of the natural disaster caused by hurricanes Harvey, Irma and Maria, framed within crisis communication, as defined by the authors (Coombs, 2011; Reynolds & Seeger, 2005; Veil, Reynolds, Sellnow & Seeger, 2008)? Are political figures part of the environmental discourse in the context of natural disasters and is their weight significant?

The overall objective of this research is to analyse the existing information about messages posted by environmental N.G.O.s during a specific time period and their dissemination on Twitter, in connection to the natural disasters that occurred in the course of hurricanes Harvey, Irma and Maria, and materialised in social network content, in this particular case, on Twitter.

The specific objectives of this research are:

- Learning the most frequently used terms used on Twitter by environmental N.G.O.s: Greenpeace, Environmental Offense Fund, Sierra Club and Natural Resources, from 17 August to 1 October, 2017, within the context of natural crises.
- Establishing co-relations between terms in the environmental discourse of N.G.O.s.
- Discussing the importance of political figures in the environmental discourse of N.G.O.s in the content related to natural disasters.

4. Methodology

This investigation intends to examine the relevant data using the content or textual analysis or textual techniques to produce qualitative results. The software used is called Atlas.ti: a set of tools appropriate for the qualitative analysis of text blocks that allows rearranging, regrouping and sorting data, to establish links between terms. These data allow to analyse frequency and co-occurrence discourse.

First, the relevance of the terms was measured with a Frequency Analysis. The distribution of the terms used allows delving on the semantic content of the textual unit and analysing the value of meaning and significant. Second, a co-occurrence analysis studied the number of concepts that coincided in the discourse. To this end, an analysis of pairs of terms appearing simultaneously in the tweets was conducted. This

Table 1. Join date on Twitter and number of followers.

NGO	Twitter profile	Join date on Twitter	Followers on Twitter (2019)
Greenpeace	@Greenpeace	2007	1,790,717
Environmental Defense Fund	@EnvDefenseFund	2009	190,882
Sierra Club	@SierraClub	2009	357,644
Natural Resources Defense Council	@NRDC	2009	325,196

Source: Compiled by the authors based on data from Twitter.

technique provided information on the distribution of the correlation between words (Bardin, 1996). The results obtained allow establishing semantic groupings.

4.1. Sample

The study sample comprises tweets in corporate accounts of environmental N.G.O.s on the social network Twitter from 17 August to 1 October, 2017. The four N.G.O.s selected were those that published the highest number of tweets during the analysis period under study. They are the following: Sierra Club, Environmental Defense Fund, Natural Resources Defense Council and Greenpeace.

Table 1 shows the date on which each of these entities joined the social network Twitter. This table also shows the number of followers that these organisations have gathered over the years.

4.2. Data analysis

A descriptive content analysis of the tweets posted in English language in the social network Twitter was conducted. Content analysis is an effective method to analyse messages (Wimmer & Dominick, 1996), that allows to contrast the research hypotheses relating to the characteristics of a message.

Several fundamental operational definitions were used to conduct the analysis. Firstly, the population under analysis or universe. This is the corpus of material to analyse, messages issued through social networks in the context of natural disasters by international environmental N.G.O.s. Another relevant concept was the sample, which included the messages published by the international environmental N.G.O.s Greenpeace, Environmental Defense Fund, Sierra Club and Natural Resources Defense Council, on the social network Twitter during the course of hurricanes Harvey, Irma and Maria that took place in the Atlantic Ocean, from 17 August to 1 October, 2017. And finally, the sampling and analysis units. A unit of analysis is defined as each quantifiable item in the content analysis (Wimmer & Dominick, 1996), in this case, each of the terms included in the conversation of environmental N.G.O.s with their audience. For their part, sampling units refer to each of the tweets from the N.G.O. corporate accounts: Greenpeace, Environmental Defense Fund, Sierra Club and Natural Resources Defense Council. The number of tweets analysed was 397.

A two-stage process was carried out to select the final sampling units. First, a preliminary selection of tweets posted from 17 August to 1 October 2017 by the NGOs mentioned above, containing some or all of the following terms, was collected:

Table 2. Variables of the sampling units analysed.

Variable	Description
Tweet identifier	Single numeric code for each tweet
Account	Message issuer (N.G.O.)
Date	Posting date of the tweet
Time	Posting time of the tweet
Location	Geographic location from where the tweet was posted
Content	Text of the tweet

Source: Compiled by the authors.

Hurricane, Harvey, Irma and Maria. These dates correspond to the start of the first hurricane: Harvey and the end of the last: Maria.

The second phase consisted of an exploratory analysis and a screening process of the tweets to discard those that were not relevant to the research. Table 2 shows the variables used for recording and treating the sampling units. Finally, the data was entered in the Atlas.ti software to register the units of analysis, coding and subsequent analysis. During the registration process, derivative words were identified to avoid duplications.

5. Analysis and results

Figure 2 below illustrates the result of the frequency analysis of the words present in the messages, with the most repeated terms.

The word that appeared the most in all the cases under study was *Climate Change*. The following words also ranked in the top positions: Community, Pollution, Trump, Chemical, Toxic, People, E.P.A.,[1] Global Warming and Environment.

The co-occurrence analysis examined the number of cases in which some concepts coincided in the discourse, taking into account the pairs of terms that simultaneously appeared on the same tweet. This analysis provided information on the distribution of the units analysed and their association (Bardin, 1996).

Figure 3 shows the network of co-occurrence of terms.[2] The term showing the highest number of co-occurrences was *Climate Change,* followed by *Trump* and *E.P.A.*, which had the same number of co-occurrences. They were followed by *Community*, *Pollution* and *Toxic*, which showed the same number of co-occurrences and, lastly, the terms *Chemical* and *Residents*.

The textual content analysed in all the tweets posted by the N.G.O.s showed several cases of co-occurrences. As with the concept of *Climate Change,* meaning can vary depending on the associations between this term and others with which a relationship is established. When *Climate Change* was associated with the terms *E.P.A.* or *Trump*, these notions were part of a speech of a negative nature with respect to the fact itself, namely, environmental disaster and the three hurricanes cited, as the N.G.O.s expressed. In the co-occurrence of the terms *Climate Change* and *E.P.A.* next to *Trump*, the term *denying* appears 37.5% and *rejects in* 25% of the total tweets published. It is worth mentioning that the term *deny* appeared in 42.86% of the co-occurrence cases with *Climate Change* and *Trump*. The President is associated in 28.57% of the cases to the term *silence*, in 14.29% with *denier,* and in *12.5%* of them with *ignoring*. In the case of co-occurrence with the terms *Trump* and *Chemical*, the

Figure 2. Frequency analysis of words.
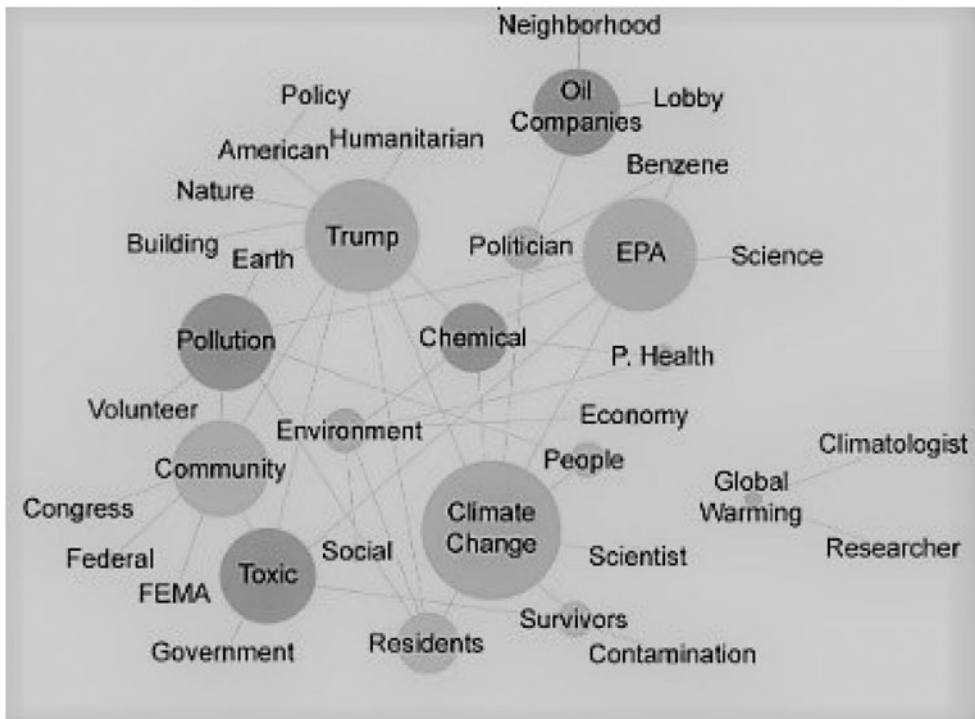*Source:* Compiled by the authors.

Figure 3. Network of co-occurrence of terms.
Source: Compiled by the authors.

following phrases are included: 'Release of toxic substances as a result of the hurricane, which, in turn, is an effect of climate change.' There was a 33.33% co-occurrence of *Trump* and *Face* (*the face of*), and a 16.67% of co-occurrence

when adding the term *explosion* and *release*, in each case. The term *scientist* appeared in 33.33% in the posts, together with *Climate Change* and *Natural Disaster*. In addition, in 33.33% of the cases, *Climate Change* showed a co-occurrence with *makes* and *stronger*.

In the case of discourses that include the term *President Trump*, co-occurrence varies depending on the following words: *American, Building, Chemical, Climate Change, Community, Earth, Humanitarian, Nature, Residents, Toxic*. In the cases of co-occurrence with the terms *American, Community* and *Residents,* N.G.O.s built negative statements in relation to the measures carried out by the President for the management of the crisis and its prevention, with special emphasis on the harmful effects for American citizens. The terms *erasing* and *protections* appeared in 20% of the cases between the term *Trump* and *American*. There was a 66.67% of co-occurrence cases between *Trump* and *community,* associated with the terms *flood* and *protection*. The latter appear in 33.33% of cases, along with the term *eliminate* and the term *cut* in 33.33% as well. The terms *rescinded* and *flood-risk rule* appear in 60% of the cases between the terms *Trump* and *residents*. Some similar happened with the term *building*. The following sentence appeared in the discourse produced by N.G.O.s: 'Trump's policies allows building housing in areas of potential danger of flooding due to the amendments of the policies that classify them as such.' The co-occurrence of the terms *Trump* and *building appeared in* 71.43% of the cases. The term *repealed* appeared next to *climate rule* in 42.86% of the cases and 28.57% next to the word *ends*. The N.G.O.s discourse includes negative opinions of the President with respect to the environment and the term *Earth*. When the terms Trump and *Earth* appear together, the term *against* shows a 40% co-occurrence with the latter, and a 20% co-occurrence with *versus*. When the co-occurrence of Trump and *Toxic* appears in the discourse, it appears in phrases that make reference to the consequences that the combination of the crisis and the president's inefficient actions have on the populations that suffered them, i.e., contamination with toxic substances ejected by the industries damaged during the disaster. When there is a co-occurrence of *Trump* and *toxic,* the terms *relaxed* and *rules* appeared in 60% of the cases, and the terms *U.S.* and *vulnerable* appear in 20% of them. Finally, when the words *Trump* and *Climate Change* appear together, the dominant discourse of N.G.O.s evidences global climate change and criticises the President for denying the existence of this phenomenon. The term *deny* appears in 42.86% of the cases of this co-occurrence, along with the terms *silence* in 28.57%, and the term *denier* in 14.29% of them.

As can be seen through the analysis performed, the term that appeared in co-occurrence with a greater diversity of terms is *Trump*, followed by *Climate Change, E.P.A., Community, Pollution, Toxic, Chemical* and *Environment*. This implies that co-occurrences do not focus on a specific amount of terms, but that there is variety of them. In the case of the term *Trump*, which is the one appears the most in the network of co-occurrence, it is usually associated words that have to do with the affected populations, such as *American, Building, Community and Residents, Humanitarian*. It also appeared next to polluting substances such as *Chemical, Toxic,* as well as to terms that relate to the environment, i.e., *Earth* and *Nature*.

The term *Climate Change* ranked second in term co-occurrence diversity. A variety of issues are addressed in conjunction with the term, even more than with the term *Trump*. It emerges with words that make reference to the persons affected by the crisis as is the case of the words *people, residents and Survivors*. It is also included next to polluting substances through the co-occurrence with the term *Chemical*. A different phenomenon emerged with *Climate Change,* as is the scientific substantiation of this phenomenon throughout the term *Scientist*. Finally, other concepts, namely the political actors and N.G.O.s involved in the natural crisis, co-occurred with terms such as *Trump, E.P.A. or politician*.

6. Conclusion

Pay, own or earn (P.O.E.) digital media share the interest to produce of effective and persuasive content. The use of attractive content based on a variety of genres and with a storytelling structure has been a traditional element in the construction of messages of a commercial nature. The use of attractive content based on a variety of genres and with a storytelling structure has a long history in the construction of messages of a commercial nature. Nonetheless, the interest for these intentional discourses that stem from actions such as the *battering*,[3] is quite recent among N.G.O.s, even if communication companies have been using them for decades. N.G.O.s are companies that manage their own campaigns in P.O.E. media, just as any brand that launches persuasive campaigns does.

As McLuhan said: 'The medium is the message', and the content created by N.G.O.s to manage their own discourse sheds a light on the media strategy at a time as unique as an environmental disaster and the impact it generates. It should be noted that it is not possible to initiate a research in the field of digital communication without the unique and inseparable perspective of content and medium, as McLuhan pointed out some time ago. The discourses analysed in the social network Twitter helped understand the importance of storytelling as a short story that, while digital, continues to build significant characters, the result of a humanised palimpsest.

The current president of the U.S., Donald Trump, constantly fills the media with headlines and storytelling with his personal style. He has become a protagonist in the online scene worldwide. He represents a brand filled with meanings, that are shared and re-signified in various contexts, including the discourse of other players. Here lies the interest of this research, which shows that the terms used and repeated by the N.G.O.s under study generate different semantic structures, and with greater intensity if the terms co-occur among themselves. A different interpretation in terms of the weight of the entire textual unit is different when compared with the terms alone.

Climate Change and *Donald Trump* go hand in hand, along with a list of terms and names commonly associated with environmental issues: *Community, Pollution, Chemical, Toxic, People*, E.P.A., *Global Warming* and *Environment*, which frame the discourse in their own media channels, with a very likely and not yet analysed consequence in the effectiveness of the messages in earned media. The reflection to ponder is: If the use of a political figure next to this foreseeably findable set of terms in the environmental disaster discourse of the three hurricanes above is indeed an

advantage, is there a dominant theory strategy in the narrative construction? A common front, a common enemy, that is to say, a public, political and notorious villain; or something that has already happened in persuasive communication campaigns, namely, achieving results that are contrary to those expected.

This research must continue to expand its scope longitudinally: analysing a longer period of time and covering other environmental disasters. Adding the retweets of the public and analysing, sorting, and finding co-occurrences in semantic units. Adding other analysis tools in social networks. Including an N.G.O. taxonomy and making comparisons, and ultimately delving into the effects of content management and disinformation and its effects on society.

Other discourses that should be explored include: ecological crises affecting the lives of people, where terms like *guilt* or *pessimism* are used. The role of the recipients of the message as members of a consumerist society is created to place them as responsible for this catastrophe, along with other economic and political agents, as a result of environmentally-unfriendly behaviours. With messages based on the contrast of values, the space where environmentally-committed people and institutions are, as well as the space of those who are not, is clearly defined, inviting the public to join the environmentalist cause. The academic field can provide relevant results with positive results for the communication of N.G.O.s.

Notes

1. E.P.A.: Environmental Protection Agency.
2. Terms that presented the greatest number of co-occurrences.
3. Creation of free content by brands for distribution in communication channels. Most of them were audiovisual stories.

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