RAISING AWARENESS ON CLIMATE CHANGE THROUGH HUMOR

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Abstract

Environmental awareness, for issues like climate change, is on top of the list with the concerns, humanity is facing. We are being exposed to a gigantic number of environmental messages but still we haven't reached the optimum level of environmental sensitivity.

Most of the climate change awareness campaigns use fearful stimuli such as scary titles, and images of catastrophes and uncertain futures. That kind of campaigns create emotions like fear, anxiety and worry to the public. That's an explanation why lots of people ignore climate change and deny its importance. According to various researches, humor can boost successfully educational and communication processes at stake. Participants being confronted with pleasant approaches have responded positively to the new information and their intention to retain longer their behavioral change has been recorded.

Through a quality process, this study aims to study the importance of humor, and how it can be used in climate change awareness campaigns in a way that will influence public's attitudes and behavior, so that a positive response will be created.

Keywords

climate change; humor; environmental awareness; environmental communication;

1.INTRODUCTION

Climate change and global warming are a growing problem in the world at this present time and the future as well (IPCC, 2007). The first legally binding national commitment to greenhouse gas (GHG) emissions reduction was through the Kyoto Protocol, adopted in 1997 and entered into force in 2005 (O'Neill and Nicholson-Cole, 2009). However, in 2007, the Intergovernmental Panel on Climate Change suggests that actions are quickly needed to reduce global climate change (IPCC, 2007). The human cause of global climate change has been identified as increasing levels of greenhouse gases: for example, carbon dioxide (CO2) emitted by burning fossil fuels for transport and heating; and methane emitted by cattle raised for the meat industry (Parant et al., 2017). Within the European Union (EU), a target has been set to reduce greenhouse gases by at least 20% by 2020 compared with the 1990 level (European Commission, 2011). The Intergovernmental Panel on Climate Change stated in its most recent report that warming of the climate system is "unequivocal (IPCC, 2007). Impacts of climate change are projected to be many and varied, ranging from

changes in ecosystems (e.g., LeemansandEickhout, 2004), to impacts on human systems such as water resources (Arnell, 1999), to potential forced human migrations (e.g.,Barnett andAdger,2003), to widespread acidification of the oceans (e.g., Caldeira and Wickett, 2003), to insurance and reinsurance difficulties (e.g., Munich Re, 2004). Both mitigation and adaptation are needed to appropriately manage the challenge of climate change (O'Neill and Nicholson-Cole, 2009) and global efforts have so far tended to concentrate on the mitigation of GHG emissions (O'Neill and Nicholson-Cole, 2009).

Nowadays, many environmental campaigns appear to be based on the presumption that people need more information to behave pro-environmentally (Howell, 2014). In recent years, governments, nongovernmental organizations, and individuals have all been involved in creating "climate change communications" aimed at changing public attitudes and behavior related to climate change. These include leaflets and flyers, billboard, press and television advertisements, movies, and publications of many kinds are disseminated to the population (Parant et al. 2017).

Also, there is a growing consensus that we must engage publics in scientific dialogue (House of Lords, 2000). Scientists are increasingly expected to become prominent actors in communicating science to the lay public (Bentley and Kyvik, 2011; Dudo, 2012; Trench and Miller, 2012).One of the reasons this need arises is based on the fact that scientific knowledge is at the core of many of the issues that society faces today (Poliakoff and Webb, 2007). However, the approach in terms of "information-deficit" has been widely criticized as being inadequate to promote behavioral change (Kellstedt, Zahran and Vedlitz, 2008; Ockwell, Whitmarsh, and O'Neill, 2009; Schultz, 2002).Organizations such as Futerra (2005) and the Institute for Public Policy Research (Ereaut and Segnit, 2006), and academics such as Kloeckner (2011),Pooley and O'Connor (2000), and Moser (2007) advise that environmental messages should appeal to the emotions rather than simply providing factual information, to be more engaging.

1.1 Fear is no productive

Climate change communications frequently use disaster framing to create a fear appeal intended to motivate mitigation action (Howell, 2014).Fear appeals in climate change are prevalent in the public domain, with the language of alarmism appearing in many guises (O'Neill and Nicholson-Cole, 2009). The literature that does exist suggests that using fearful representations of climate change may be counterproductive (Moser and Dilling, 2004). Current climate change discourses are often characterized by fear and catastrophe narratives (Doulton and Brown, 2009; Hulme, 2008).

For example, the U.K. government talks of "dangerous climate change" (Conference on Dangerous Climate Change, 2005), the media of a "climate of fear" (Bonnici, 2007) and NGOs of "climate chaos" (Stop Climate Chaos, a U.K. coalition for action on climate change). Even so, Ereaut and Segnit (2006) state that the alarmist climate repertoire is characterized by an inflated or extreme lexicon, with an urgent tone: It is a terrible, immense, and apocalyptic problem, beyond human control. They find alarmist climate messages employ narratives of doom, death, judgment, and heaven and hell (Ereaut and Segnit, 2006). Fear is also strongly apparent in the kinds of imagery used in association with climate change more broadly (O'Neill and Nicholson-Cole, 2009). The U.K. Green Party used an image of a catastrophically flooded and drowned "British Isle [sic]" to campaign in the 2005 national elections (Wootton, 2005). Images of polar bears stranded on ice floes have become iconic of climate change (O'Neill, 2008), and those depicting human struggle are evident in the famine and water shortages depicted in the climate campaign literature of charity Christian Aid (2008).

The mediation of fear messages is illustrated in Hulme (2007). The researcher conducted a study into the coverage of the IPCC Working Group I report in 10 major U.K. national newspapers. Only one newspaper did not run a story on the IPCC report. The other nine, all ran articles introducing the adjectives catastrophic, shocking, terrifying, or devastating. Yet none of these words were

present in the original IPCC document. Weingart, Engels, and Pansegray (2000) offer some explanation that newsworthiness increases if identifiable events can be linked to a threat to human life, and in order to do this levels of alarm are often magnified (Joffe, 1999). Accordingly, some authors report that climate change is most commonly communicated in the media in the context of dramatic climaterelated events (e.g., Carvalho and Burgess, 2005).

Furthermore, in their research O'Neill and Nicholson-Cole (2009) argued that "fearful" and "shocking" representations of climate change are "likely to distance or disengage individuals from climate change, tending to render them feeling helpless and overwhelmed when they try to comprehend their own relationship with the issue". However, they can also act to distance and disempower individuals in terms of their sense of personal engagement with the issue (O'Neill and Nicholson-Cole, 2009). This research has shown that dramatic, sensational, fearful, shocking, and other climate change representations of a similar ilk can successfully capture people's attention to the issue of climate change and drive a general sense of the importance of the issue.

Although shocking, catastrophic, and large-scale representations of the impacts of climate change may well act as an initial hook for people's attention and concern, they clearly do not motivate a sense of personal engagement with the issue and indeed may act to trigger barriers to engagement such as denial and others (Lorenzoni et al., 2007; O'Neill and Nicholson-Cole, 2009). All of these which presented here certainly demonstrate that on a standalone basis fear, shock, or sensationalism may promote verbal expressions and general feelings of concern but that they overwhelmingly have a "negative" impact on active engagement with climate change (O'Neill and Nicholson-Cole, 2009).

The "wicked" nature of climate change makes it, for many people, an impersonal and distant issue (Lorenzoni et al., 2006). A further consequence of long-term reliance on fear appeals, as stated by Hastings et al. (2004), is that it is possible that a law of diminishing returns may exist. If this exists, fear approaches need to be made more intense as time goes by because of repeated exposure to threatening information in order to produce the same impact on individuals.Linville and Fischer's (1991) "finite pool of worry" effect is also worthy of note here.

An ill-considered fear approach may damage (or further damage) the reputation of the communicating organization and the ability of that organization to attempt further engagement approaches. This is key when considering the need for sustained and consistent messages to communicate climate risks (Futerra, 2005).The continued use of fear messages can lead to one of two psychological functions. The first is to control the external danger, the second to control the internal fear (Moser and Dilling, 2004). If the external danger—in this case, the impacts of climate change—cannot be controlled (or is not perceived to be controllable), then individuals will attempt to control the internal fear. These internal fear controls, such as issue denial and apathy, can represent barriers to meaningful engagement.

Lorenzoni et al. (2007) divide the barriers to engagement with climate change, into two types, individual-level and social-level barriers. Of particular consequence for this discussion of fear appeals are the barriers acting individually to inhibit engagement with climate change. Although hoping that climate change would not affect them, three participants in the imagery study specifically noted that thinking about climate change made them feel so scared and depressed that they purposefully did not think about it. Fear appeals may act to increase this response, leading to denial of the problem and disengagement with the whole issue in an attempt to avoid the discomfort of contending with it (O'Neill and Nicholson-Cole, 2009).

1.2 Humor versus fear

Using humor in environmental communication can help communicators avoid overwhelming audiences with feelings of fear, helplessness, and guilt, which may otherwise discourage them from taking action against climate change (O'Neill and Nicholson-Cole, 2009). Similarly, Howell

(2014)states that fear appeals about climate change need to be combined with discussion of how to avoid the threat in order not to trigger maladaptive defensive responses. Fear appeals need to be combined with high-efficacy messages (useful information about how to avoid the threat) in order not to trigger maladaptive defensive responses (Lewis, Watson and White, 2010; Moser, 2007). However, O'Neill and Nicholson-Cole (2009) found that fear-based climate change representations do not motivate personal engagement with the issue, while Spence and Pidgeon (2010) found that positive framing produced attitudes toward climate change mitigation that were significantly more positive than those produced by loss frames. Morton, Rabinovich, Marshall, and Bretschneider (2011) found that positive framing combined with higher uncertainty about outcomes increased individuals' intentions to mitigate climate change, compared with negative framing.

In a meta-analysis on the use of fear appeal in health prevention, Peters, Ruiter, and Kok (2013) confirm the link between threat and efficacy in initiating positive behaviors. However, they underline that "a potent efficacyenhancing element" is required in the intervention to increase positive outcomes (Peters et al., 2013;Parant et al., 2017). In a binding communication paradigm, it is possible to reduce the potential drawbacks from fear appeals when the preparatory act includes solutions for the issue at hand (Parant et al., 2017). Even if movies are able to present information and have been shown to engage their audience emotionally, our data suggest that fear appeal-based movies could be inefficient if not accompanied by concrete solutions (Parant et al., 2017).

2. METHODOLOGY

Through a qualityassessment process, this study aims to emphasize the importance of humor, and point out how it can be used in climate change awareness campaigns, in a way that will influence public's attitudes and behavior to a positive response. Also, this study examines if stand-up comedy is a successful alternative way to communicate about climate change through raising environmental awareness.

3. HUMOR: AN ALTERNATIVE WAY IN CLIMATE CHANGE COMMUNICATION

Although the definitions of humor vary, there is widespread agreement among scholars that humor involves the communication of multiple, incongruous meanings that are amusing in some manner (Martin, 2007).Humor is not a common tool scientists use to communicate, but there are nevertheless several examples of comedy in scientific academia (Pinto et al, 2015). Humor is sometimes argued to be an effective way of communicating science (Bultitude, 2011). Also, it requires a coordinated network of responses involved in generating expectations and associations, perceiving incongruities, and revising these expectations, resulting in affective and expressive responses of mirth and laughter (Robert et al., 2011).

In evaluating over 40 years of research on humor and education, general conclusions about the effects of instructional humor as well as directions for future research can be reached (Banas et al., 2011). The use of humor is a prevalent communication behavior in pedagogical settings and serves different purposes. On Banas et al. (2011) research, the clearest findings regarding humor and education concern the use of humor to create learning environment. The use of positive, nonaggressive humor has been associated with a more interesting and relaxed learning environment, higher instructor evaluations, greater perceived motivation to learn, and enjoyment of the course. Conversely, the use of negative or aggressive humor aimed at students has been associated with many of the opposite outcomes, including a more anxious and uncomfortable learning environment, lower evaluations of instructors, increased student distraction and less enjoyment of class (Banas et al., 2011).

3.1 Satire

Satire uses humor as a weapon, attacking ideas, behaviors, institutions, or individuals by encouraging us to laugh at them (Bore and Reid, 2014). It may be gentle or hostile, clear-cut or ambiguous, aimed at "us" or "them" - or it may oscillate between different approaches, remaining flexible and surprising (Bore and Reid, 2014).

First, satire can facilitate audience reflection, investigation, and action (Bore and Reid, 2014). Second, the use of humor can help audiences manage feelings of fear, helplessness, and guilt, which may otherwise prevent them from taking action(Bore and Reid, 2014). However, as Herr (2007) notes, a key critical dilemma associated with theatrical satire is the belief that "the presence of human actors on stage fosters sympathy". While such sympathy can help the satirist by encouraging audience members to recognize themselves in the characters' portrayed, it also undermines "the possibility of sardonic detachment." Herr suggests that this conundrum is often resolved "by tempering the bitterness of the attack." He describes it as "instructing through laughter rather than punishing through scorn".

As Spicer (2011) notes, "Satire is a slippery customer. It weaves in and out of reality and makes itself accessible enough for the instantaneous laughter while it is just tricky enough not to be pinned down. Also, Bore and Reid (2014) claim that the first key benefit associated with the use of satire on climate change communication is that the satirical mode can promote active engagement with climate change by encouraging reflection, investigation, and action. The second significant benefit associated with the use of satire on climate change communication is that a humorous tone can help promoting a positive engagement with climate change (Bore and Reid, 2014).

While satire can encourage positive engagement with climate change, communicators need to take measures to avoid confining their engagement with climate change issues to the realm of humor, so that they can make productive proposals to climate change debates (Bore and Reid, 2014).While the distinction between the realm of humor and the realm of seriousness is analytical and it is clearly possible to make fun of climate change while remaining committed to taking action against it, it is important that the use of humorous distance does not discourage citizens' action (Bore and Reid, 2014). Nisbet and Scheufele (2009) have called for further research "on the potential for using this style of humor [satire] as a tool for public engagement on science". They believe that satire could be developed as a tool to make science more accessible for nonelite audiences, particularly young people.

3.2 Stand-Up Comedy

Among the different genres of humour, stand-up comedy is one of its most recent forms and can be described as a performer standing on a stage and speaking to an audience with main purpose making people laugh (Pinto et al, 2015). However, some comedians can seek a reaction that is not necessarily laughter, but instead invites the audience to think about certain issues (McCarron and Savin-Baden, 2008). The performances are composed of a succession of funny stories, one-liners or short jokes, and anecdotes, in which each "bit" usually has a set-up (that establishes the context of the joke and introduces necessary background of information to prepare the audience for the punchline, which is the joke about that subject (Greenbaum, 1999; Schwarz, 2010).

The application of stand-up comedy to science communication is still uncommon but has been gaining momentum in recent years in the United States of America and the United Kingdom (Pinto et al, 2015). Probably the most well-known example is the US former scientist Brian Malow (self-proclaimed Earth's Premier Science Comedian), who develops several activities as a science communicator, not only acting in comedy clubs, conferences and other venues, but also teaching other scientists to better express themselves through the use of comedy (Malow, 2010; Pilcher,

2010). Other examples include US biologist Tim Lee (Chang, 2009), with performances that are usually a parody of science seminars, and the UK mathematician Matt Parker, who does stand-up comedy in clubs, science and comedy festivals, as well as presentations about mathematics in schools (Parker, 2013). Other professional comedians such as Ricky Gervais and Tim Minchin have also adopted themes concerning science in recent years, which is indicative that this humor format has the potential to be used in science communication (Gunderson, 2006; Chang, 2009; Pilcher, 2010).

In their research with students, Robert et al. (2011) investigated neural activation underlying humor specifically as it applies to a naturalistic, dynamic social interaction, addressing the puzzling lack of evidence for mesolimbic responses using such dynamic stimuli. The study examined the neural activation associated with watching stand-up comedians, specifically contrasting high- and low-amusing skits of the same comedians, as selected based on prating made by a sample of raters from the same student population. Although stand-up comedy is certainly still a performance art, it simulates the joke-telling experience in everyday life, where one person surrounded by others captures the attention of the group and delivers the necessary cognitive structure and elements to produce a mirth response and receive the social capital that comes with it(Robert et al., 2011). This may be the case because when instructors enact successful humor, their students enjoy their educational experiences and learn more (Booth-Butterfield and Wanzer, 2010; Chesebro and Wanzer, 2006).

4. DISCUSSION AND CONCLUSIONS

Global issues, like climate change is a growing problem, which concerns everyone about a sustainable future. But communication and education about climate change are on the topic last years, such as directly and interactive tools. Developing ways of communicating complex messages and implementing science-policy interface mechanisms are not ends in themselves. Collating, interpreting and disseminating information on climate impacts has as a long-term goal to wisely use scientific information in policy and decision-making in order to plan and manage communities accordingly (Skanavis et al., 2018).

Through humor in environmental communication, communicators avoid overwhelming audiences with feelings of fear, helplessness, and guilt, which may otherwise discourage them from taking action against climate change (O'Neill and Nicholson-Cole, 2009). The reward is a central mechanism of humor, motivating a process of debugging inferential errors in our comprehension of the world that is essential for smooth cognitive functioning (Hurley, Dennett, and Adams, 2011). Humor can thus serve as a means of assessing the shared underlying knowledge, attitudes, and preferences of others and "works, in a sense, as a mind reading spot-check, 'pinging' various minds in the environment and discovering those which are most compatible" (Flamson and Barrett, 2008). This confirms that climate change communicators need humor as a good vehicle for awareness.

Professional comedians have adopted themes concerning science in recent years, which is indicative that this humor format has the potential to be used in science communication (Gunderson, 2006; Chang, 2009; Pilcher, 2010). Comedians can seek a reaction that is not necessarily laughter, but instead invites the audience to think about certain issues (McCarron and Savin-Baden, 2008). The application of stand-up comedy to science communication is still uncommon but has been gaining momentum in recent years in the United States of America and the United Kingdom (Pinto et al, 2015).

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instructors enact successful humor, their students enjoy their educational experiences and learn more (Booth-Butterfield and Wanzer, 2010; Chesebro and Wanzer, 2006). The use of humor is a prevalent communication behavior in pedagogical settings and serves different purposes (Banas et al., 2011).

The clearest findings regarding humor and education concern the use of humor to create a learning environment. The use of positive, nonaggressive humor has been associated with a more interesting and relaxed learning environment, higher instructor evaluations, greater perceived motivation to learn, and enjoyment of the course (Banas et al., 2011). Specifically, instructor's humor increases student performance on exams, especially on knowledge and comprehension items (Hackathorn, Garczynski, Blankmeyer, Tennial, and Solomon, 2011), recall of information (Garner, 2006), and final examination scores (Ziv, 1988). Humor, therefore, guarantees or makes highly likely that specific, hidden knowledge was necessary to produce the humorous utterance, and that the same knowledge is present in anyone who understands the humor (Flamson and Barrett, 2008). Similarly, Martin (2007) argued that the positive emotions aroused by instructional humor may become associated with learning.

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