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Relation Between Sustainable Message, Brand Reputation and Online Sharing: The Role of Humour. An Experimental Research.

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Contents

Chapter 1

1.1 Introduction

The aim of this project is to deepen the knowledge of how the use of humour in a commercial add influences the consumer perception of it. In particular this study is centred on the use of humour to promote a brand's choice of switching to a new packaging format made of sustainable material.

The first step was to research previous studies on the topic (i.e. humour and environmental advertisement) as well as related subjects (i.e. green marketing, humour in advertising). Furthermore, possible effects that could be relevant for the experiment where they were, and they have been restricted to respondent's interest in the environment, feeling of being in control of the situation and brand reputation.

After an overview of previous studies and observation, an online questionnaire has been created and distributed through social media (i.e. Facebook, WhatsApp, WeChat).

In the last part data has been analysed and the results were studied, such analysis has shown interesting hints on the effect that humour has in sustainable advertisement.

1.2 Development of the idea

What is a brand community and why is it important for a firm? A brand community is a group of people who are bound to each other by relationships formed trough to their admiration of a brand (Muniz and al., 2001), an example is the community formed around the Harley Davidson, people with the same brand of motorbike meet regularly to have fun together.

Having a brand community is extremely good for the wellbeing of a brand, it means that the customers become advocate and it increases the positive word of mouth. It also means that there is a direct relationship with the customer and the brand (and between the customer, the firm and the product) (McAlexander, 2002); the question is "How to increase this interaction between customer and brand?"

As observation of the natural environment has often been the process to follow to come across a hint of a phenomenon, in a similar way the first idea for this investigation has been inspired by an online post on Facebook and by the interaction that users had with it.

The general description of the publication is that of an image on a company official Facebook page (i.e. Taffo, an Italian funerary brand). Such company's products were not directly related to sustainability, but humour regarding environmental issues was used in their advertising.

It was interesting to observe that the post had a good number of online shares and seemed to have a good reception, people liked the joke and expressed their sympathy towards the brand, congratulating them for the idea (the page has almost 86 thousand followers in June 2019, which is quite a lot considering the nature of the industry and the fact that it operates locally).

Considering that the brand was unrelated to the concept of sustainability it was interesting to consider the characteristics of public: the profile of the few randomly selected people who had commented did not show them to be particularly keen on the topic as their last publications usually were not related to environmental issues.

Environmental issues are an extremely serious topic, and sustainable communication tends to have a serious format. The common way to promote a sustainable behaviour and to broach the subject mainly exploits two different values, instrumental, (utilitarian) and intrinsic (moral obligation) (Kilbourne, 2006). Such methods are extremely useful in developing awareness regarding the topic, they stress the importance of environmental issues and inform the public about the current situation and the risks we are heading towards.

Literature related sustainable communication focuses on the classical way to convey the message and the literature available with the keyword "sustainable communication" and "humour" is quite narrow.

This research wants to be complementary to this approach and it aims to study a possible different and parallel way to pursue sustainable communication.

The average person is the target that the study on this kind of communication is trying to reach. In developed countries people could be considered as sufficiently informed about the environment, because the importance of the topic and thus the previous communication both from public service announcements, private campaigns, news and several other kinds of publications, even if it would be important to understand how much this concept is true thought further study.

The supposed degree of education on the topic, is important because humour has been observed to weaken the message, which has a bad influence on persistency (Petty and Cacioppo, 1986a), so a strong preliminary knowledge can avoid the problem of the perception of the message as "weak".

Considering the fact that culture plays an important role in understanding a particular message when talking about the effects of humour, a geographic segmentation could be needed to better understand the phenomena and to figure out if the humorous approach could have some limitations in an international and multicultural environment. In fact, the difference in cultural background could prevent the correct interpretation of the message and the appreciation.
Age, as in the generation one belongs to, has an effect on the interpretation and appreciation too. Leading, for example towards a communication format that uses memes when focusing on younger generations.

Another characteristic is the level of care, even if in a general way, about the wellbeing of the planet and appreciation of this kind of humour does not seem to be strictly linked to activist, neither advocates. This could mean that an excessive concern about the problem could lead to an unclear appreciation of the of humour, because of a vehement sensibility. To further examine this factor could be useful for those companies who already have a strong fanbase with a great majority of green consumptions, to know if the use of humour could be beneficial or if it would be a faux pas.

The decision of developing a sustainable humoristic advertisement is expected to have several possible positive effects.
First, the use of green marketing creates a correlation in the consumers' mind between the brand and care for social causes. Furthermore, the humoristic part is expected to have a stronger impact on the reader, exploiting the concept of shock, and maybe being remembered for a longer time taking advantage of the characteristics typical of black humour. Brand could also be appreciated more because the intellectual regard caused by a well-structured campaign and the fondness on the joke has the positive effect of make people more prone to share the campaign on their social media.
Finally public would be further exposed to the sustainable message, which, even if not directly beneficial to the brand, maybe because a lack of interest in the products, is positive because it reminds people of the importance of keeping a correct behaviour, and because the repetition of a certain message is proven (Faina, 2012) to increase the perception of the relevance of a specific problem.

1.3 Contribution

This research tries to fill the gap between humorous advertisement and green marketing; it aims to understand what the best ways are to optimize message strength and increase people's appreciation, with respect to the same environmentally friendly advertisement but without the humorous part.
It also aims to further study the different elaboration of the same sustainable message, controlled by the importance the respondents give to environmental friendly behaviour. A further intent of the study is to understand the relationship between control and humour (still related a "green" topic). Finally, it endeavours to enrich the literature about brand reputation, analysing if humour interacts with brand.

Taking the managerial point of view, the research wants to understand if the use of humour with a sustainable product has a positive effect on purchase intention and if it could increase the interaction of the consumer, even in a way untreated to increase in purchase.
As environmental issues could be a delicate topic, the research also wants to understand if there are practices that could be damaging for the brand.

Chapter 2

2.1 Premise on environmental issues

In the last few centuries great part of the global resources had been worn out and it raised the risk of resource exhaustion (Lee, 2016), this, in addition to pollution had caused important and problematic changes to the environmental equilibria.

Nowadays the uncontrolled production and the waste of resources is too high to be sustained by the environment: material as oil, gas and plastics are often protagonist of environmental disasters and the excessive usage of paper is cause of deforestation. Considering plastic as an example, at the end of 2017, 8.3 billion tons of plastic had been produced, of which only the 9% have been recycled [Figure 1], while the rest had been burned (which causes air pollution) or are still in the environment. In particular, China is recognized as the first country for mismanaged plastic in the sea [Figure 2] (Trowsdale, Housden and Meier, 2017). In addition, as the majority of consumed products are packaged for distribution and sales, there is a double environmental impact: the intrinsic one, of the product itself and extrinsic (e.g. the package). This implies that, not only firms need to care about the composition o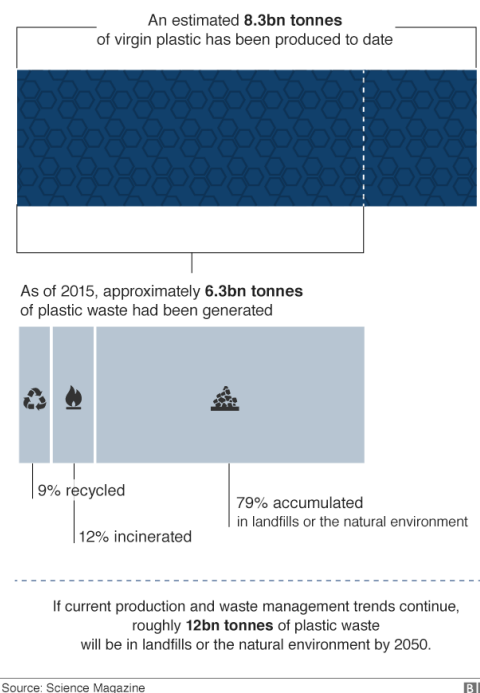f their products, but also concern about the crate (Magnier, Schoormans and Mugge, 2016).The effects of these is feared to be noxious for life survival, as desertification, air and water pollution and ozone depletion (Peng,2012).
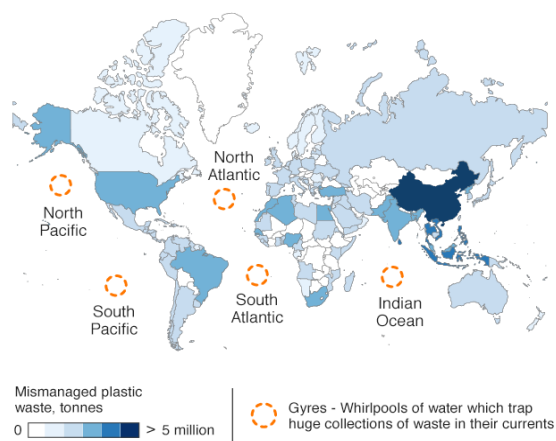
How much plastic is there?

Figure 1

Ocean plastic

Figure 2

Because of the importance of this topic for the survival of the planet great interest had been taken about it in the last decades: several people understood the relevance of environmental issues and the idea of a possible sustainable development had sprout.

2.2 Previous literature

Sustainable development is the idea of pursuing progress and the current needs of the world population, preserving the possibility for future generation to do the same. To successfully follow this path, they are usually identified four elements which are considered the pillars of sustainable development and in which it is necessary to intervene to change the current situation: economy, environment, society and culture (World Commission on Environment and Development, 1987; Servaes and Malikhao, 2016).

An important push toward environmental friendly behaviour is done by people, which underlines the important of society and culture in the change in behaviour. But what are the intrinsic motivations that push people to take care about the environment? Three fundamental values that can explain the sustainable behaviour had been found: (1) intrinsic, so the idea that is our moral obligation to preserve the Earth and its inhabitants, it is characterized by the selfishness; (2) instrumental, on the contrary is the utilitarian reason, humans live in the ecosystem so preserving it serve to preserve human life; finally (3) there is an aesthetic motivation, indeed pollution and resource exploitation destroys beautiful areas, as forest or beaches, which could be used as a recreational space (Kilbourne 2006). An alternative, but similar way to look at topic is the one proposed by Lee (2016), he also identify three elements: (1) the care for the self, as excessive consumption is detrimental for personal wellbeing; (2) the interest for others, as overconsumption damage the community and deteriorate relations; and (3) the actual care for the wellbeing of nature.

Because of the interest arisen towards the sustainable development of the general public, the demand for sustainable products had increased. The characteristic of being "green" has shown to have a relevant impact on consumer decision making, which means that sustainability and sustainable marketing could have a great benefit not only on the environment, but also on the company performance (Atkinson & Rosenthal, 2014). Furthermore is important to notice that the presence of green products not only favour the sales of the single lines, but is the firm as a whole which take

advantage of the green move: according to RepTrack one of the element which influence most corporate reputation is the index "citizenship", which contains, among other variables, environmental responsibility, thus, the company has a convenience also looking to the long term.

Communication is an essential mechanism of today economy and it is also valid in this field; sustainable communication is '. . . working towards a world where humankind can preserve rather than dominate nature' (McDonagh,1998), and it tends to differ from social marketing for the fact that it is strictly focused on ecology and the environment.

Going deeper into the topic, even if sustainable advertising is often considered to be a single defined element, it had be observed at least five kinds of advertising, which goes from the idea of political intervention and technological solutions to ecocentrism which is based on the concept of a change in the root of the politics, toward the peaceful coexistence with nature. The marketers need to understand at what level the product and the target are positioned so to create a more or less green communication (Kilbourne, 1995).

A way to see sustainable marketing is it as an holistic approach which can balance the modern concept of relationship marketing, ethics, eco friendliness and care for the society, with the traditional way of doing business, which usually ignores its environmental impact: it 'involves identification and satisfaction of customer needs in a sustainable manner, while conventional marketing satisfies needs and wants in the most profitable manner' (Belz, 2006) .

When developing a project based on sustainability and sustainable communication, in assessing the objectives, the strategy and the medium, an important factor must be taken in consideration is the previous knowledge of the target about the topic as it could change the perception of an advertisement. This is of relevance when dealing with an international audience as that the importance of green consumption is not perceived in the same way in all countries, in 2016 Jerzyk conducted a research between France and Poland to analyse the weight of "green consumption" in people lives. An interesting result was that, while in France the concept of "sustainable packaging" was largely known (more than 70%); only 30% of Polish sample knew what it was. This result suggests that in developing countries the general information about environmental issues is less spread and less easily available. Lack of consumer awareness is one the key barrier to develop of sustainable products (Gustavo et al., 2018).

This could mean that, with the correct education waste could be reduced even without European high regulation, but with a push from the public.

It has also been observed that the level of perception of the environmental risk and the diffusion of information are not always completely directly proportional, but can vary among cultural and racial characteristics even when subjects came from the same country (Macias, 2015). Macias study (2015) also highlighted a greater interest in environmental issues of females rather than males, but this difference is still less relevant than cultural background.

Many authors have argued that to have a true change in the relation with nature, western culture has to better understand its role, to change its perception and its position; this is opposed to Buddhist perspective, as this culture has a deep connection with nature, which is considered an important part or society and the perception of the human being who should strive for the selfishness (Servaes and Malikhao, 2016; Kilbourne, 2004).

Not only to improve the wellbeing of the planet it could be used the rhetoric of the importance of the act, but it could also be exploited the tendency of people of preferring the status quo over changes and uncertainty (Faina, 2012), which could push people who are not directly interested in the environment, to have a negative attitude toward climate change and the unknown effects of it, so to have a sustainable behaviour.

Regarding the message framing it has been observed that, as in other sectors, different messages are more effective with different targets. Demographics and culture strongly changes the perception of the world, so it is extremely important to understand the correct content and channel to have a correct communication (Moon et al., 2016), in particular the effectiveness of the message is often related to the self-representation of the consumer and their self-expression (Wheeler, Petty, and Bizer 2005). The presence of a high or low involvement in the issue vary the impact of a weak versus strong arguments [Figure 3a]. In a similar way the length of the message could influence the perception [Figure 3b] (Petty and Cacioppo, 1986b).
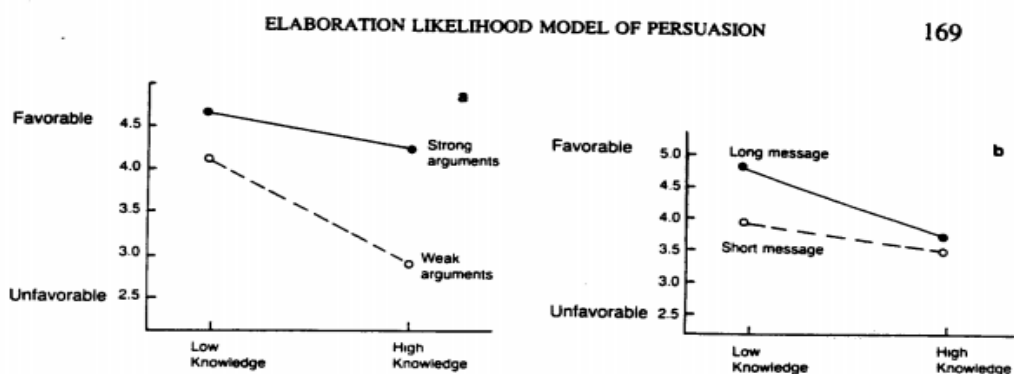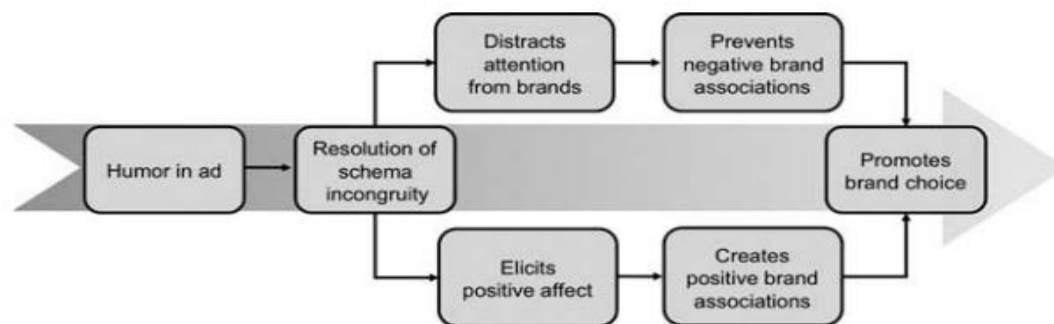

Figure 3

According to Strick (2013) humour has a strong effect on consumers, it would rise attention and increase the likability of recollecting in the future, and furthermore it fosters a positive association toward a brand [Figure 4].

A negative aspect of the use of humour is the fact that the use of weak and unrelated argument to convey a message has seems to have a weaker effect on persistence, rather than strong ones (Petty and Cacioppo, 1986a).

In the elaboration of the ad the use of rhetorical questions could be useful to increase the cognitive elaboration of the message for people who were not interested in the topic in a first time. This kind of expression has a negative impact on people with strong opposite views (Petty, Cacioppo and Heesacker, 1981), but this negative effect could be ignored as who has strong negative motivation towards sustainability or the brand is not likely to change their opinion because a commercial but would need a strong debate and proofs.

F   chematic representation of the effect of humour in ads on brand associations and choice.

Figure 4

The positive sentiment toward the ad could increase the online share, thus the positive WOM. eWOM could be defined as "any positive or negative statement made by potential, actual, or former consumers about a product or company, which is made available to a multitude of people and institutions via the Internet" (Hennig-Thurau et al. 2004). It is extremely useful as it has, for the customer a dual value, economic and experiential and it increases the perceived customer value (Sussan, 2012), it has been found that it influences 70% of all buying decision (Balter, 2008).

Regarding the situation depicted in the publication, it may be taken in consideration control, as people tend to be more influenceable if they have been put in a situation of lo low control (Briñol et al.,

2007). Considering that environmental problems can easily fall in the category of "way over his/her head" the implication of different levels of control are not to be ignored.

As acting had been observed as a way of restoring control, it is possible that being exposed to the notion of changes in environment due to pollution could have a positive relation with willingness to buy, furthermore online sharing is felt as a way to restore control (Consiglio, De Angelis and Costabile, 2018), so these kind of message could also increase WOM. A strong image could also mean an increase in vividness as it works on an emotional level and evokes images which are close in times and has a higher possibility of influencing the subject (Nisbett and Ross, 1980).

Mood is also been proved to have an impact on the message perception, people avoid to elaborate messages which could have a negative impact on their state of mind (Wegener and Petty, 1994), this suggest that it has to be understood which idea prevails in the consumer's mind if the negative one of "we are destroying the world" and if it could have a dissonant effect with the humour, or if the one of "I can do something to change" that could also improve brand perception.

The choice of the channel is particularly relevant since a television or online ad would need a strong persistence in time, while a in loco poster would influence the buying behaviour of the consumers in the moment they are seen, while increasing exposition to a sustainable message, which is extremely positive as it had been studied that it had a positive effect on the perception of a stimuli (Harrison, 1977). In addition the presence of other people, since it could be in a shop, could influence the buying behaviour as people want to give a positive image of themselves, particularly when confronted with a large majority and in taking relatively simple actions (Faina, 2012; Asch, 1951). It is true that the idea of being judged by others could also persist in the online environment.

Trust is a fundamental issue when dealing with sustainable products, it is often necessary for the customer to believe to the company when it says that it is actually doing good and, on the other hand, for brands and corporations whose core is sustainable marketing, it had seen that their strategy and communications are more credible to their customers (Bernytė, 2018).

An important concept to be studied is the credibility of the source as a trustable source immediately creates a stronger change in the behaviour. The two fundamental element that makes a source trustable are competence and reliability, in particular for the last is the motivation of the source which has to appear sincere, unbiased and without a hidden agenda (Faina, 2012). In the case of a brand, this fact becomes particularly relevant as the consumer could easily find an agenda, which is to sell the product, so it could be perceived that the sustainable message is only forwarded to increase sales, without a

real interest in or impact on the environment, in general the presence of information asymmetry, means that customer has to trust the company. There are some ways to reduce the risk, as it could be certificates, but in general consumers are not able of directly verifying information (D'Amico et al., 2016; Giannakas, 2001). For example, a research on the relation between eco-friendly values and mainstream retail brands conducted in Lithuania had showed that not always the advertised greenness and interest in customer value communicated is consistent with the brand strategies (Bernytė, 2018). In particular, in the field of organic food it had been observed that trust seems to be strictly linked to the peripheral elements of the message (i.e. form of appeal and source) as it appears to be subject to the low elaboration of information process; in addition it was shown that it can be divided in two dimensions, authenticity (e.g. proper certification, transparency...) and functionality (the potential benefit) (Vega-Zamora et al.,2018).

For companies it can also be a good move to engage people in participating in their campaigns in favour of the environment: it communicate the existence of the said campaign, it builds a community around the brand which will be considered as a reference point and it reach deeper in the people, involving deep thought and emotions (Harrison, 1992).

2.3 Hypothesis

As humour seems to weaken the message strength, as in could seem more superficial (Petty and Cacioppo, 1986a) and people with high knowledge of the matter are expected to be less influenced by weaker message than people with low knowledge ones (Petty and Cacioppo, 1986), people who do not express a strong interest in environmental issues are expected to be more influenced by the advertisement. This is only true when the respondents do not strong argument against, as they will again need a stronger message (Petty, Cacioppo and Heesacker, 1981).

H1) Humour could be used to rise attention on environmental problems in a positive way (I can do something to change), but the effect on WTB and online share is stronger if the previous interest on sustainability is moderate (neither too strong nor too weak).

The second and the third hypothesis are related to the idea of control, which is the perception of being in control of the situation and of what is happening, in particular, as the lack of it increases persuading power

(Briñol et al., 2007); the question is if trying, to simulate a situation of higher versus lower control, people would change their behaviour doing actions (i.e. purchase or share online) to restore the control lost (Consiglio, De Angelis and Costabile, 2018).

H2) If the humoristic sustainable ad is related to a situation of "low control" rather than "high control" WTB increases.

H3) If the humoristic sustainable ad is related to a situation of "low control" rather than "high control" online share increases.
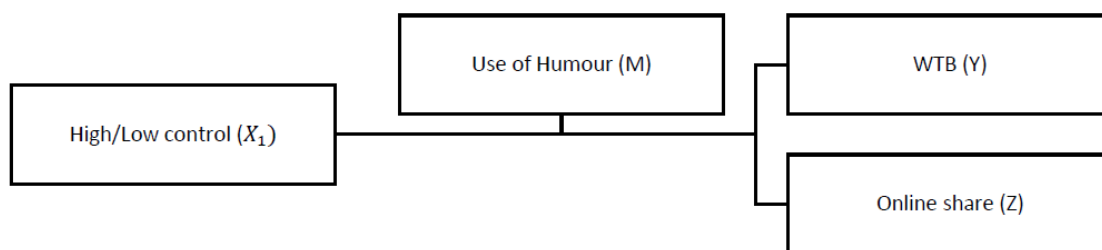
Figure 5

The next step is to pursue the understanding of the importance of the brands motivations, o better, the perception that the consumers have of them agenda (Faina, 2012). Credibility is extremely important when dealing with sustainable issues (Bernytė, 2018) so it is expected to have different responses with brands with different reputation.

H4) If the humoristic sustainable ad is produced by a brand with good reputation rather than bad reputation WTB increases.

H5) If the humoristic sustainable ad is produced by a brand with good reputation rather than bad reputation online share increases.

Figure 6

Finally, is interesting to observe if people perceive the add or if the jokes gains a greater importance and increases the shareability of the add.

 H6) Humoristic sustainable ad, in the short term, has a stronger positive impact on online share than on WTB.

Chapter 3

3.1 Procedure and methodology

The research consists of an online experiment, a questionnaire. Each participant is randomly exposed to different conditions (six different scenarios), and had to answer some questi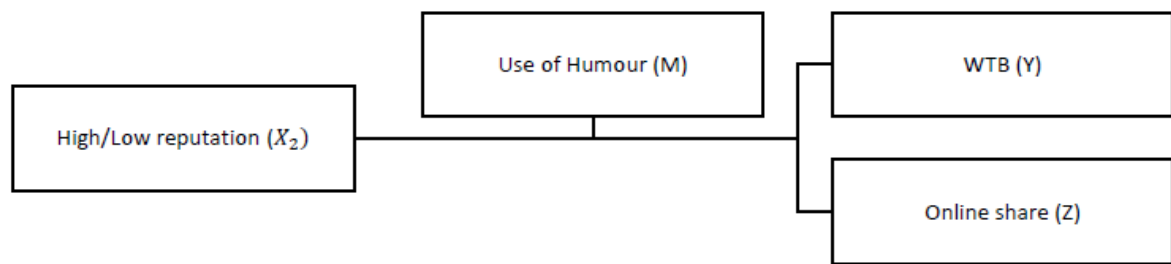ons about it, in a between-subjects experimental design. It is composed by four sections, demographics, scenario presentation, questions about the scenarios and question about the interest in environmental issues of the respondents.

The sample is a convenience sample: the distribution channels were limited, and the survey was mainly diffuse through social media (Facebook, WhatsApp, WeChat) and
The circulation had no demographic limitations, even if a younger audience was expected considering the channel employed. In addition, there was no geographical limitation, but the languages in which the survey was are Italian and English, so it would be expected not mother tongue of one of the two could have problem in filling it, thus, particularly older generation and uneducated people.
The total number of respondents is 219, and ranged from 17 to 89 years; the majority of the sample came from Italy, (n = 190), followed by Croatia (n = 8) and China (n = 8), the rest of the participants, were from other European counties (n = 8), South America (1 from Venezuela, 2 from Brazil), Iran (n = 1) and Uganda (n = 1).
Being the experiment was based on two brands, McDonald's and Starbucks, who mainly target young people, and, considering that the second brand is not extremely well known in Italy by older generations as it is not well developed (only one shop is present in Italy), it was considered more suitable to limit the age of the participants to 49, obtaining a smaller sample (n = 169), the excluded were all from Italy, except one from Germany.

The design of the experiment was between-subject: the participants were randomly assigned one of the six possible scenarios, which all contain a sustainable ad (*100% recyclable materials. The same unrivalled flavour in a new packaging, thought for the everyday fight in aid of the environment.*) and were based on two variables: the presence of humour (humour = 1), the sense of control of the situation (control = 1) or the absence of it (control = 0) and two different brands (i.e. Starbucks, brand = 0, and McDonalds, brand = 1).

The message presented was studied to be short as possible convey the necessary information, to be read in a short time, furthermore is expected to be the method of persuasion which remains more similar between people with high and low knowledge on the topic, this to avoid biases caused by the message length. Regarding the message strength the message was expected to be quite strong, which was confirmed by the questions related (mean message strength = 4.69) (Petty and Cacioppo, 1986).

Humour was defined by the presence or absence of a joke, there were two kinds, each related to an environmental issue, the first four (1 to 4) scenario contained the joke (2x2), while the last two only had the ad (5 and 6).
The definition of control was trough the topic of the joke: one was characterized by a problem that we face every day, the trash (1 and 3), people have an active impact on garbage, so it was a situation on which respondents had higher control, with respect to the second (2 and 4) which had as subject polar bears and climate change; the last two scenario did not contain the joke.

Assuming that people are usually moved by three main motivations when they adopt a sustainable behaviour (Kilbourne 2006), all three have an importance in the comics: moral obligation is linked to "avoid climate change and keep polar bears alive" and "avoid to pollute the environment", the utilitarian reason is "avoid climate change because is also damaging for humans and the ice melting can cause floods" and "avoid to pollute because is also dangerous for human health" and, finally, aesthetic regards the "beauty of polar cap and wanting to keep gorgeous animals as polar bears" and not wanting to ruin "the beautiful landscapes with garbage".

The bands chosen were Starbucks (3, 4 and 6) and McDonalds (1, 2 and 5), they were selected because both use disposable packaging and sell food, the choice also took in consideration the target of the brands, the image they have and the perception the general public have about them.
The design of the ad tries to follow the brand identity, both for colours and shapes, in addition there was the logo at the top of the page. [Table 1]

Scenario	Freq.	Percent	Cum.
1	25	14.79	14.79
2	29	17.16	31.95
3	31	18.34	50.30
4	28	16.57	66.86
5	25	14.79	81.66
6	31	18.34	100.00
Total	169	100.00	

Table 1

The third part was dedicated to the questions about the scenario, all respondents had to answer to the same 17 questions which were seven-point scales going from 1= "Strongly disagree", to 7 = "Strongly agree" and were presented in a random order.

In deciding which question had to be asked it was necessary to consider that the attention span that responder have is quite short, so too they could not be kept on the survey too long.

The dependent variables for the experiment were willingness to buy (wtb), which intended to test the variation of purchase intention (Dodds et al., 1991) ($\alpha = 0.93$) and willingness to share online (wom), this second scale was not found in a previous work, so it was adapted a previous one (adapted from Walsh and Beatty 2007) ($\alpha = 0.90$) .

Then "message strength" was tested (ms) (Wheeler, Petty, and Bizer 2005) ($\alpha = 0.71$) to understand how the message was perceived and if it could have caused some biases in the responses (Petty and Cacioppo, 1986).

Furthermore, it was tested reputation, which is was extremely important to understand the reputation that McDonald's and Starbucks have. Different scale were used to test different elements of reputation: customer satisfaction (repcs) (Walsh and Beatty 2007) ($\alpha = 0.86$), how reputation would influence positive word of mouth and advocacy (repwom) (Walsh and Beatty 2007) ($\alpha = 0.87$), trust (reptrust) (Walsh and Beatty 2007) ($\alpha = 0.92$) and reputation in relation to environmental issues (repenv) (Walsh and Beatty 2007) ($\alpha = 0.47$), which was the only one with a low alpha. Finally, another variable was created to test a generical "reputation" which contains questions about trust and perception of an interest in the environment (rep) (Walsh and Beatty 2007) ($\alpha = 0.79$).

Finally, the last section was about the own interest in the environmental issues of the respondent, there were 5 questions (Haws et al., 2014), of which 2 were reversed to test the attention of the respondents. From this section it had been created 2 variables, the first (env) ($\alpha = 0.89$) contained all the questions while the second (env1245) ($\alpha = 0.85$) only considered the non-reversed ones.

[See Appendix A]

The reversed question may have caused some confusion, as, even if the answers generally were not opposite to the others, they tended to be closer to the neutral value (env = 4) with respect to the others, so they have been used to asses the coherence with the other, but had been excluded from the calculations.

The difference in reputation [Table 2] for Starbucks (brand = 0) and McDonald's (brand = 1) was tested with a one-way ANOVA, with the variable which contained both trust and perception of the interest in green behaviour (rep). The experiment resulted to be significant and with a difference of 0.84 between the two brands, which is particularly important because Starbucks (meanrep = 4.67) is above the average (rep = 4), while McDonald's (meanrep = 3.83) is below.

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. oneway rep brand, bonferroni tabulate
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| | Summary of rep | | |
Brand	Mean	Std. Dev.	Freq.
0	4.6722222	1.0650503	90
1	3.8322785	1.2166852	79
Total	4.2795858	1.2103278	169

| | Analysis of Variance | | | | |
Source	SS	df	MS	F	Prob > F
Between groups	29.6813256	1	29.6813256	22.90	0.0000
Within groups	216.420745	167	1.29593261		
Total	246.102071	168	1.46489328		

Bartlett's test for equal variances: chi2(1) = 1.4684 Prob>chi2 = 0.226

Comparison of rep by Brand
(Bonferroni)

Row Mean-Col Mean	0
1	-.839944
	0.000

Table 2

3.2 Hypothesis testing

H1) Humour could be used to raise attention on environmental problems in a positive way (I can do something to change), but the effect on willingness to buy (wtb) and online share (wom) is stronger if the previous interest on sustainability is moderate (neither too strong nor too weak).

Hypothesis 1 cannot be answered because almost all respondents have low interest in environmental issues: the vast majority of the sample stated that their interest in sustainability is low (mean = 2.1) [Table 2], considering the sample (n=169), only 14 (8.3%) people answered to the question on the interest in environment with a mean higher than 3.33 and only 4 (2.4%) answered positively (mean higher than 4.66), so that there is not enough data to be tested [Graph 1].
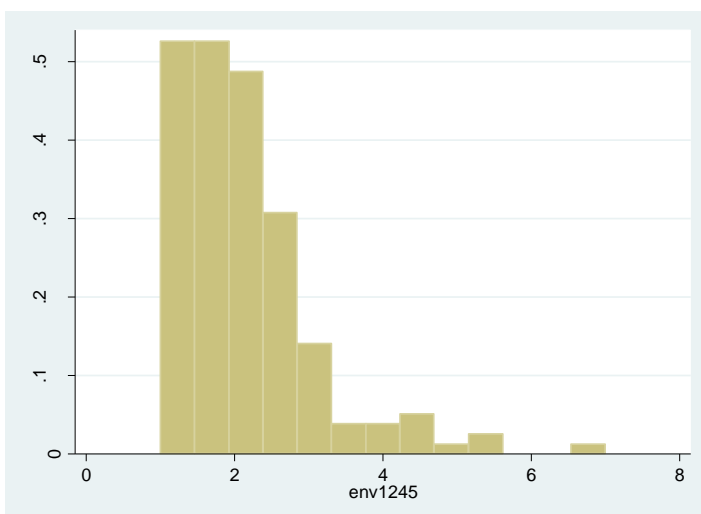
```
. gen envcat = env1245

. recode envcat 0/3.33=0 3.34/4.66=1 4.67/7=2
(envcat: 169 changes made)

. tab envcat
```

envcat	Freq.	Percent	Cum.
0	155	91.72	91.72
1	10	5.92	97.63
2	4	2.37	100.00
Total	169	100.00	

Table 3

Graph 1

Even if the hypothesis was inconclusive, several new questions arise from these responses, in particular "Why is the mean so low?".

As mentioned before the questions were taken from a work of Haws et al. (2014) and were tested by them; their results were definitely higher than the ones in this experiment (mean for males = 4.4, mean for females = 4.53). It could be argued that this first experiment was done in the US, that has to be taken in consideration because it means that the respondents had a different geographical provenience and culture. To avoid demographic impairment other data were analysed: they were taken from an experiment taken in November 2017. Oddly the additional data confirm the original ones, with a mean of 4.1, the results are still definitely higher that the ones in this study.

Therefore, what could have defined this low result?

One possibility could be the fact that both chosen brand produce take away food, with lots of packaging to be disposed after the meal, meaning that their packaging is to be discarded after the meal, hence creating a significant amount of disposable material. This could have could have made the respondents actively think about how much waste they actually produce and lower the perception they have about their interest in the environment. This hypothesis fits with the 2017 experiment results because in that situation the scenario was still linked to sustainability, but it showed clothes, something people usually does not directly associate with trash and pollution.

Another inference could be made considering the education level of the respondents: it was not asked in the survey but, because a convenience sample has been used, it can be considered safe to define the better part of the sample as in possess of a higher level of education. The idea is that a sort of Dunning-Kruger (Kruger and Dunning 1999) effect might have happened. Educated people, generally aware of environmental problems, know they are not actively doing enough for the environment, compelling themselves to underestimate the depth of their "interest on the environmental issues topic". This idea is supported by a few interviews done after the experiment: people that confirmed to habitually recycle, and care in their daily life not to directly have a negative impact on the environment, confirmed a low interest in those issues despite acknowledging their eco-friendly lifestyles.

Still it would be interesting to do further research on these responses to understand why they have so low mean value.

H2) If the humoristic sustainable ad is related to a situation of "low control" (control = 0) rather than "high control" (control = 1), willingness to buy (wtb) increases.

Neither in H2 [Table 4] or H3 [Table 5] we can reject the null hypothesis. The explanation of this result could be linked to the low interest in the topic that the sample had shown: these hypothesis where related to the emotional impact that low control could enance, and the necessity to restore the lost control through adifferent behaviour (i.e. purchase and online share). As low interest in a certain topic also implies also low emotional involvement , it is understandable that the respondents felt no need to restore control.

Finally the problem could be the fact that the sample did not perceive the two scenarios as "high control" and "low control", or that people feel a situation of "low conrol" everything enviormental related, as these scenarios where constructed using the definitin of "situation of low/high control". Future tests could benefit of a further research on scenarios, maybe including in depth interviews or focus groups to understand how they are perceived.

```
. oneway wtb control, bonferroni tabulate

                     Summary of wtb
  Control         Mean    Std. Dev.        Freq.

        0     4.4404762    1.6069384           56
        1     4.5438596    1.4915524           57
        2          4.75    1.5072217           56

    Total     4.5779093    1.5320685          169

                    Analysis of Variance
   Source              SS        df       MS            F       Prob > F

Between groups    2.78225692      2   1.39112846      0.59      0.5556
 Within groups    391.553045    166   2.35875328

    Total         394.335302    168   2.34723394

Bartlett's test for equal variances:  chi2(2) =   0.3618  Prob>chi2 = 0.835

                   Comparison of wtb by Control
                           (Bonferroni)
Row Mean-|
Col Mean |         0              1

       1 |    .103383
         |    1.000

       2 |    .309524        .20614
         |    0.863          1.000
```

Table 4

H3) If the humoristic sustainable ad is related to a situation of "low control" rather than "high control" online share increases.

```
. oneway wom control, bonferroni tabulate
```

| | Summary of wom | | |
Control	Mean	Std. Dev.	Freq.
0	3.5357143	1.8704816	56
1	3.6491228	1.7242103	57
2	3.2410714	1.8265493	56
Total	3.4763314	1.8050942	169

Analysis of Variance

Source	SS	df	MS	F	Prob > F
Between groups	4.99876216	2	2.49938108	0.76	0.4670
Within groups	542.406563	166	3.26750942		
Total	547.405325	168	3.25836503		

Bartlett's test for equal variances: chi2(2) =   0.3827 Prob>chi2 = 0.826

Comparison of wom by Control
(Bonferroni)

Row Mean- Col Mean	0	1
1	.113409 1.000	
2	-.294643 1.000	-.408051 0.696

Table 5

H4) If the humoristic sustainable ad is produced by a brand with good reputation rather than bad reputation WTB increases.

To test H4 a two-way ANOVA was done [Table 6], with willingness to buy (wtb) as dependant variable and humour and brand reputation (brand) as independent. In this test the independent variable resulted to be an influence for the purchase intention **($F_{(3,165)}=4.56$, p<0.05)**. The main effect analysis showed that the perception of the brand has a statistically significant effect on willingness to buy (wtb) **($F_{(1,165)}=3.79$, p<0.05)**. Regarding the use of humour he result is not significant **($F_{(1,165)}=1.33$, p= 0.98).** The interaction between the two independent variables is significant **($F_{(1,165)}=4.49$, p<0.05)**.

This result could mean that humour is a moderating effect between brand reputation and willingness to buy, showing that the use of humour does have a level of influence in the perception of the brand.

```
anova wtb brand humour humour#brand
```

	Number of obs =	169		R-squared	= 0.0765
	Root MSE	= 1.48559		Adj R-squared =	0.0598

Source	Partial SS	df	MS	F	Prob > F
Model	30.1828355	3	10.0609452	4.56	0.0043
brand	8.35383213	1	8.35383213	3.79	0.0534
humour	2.9434767	1	2.9434767	1.33	0.2498
humour#brand	9.9045267	1	9.9045267	4.49	0.0356
Residual	364.152466	165	2.20698465		
Total	394.335302	168	2.34723394		

Table 6

Margin for the interaction between "humour" and "brand" were analysed to explain the interaction effect, with a 95% confidence level [Table 7] .

```
. margins humour#brand

Adjusted predictions                              Number of obs   =        169

Expression   : Linear prediction, predict()

                         Delta-method
              Margin    Std. Err.      t      P>|t|     [95% Conf. Interval]

humour#brand
       0 0    4.731183   .2668203    17.73    0.000     4.204361    5.258005
       0 1    4.773333   .2971185    16.07    0.000     4.186689    5.359978
       1 0    4.966102   .1934077    25.68    0.000     4.584229    5.347975
       1 1    3.975309   .2021635    19.66    0.000     3.576148    4.374469
```

Table 7

Plotting the margins we have an unclear result: as the two means for humour = 0 are so close, it could both be an ordered interaction or a dis-ordered one, to give a more precise indication it would be better to test a larger sample; the line segments are not parallel, confirming that there is an interaction [Graph 2].

It can be observed in the margin's graph that there is a situation in which, with humour = 0 (the joke was not shown) the means of willingness to buy (wtb) are almost the same, (the difference could be a random evidence given the fact that the sample is quite small). When humour = 1 the situation changes: when humour was used (humour = 1), respondents who were exposed to Starbucks (brand = 0) have an increase in purchase intention, which decreases in those exposed to McDonald's (brand = 1). In fact, the slope of Starbucks is positive, while the one representing McDonald's is negative.

Adjusted Predictions of humour#brand with 95% CIs
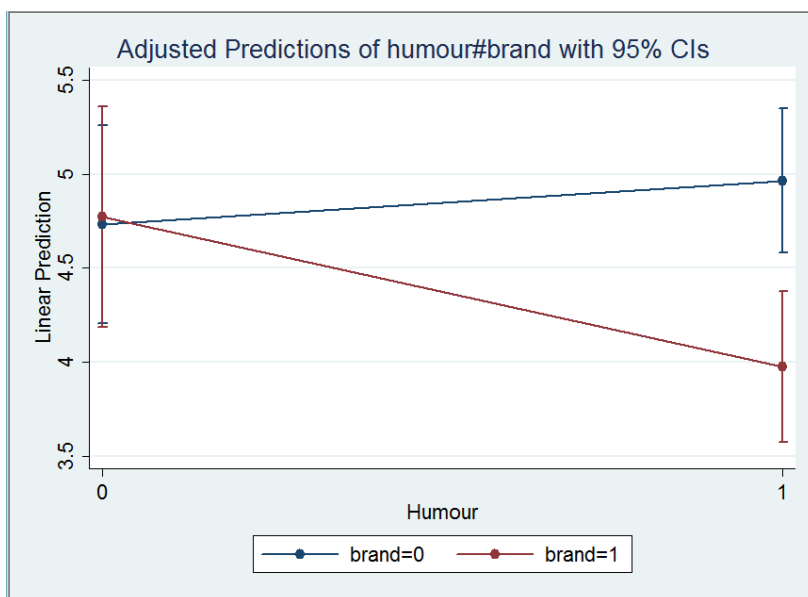
Graph 2

Given the previous outcomes regarding the perception of the two chosen brands (Starbucks has a better reputation than McDonald's), these last results support H3. Humour is a moderating effect between brand's reputation and purchase intention, and it has a positive effect if the brand's reputation is good. Furthermore, it can be observed that there is a negative effect of humour on brand with a negative reputation (McDonald's Rep = 3.83 < 4, which is the zero-level).

These findings could be explained by the assumption that the respondents might have considered the brand as not interested in the environment, to the point of being damaging even, leading them to perceive the use of humour as hypocritical. Additional tests could be done on the emotional reactions triggered by such adds.

Even if this conclusion would fit the hypothesis, the interaction effect could be explained in a second way: that people find funnier what is presented by the brand that they like and because they find the add funnier their willingness to buy increase. In this situation it would be the brand's reputation that moderates the humour, making the joke more or less appreciable by the respondents and thus increasing or decreasing the purchase intention. A hint that support this second result could be found in the ANOVA with reputation (rep) as dependent variable, and humour (humour) and brand (brand) as independent. This new model ($F_{(3,165)}=8.19$, $p<0.05$) finds a statistically significant effect in the "brand" ($F_{(3,165)}=16.49$, $p<0.05$), while both "humour" ($F_{(3,165)}=0.02$, $p=0.9$) and the interaction ($F_{(3,165)}=1.64$, $p=0.2$) are not statistically significant, which could suggest that the second interpretation is more suitable [see Table 10 in the appendix].

This could be a case of framing effect (Behavioraleconomics.com | The BE Hub (a), n.d.): the actual frame is the brand and of brand's characteristics (colours, shapes, etc) which work as semantics, and depending upon the brand chosen it is positive or negative. The appreciation of the joke is filtered by that.

Another hypothesis is the halo effect (Behavioraleconomics.com | The BE Hub (b), n.d.), again the respondents projected the negative idea they had about McDonald's to the joke, so they reduce the appreciation of it.

Considering this second option we would have a dis-ordinal effect, with a negative slope for humour (from Starbucks = 0 to McDonalds = 1), so when presented with McDonald's the joke would be perceived as less funny than when used with Starbucks. The fact that the slope for non-humour (humour = 0) is almost equal to zero could be interpreted if favour of this second thesis. [Graph 3].

Adjusted Predictions of brand#humour with 95% CIs
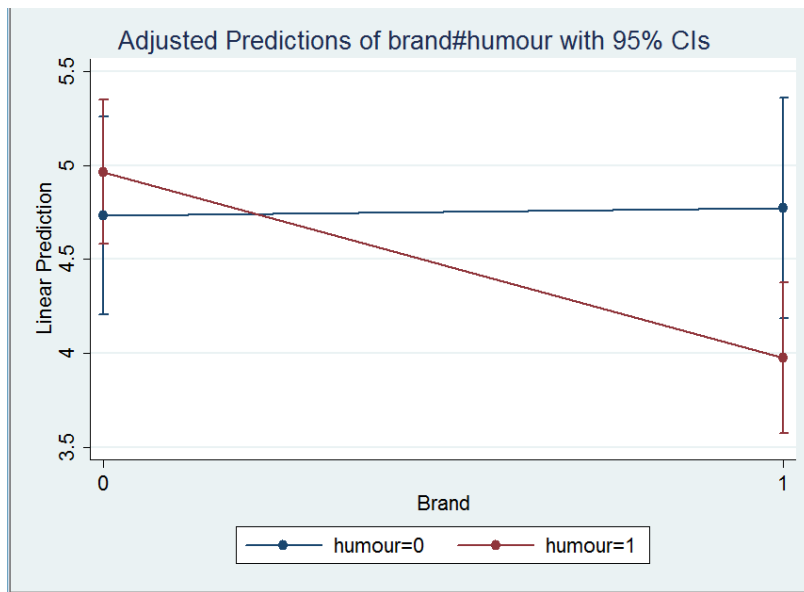
Graph 3

H5) If the humoristic sustainable ad is produced by a brand with good reputation rather than bad reputation online share increases.

H5 was tested with a two-way ANOVA which had online share (wom) as dependent variable and humour and brand as independent [Table 8].

The model computed for this experiment is significant **(F(3,165)=6.58, p<0.05)**.

The main effect analysis showed that the perception of the brand has a statistically significant effect on willingness to buy (wtb) **(F(1,165)=1.49, p=0.22)**, while, regarding the use of humour he result is not significant **(F(1,165)=1.33, p= 0.98).** Regarding the interaction between the two independent variables we can neither reject the null hypothesis at 95%, neither at 90%, but, as p is extremely close to 0.1 we can assess the presence, at least, of a trend **(F(1,165)=2.61, p=0.108)** (n.b. both the small sample and the fact that the scale for "online share" was adapted from another scale could have impacted this result).

This result could mean that humour is a moderating effect between brand reputation and online share, and thus the use of humour influences the perception of the brand.

```
anova wom brand humour humour#brand
```

	Number of obs =	169	R-squared	=	0.1069
	Root MSE	= 1.72131	Adj R-squared =		0.0907

Source	Partial SS	df	MS	F	Prob > F
Model	58.5230583	3	19.5076861	6.58	0.0003
brand	29.5401926	1	29.5401926	9.97	0.0019
humour	4.4284407	1	4.4284407	1.49	0.2232
humour#brand	7.73644737	1	7.73644737	2.61	0.1080
Residual	488.882267	165	2.96292283		
Total	547.405325	168	3.25836503		

Table 8

Margin for the interaction between "humour" and "brand" were analysed to explain the interaction effect, with a 95% confidence level [Table 9].

```
. marginsplot

  Variables that uniquely identify margins: brand humour

. margin humour#brand

Adjusted predictions                          Number of obs    =        169

Expression   : Linear prediction, predict()
```

|	Margin	Delta-method Std. Err.	t	P>|t|	[95% Conf. Interval]	
humour#brand						
0 0	3.435484	.3091572	11.11	0.000	2.82507	4.045898
0 1	3	.3442629	8.71	0.000	2.320272	3.679728
1 0	4.237288	.224096	18.91	0.000	3.794823	4.679754
1 1	2.888889	.2342412	12.33	0.000	2.426392	3.351385

Table 9

It can be observed in the margin's graph [Graph 4] that there is an ordered interaction, and that the segments are not parallel.

Talking about online share (wom) it can be observed that generally people are more prone to share online a commercial of Starbucks (brand = 0), which has a better reputation (rep) than McDonald's one (brand = 1). In addition, when moderated by humour Starbucks (brand = 0), has a positive slope and it seems that people's willingness to share online considerably increases when the effect of humour is present.

Talking about McDonald's (brand = 1) the effect is not perfectly clear: the slope is negative, so there should be a negative effect of the use of humour on online share,

This thesis is supported by the results of H4, where purchase intention (wtb) of this brand was clearly negatively impacted by the use of humour (humour = 1), but it also true that the difference is quite narrow and the significance was not extremely high, so further test would be suggested.
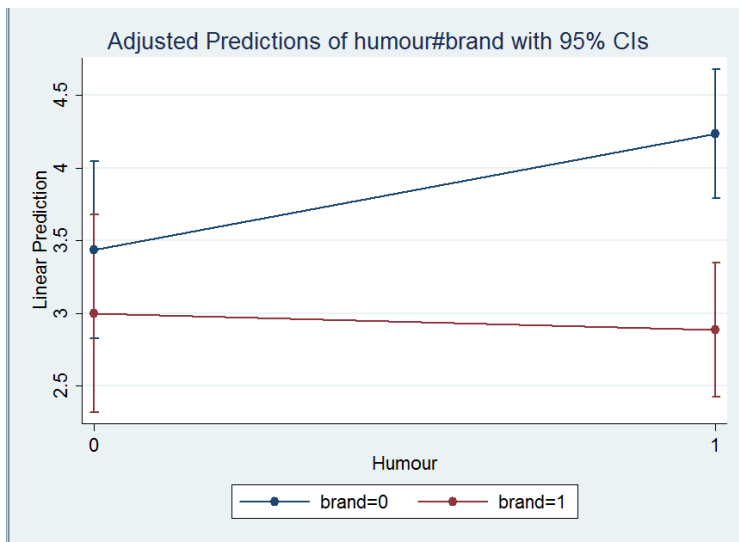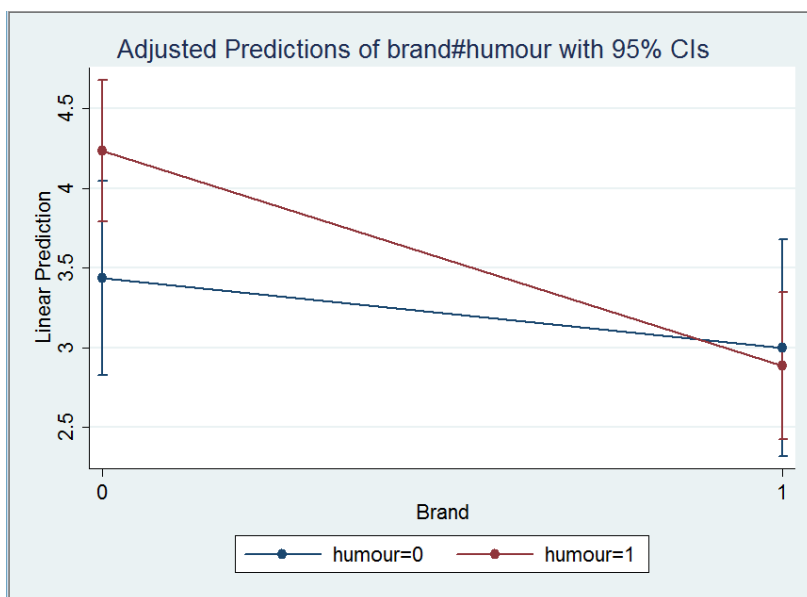
Graph 4

As for H4, in this experiment, it should also not be overlooked the possibility of a "framing effect" of brand reputation (brand) on the perception of humour (humour), thus an increase on online share (wom) would be due to a different perception of the joke. In addition, regarding the nature of "online share", the importance of the appreciation of humour (humour) should be even greater.

In this dis-ordered plot there is a quite steep negative slope, so that humour would be perceived as less engaging when "framed" by McDonald's. In this case the slope of non-humour (humour = 0) is not equal to zero, but is still flatter than the one of humour (humour = 1).

Yet, because the fact that the significance of the interaction was not high, the trend can be identified but further research would be needed to reach a definite conclusion.

Graph 5

H6) A humoristic sustainable ad, in the short term, has a stronger positive impact on online share than on WTB.

To test this hypothesis, it is necessary to run two different one-way ANOVA, one with purchase intention (wtb) [see Table 11 in the appendix] as dependant variable and humour (humour) as independent, and one with online share (wom) as dependant and humour (humour) as independent [see Table 12 in the appendix], then compare them.

Unfortunately neither ANOVA where statistically significant: $(\mathbf{F_{wtb}(1, 167) = 1.06, p_{wtb} = 0.3})$ and $(\mathbf{F_{wom}(1, 167) = 1.23, p_{wom} = 0.23})$.

So, we cannot reject the null hypothesis.

3.3 General results

The first hypothesis, H1, had to be excluded from the analysis from a lack of data, as the large majority of the respondents told that they have an extremely low interest in environmental issue, making it really difficult and pointless to do an analysis.

However, considering the answers, these data cannot be considered useless, on the contrary, they rise interesting questions: Why do these people say that their interest is so low?

A hypothesis is that they were influenced by the advertisement, something in the ad could have triggered this behaviour; it could be the incongruous association between mainstream brands which use great disposable packaging and sustainability, this could have make respondents think about wasting and how much they waste and make them underestimate the sustainability of their behaviour. It could also be involved a Dunning-Kruger, which is a cognitive bias which makes unskilled individuals overestimate their abilities and skilled one underestimate them (Kruger and Dunning 1999), in this case it would mean that educated people would be aware of the necessity of the planet, and would be aware that they do not do enough, even if they have correct behaviour, as it could be recycling. Unfortunately, the respondents were not asked about their education, but because the convenience sample the respondents are expected to be educated.

The truth probably stands in behind.

Regarding the concept of control, in H2 and H3, neither the direct effect of control nor the moderating effect of humour resulted to be significant, this could mean different things, one is the fact that the discussion about environmental issues might influence the perception of feeling in control, so the effect of the single scenario would not strongly affect the effect. Another interpretation could be the opposite, people did not fell the loss of control in neither the scenario, so they simply did not need to restore it. This second interpretation could be considered coherent with the result of interest in environment, being so low it suggests a low emotional involvement, which would decrease the effect of feeling in control of lack of thereof.

This experiment provides good support in pinpointing a trend in H4, in fact there are different clues that suggest there is an interaction between humour and brand type (and reputation) in influencing purchase intention. In particular, even if there is not significant proof that the use humour in sustainable advertisement directly increases or decreases willingness to buy, it is evident that have a negative effect when dealing with McDonalds, which resulted to have a lower reputation than the neutral value (mean = 4) and than Starbucks, for which the trend is the opposite (positive), even if

weaker. The weaker effect could be caused by the fact that the reputation of the second brand, even if it is positive, is not extremely high.

Regarding H5 the effect seems to be similar, even if the significance is weaker.

The results of H4 and H5 could also be interpreted in a slightly different way: is not the humour which moderates the effect of the brand on willingness to buy, but is the other way round, the brand creates a frame/halo effect with regards to humour and moderates the perception that people have of the joke, thus willingness to buy.

About H6 and the results regarding online share it would be important to highlight that the average willingness to share online is quite high (mean = 3.48), particularly if the willingness to buy controlled by the presence of humour is observed we see an extremely high (3.24) propensity with respect to the empirical evidence which is usually lower. As, because the convenience sample, a big slice of the respondents is expected to be marketing students, it would be argued that they could have a higher propensity to share even normal commercials, because academic reason. To understand if it could explain the result is had been observed the average willingness to share online and the group who was more propense was the one over the age of 39 (mean = 4.1) [see Table 13 in the appendix].

3.4 Theoretical implications

The theoretical implications that this dissertation gives to literature is on consumer behaviour of consumers who are confronted with humour with regards to sustainable advertising.

The aim of this research was to understand the linkages between humour and sustainable advertising and if it could be used to increase not only purchase intention but also willingness share online the adds, in particular it was found that in both case (even if for shareability it was mostly the pinpointing of a trend) that brand is an important element in the perception of humour. The results of the experiment show that if humour is used by a brand which has a "bad" reputation, in particular with regards to trustworthiness and interest in the environment, the use of humour decreases the effectiveness of the message, causing a decrease both in willing to buy and share online. To date the literature has not investigate deeply the topic.

Another conclusion that could be observed from the research is the suggestion of the lack of importance of "feeling in control" when dealing with humour and sustainability. Considering that "feeling in control" could be considered one of the most basic needs for human being (Consiglio et al., 2018) is expected to be highly emotional, so the result could be influenced by the interest (or lack of it) in environmental issues.

3.5 Managerial implications

This research con be read in a practical point of view, in fact it aims to understand how humour is perceived in advertisement regarding environmental issues, to comprehend if it advisable to use it to push green campaigns or if it would be better to follow different strategies.

Why are the results important for managerial decision? The main output of the research is that humour interacts with the reputation of the brand which has created the ad, influencing the purchase intention (or online share propensity), in particular, it was highlighted a negative effect with respect to McDonald's when humour had been used; the reputation of this brand, with focus on trust and environmental impact, is bad, at least for the survey respondents. A previous research on the target's opinions and a better understanding of the processes which drives these effects, could be beneficial for brands. In particular firms as McDonalds, which often uses jokes and humoristic spots, could avoid mistakes, particularly as it is expected an increase in interest in the environment and to the expectations towards brand in this field.

3.6 Limitations and future research

The results of this study highlight some interesting trends which could indicate the path for possible further research in the future on this topic.

One first improvement which could be done is to overcome the limitation of the convenience sample: the number of the responders was limited (n = 218) and they mostly came from similar backgrounds, this caused an important lack of diversity which could have influenced the experiment results.

Another limitation was the geographical, in fact the large majority of the respondents came from Italy, so it was impossible to make a cultural comparison, which would have been extremely interesting, considering that humour is influenced by culture (Sen, 2012).

One thing that would benefit from research is the understanding which the cause of a so low mean for "interest in the environment" questions is, if the scenario influenced that, if it is a Dunning-Kruger, of it is just chance (even if the last hypothesis is quite unlikely). Redoing the experiment with two more scenarios, "no humour and no sustainability" and "humour without sustainability" could clarify what are the mechanism behind these responses. In addition, it would be useful to consider in the questions the education of the respondents and other demographic characteristics.

A limitation of the research could be found in the medium: comics is an interesting mean of communication, but it requires the subject to read the message and reading is an "active" action that requires a certain amount of concentration and understanding (Anderson and Pearson, n.d.); an alternative way to present the experiment could be to create a video add, as video is something that is created and framed by the author and requires less attention, as it is more passive (Y. Ma et al., 2005).

As previously said the result related to propensity to share online seem to be inconsistent with empirical observation, so it may be more useful to find a different way to experiment this particular variable, which could be real life experimentation (publishing online and observing what happens). Furthermore, it would be interesting to better research the causes of the different effect that humour has on online share and purchase intention with respect to the different brands: which emotions are triggered?

Finally, it would be interested to study the effect in a prolonged period of time, do people remember the add? Does humour have an effect in medium term remembrance? (Strick, 2013)

3.7 Conclusion

This research's results underlined the importance of brand reputation, in particular considering the use of humour in green advertising, bad reputation could reduce both purchase intention and propensity to share online, this means that a brand that wants to follow the path of humoristic advertisement has to be really careful and it is advisable to research about customer perception to understand if it could be done or if it is better to go for the traditional way.

Unfortunately, there are no evidence of the presence of a stronger effect with regards of online share than of purchase intention, this could mean that humour in sustainable advertising is not extremely useful to increase customer interaction. The results also suggest that the testing of "online share" using questionnaires could be not optimal, and it may be better to do it in a simulation.

Considering the concept of "feeling in control", there are not significant suggestions that humour could be a moderator effect in a situation of green marketing. This could be due several reason, two possibility are (1) the feeling of lack of control that are due to environmental issues which weakens

the effect of the scenarios, and (2) the lack of involvement in sustainable behaviours expressed by the respondents.

Finally, the low results of the questions about the interest in environment underline the fact that is fundamental to keep talking about environmental issues and to underline the importance of the topic.

Appendix

Appendix A: Scales

Measure	Items
Purchase Intention (*Dodds et al., 1991*)	I would purchase the described item I would consider buying the described item The probability that I would consider buying the described item is high.
Message Strength (*Wheeler, Petty, and Bizer 2005)*	While reading the advertisement, how did you feel? How persuasive is the information? How much the message would influence you in buying the product on a scale from 1 to 7?
Concern for Environment (*Haws et al., 2014*)	It is important to me that the products I use do not harm the environment I consider the potential environmental impact of my actions when making many of my decisions My purchase habits are affected by my concern for our environment I am concerned about wasting the resources of our planet I would describe myself as environmentally responsible I am willing to be inconvenienced in order to take actions that are more environmentally friendly
Reputation environment (Walsh and Beatty 2007)	Would reduce its profits to ensure a clean environment Seems to be environmentally responsible Appears to support good causes
Reputation customer satisfaction (Walsh and Beatty 2007)	I am satisfied with the services the company provides to me

	I am satisfied with my overall experience with this company
	As a whole, I am NOT satisfied with this company
Reputation trust (Walsh and Beatty 2007)	This company can generally be trusted
	I trust this company
	I have great confidence in this company
Reputation WOM (Walsh and Beatty 2007)	I'm likely to say good things about this company
	I would recommend this company to my friends and relatives
	If my friends were looking for a new company of this type, I would tell them to try this place
WOM (adapted from Walsh and Beatty 2007)	I'm likely to share this content on my social media
	I would share this content online

```
. alpha purch1 purch2 purch3

Test scale = mean(unstandardized items)

Average interitem covariance:     2.186121
Number of items in the scale:            3
Scale reliability coefficient:      0.9314

. alpha messstr1 messstr2

Test scale = mean(unstandardized items)

Average interitem covariance:     1.278811
Number of items in the scale:            2
Scale reliability coefficient:      0.7057

. alpha env1 env2 env3 env4 env5 env6

Test scale = mean(unstandardized items)

Average interitem covariance:     1.028074
Number of items in the scale:            6
Scale reliability coefficient:      0.8888

. alpha repenv1 repenv2

Test scale = mean(unstandardized items)

Average interitem covariance:      .7593688
Number of items in the scale:            2
Scale reliability coefficient:      0.4727
```

```
. alpha repcs1 repcs2 repcs3

Test scale = mean(unstandardized items)

Average interitem covariance:      1.568411
Number of items in the scale:             3
Scale reliability coefficient:       0.8559

. alpha reptrust1 reptrust2

Test scale = mean(unstandardized items)

Average interitem covariance:      1.997253
Number of items in the scale:             2
Scale reliability coefficient:       0.9205

. alpha repwom1 repwom2 repwom3

Test scale = mean(unstandardized items)

Average interitem covariance:      1.625564
Number of items in the scale:             3
Scale reliability coefficient:       0.8712

. alpha wom1 wom2

Test scale = mean(unstandardized items)

Average interitem covariance:      2.917618
Number of items in the scale:             2
Scale reliability coefficient:       0.8954
```
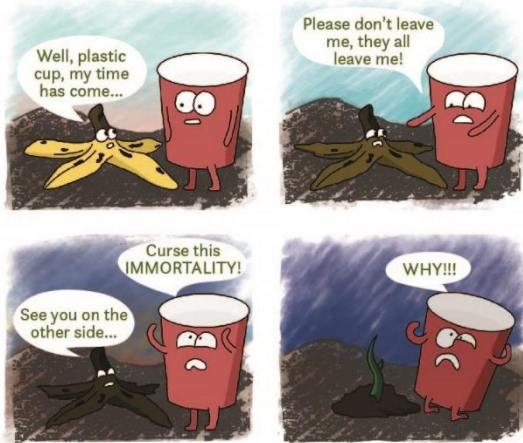
Appendix B: Scenarios
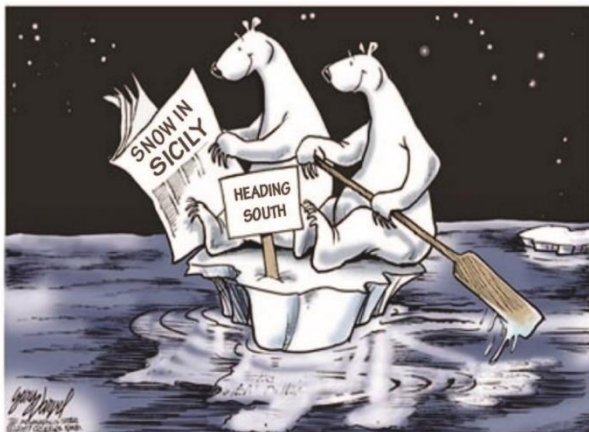
Scenario 1

Scenario 2

Scenario 3

Don't forget to recycle!

New line of eco-friendly products, made out of 100% recyclable materials.

The same unrivaled flavor in a new packaging, thought for the everyday fight in aid of the environment.

100% recycled paper

Scenario 4

i'm lovin' it®

New line of eco-friendly products, made out of 100% recyclable materials.

The same unrivaled flavor in a new packaging, thought for the everyday fight in aid of the environment.

100% RECYCLED PAPER

Scenario 5

New line of eco-friendly products, made out of 100% recyclable materials.

The same unrivaled flavor in a new packaging, thought for the everyday fight in aid of the environment.

100% recycled paper

Scenario 6

Appendix C: Tables

```
anova rep humour brand brand#humour

                         Number of obs =      169      R-squared     =  0.1295
                         Root MSE      = 1.13943      Adj R-squared =  0.1137

              Source │  Partial SS    df       MS             F      Prob > F

               Model │  31.8820216     3  10.6273405          8.19     0.0000

              humour │   .02015888     1   .02015888          0.02     0.9010
               brand │  21.4138545     1  21.4138545         16.49     0.0001
         brand#humour│  2.12828848     1  2.12828848          1.64     0.2022

            Residual │  214.220049   165  1.29830333

               Total │  246.102071   168  1.46489328
```

Table 10

```
. oneway wtb humour, bonferroni tabulate

                       Summary of wtb
     Humour │       Mean    Std. Dev.        Freq.

          0 │       4.75   1.5072217           56
          1 │  4.4926254   1.5437388          113

      Total │  4.5779093   1.5320685          169

                    Analysis of Variance
     Source           SS        df      MS         F      Prob > F

Between groups    2.48034067     1   2.48034067    1.06     0.3054
 Within groups    391.854961   167   2.34643689

      Total       394.335302   168   2.34723394

Bartlett's test for equal variances:  chi2(1) =   0.0418  Prob>chi2 = 0.838

                  Comparison of wtb by Humour
                         (Bonferroni)
Row Mean-│
Col Mean │          0

       1 │   -.257375
         │      0.305
```

Table 11

```
. oneway wom humour, bonferroni tabulate

                    Summary of wom
   Humour    |     Mean    Std. Dev.       Freq.
------------+-----------------------------------
        0   |  3.2410714   1.8265493          56
        1   |  3.5929204   1.7910351         113
------------+-----------------------------------
    Total   |  3.4763314   1.8050942         169

                    Analysis of Variance
   Source              SS         df      MS            F     Prob > F
-------------------------------------------------------------------------
Between groups     4.63545345      1   4.63545345      1.43     0.2341
 Within groups     542.769872    167   3.25011899
-------------------------------------------------------------------------
    Total          547.405325    168   3.25836503

Bartlett's test for equal variances:  chi2(1) =   0.0284   Prob>chi2 = 0.866

                 Comparison of wom by Humour
                        (Bonferroni)
Row Mean-   |
Col Mean    |         0
------------+----------
        1   |  .351849
            |    0.234
            |
```

Table 12

```
. oneway wom age, bonferroni tabulate

                    Summary of wom
    Age      |     Mean    Std. Dev.       Freq.
------------+-----------------------------------
        0   |  3.3404255   1.7323846          47
        1   |     3.395    1.8563228         100
        2   |  4.1363636   1.6488222          22
------------+-----------------------------------
    Total   |  3.4763314   1.8050942         169

                    Analysis of Variance
   Source              SS         df      MS            F     Prob > F
-------------------------------------------------------------------------
Between groups     11.1137249      2   5.55686243      1.72     0.1822
 Within groups     536.291601    166   3.23067229
-------------------------------------------------------------------------
    Total          547.405325    168   3.25836503

Bartlett's test for equal variances:  chi2(2) =   0.6202   Prob>chi2 = 0.733

                 Comparison of wom by Age
                        (Bonferroni)
Row Mean-   |
Col Mean    |         0           1
------------+----------------------
        1   |  .054574
            |    1.000
            |
        2   |  .795938    .741364
            |    0.265      0.245
```
Table 13

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Scenario design edited by Chiara Gentili

Summary

Contents

1. Introduction and literature review

The idea of the project is to study how the use of humour affects the promotion of a sustainable product could affect the customer decisions and understand why it happens.

In the last few years the situation on the planet has become critical, we are nearing the resource exhaustion and great changes in the environmental equilibria have happened (Lee, 2016). Enormous quantities of waste are dispersed in the environment every day, and the problem is not only caused by the material of the items produced, but also the packaging conteinig them that increases the garbage (Magnier, Schoormans and Mugge, 2016). This lack of care risks to be noxious for human survival, causing problems as desertification, air and water pollution and ozone depletion (Peng, 2012).

Fortunately, people have started understanding the importance of the topic, and the concept of a possible sustainable development, which is the idea of pursuing progress and satisfying current needs, while preserving the possibility of future generations of doing the same, had sprout (World Commission on Environment and Development, 1987; Servaes and Malikhao, 2016).

Fundamental for the environmental friendly trend is the participation of the general public, who can have different motivations, which usually con be divided in three elements: people can be moved by intrinsic motivation (such as the idea that it is our moral obligation to preserve the Earth and its

inhabitants, a thought characterized by the selfishness), instrumental motivation (the utilitarian reason, humans live in the ecosystem so preserving it serve to preserve human life) and aesthetic motivation (pollution and resource exploitation destroys beautiful areas, as forest or beaches)(Kilbourne 2006).

Considering the utilitarian interest of companies, green consumption had been observed to have a great potential to increase sales and company performance (Atkinson & Rosenthal, 2014) not only to the single product line, but is also a bust to the band reputation, also advantaging the firm in the long run.

Culture is an important moderator for the perception of sustainability and of the importance of keeping a sustainable behaviour (Jerzyk, 2016), relevant differences between countries had been notices, which could be motivated by a different depth of knowledge regarding the problem (Gustavo et al., 2018), but it was also seen a difference between different ethnic groups could be observed in the same country (Macias, 2015).

Regarding the message framing, as different demographics can strongly influence the perception of the world, it is important to understand what the consumer's self-representation and their self-expression are (Wheeler, Petty, and Bizer 2005).

Humour can have a strong effect on costumers: it rises attention and increases the likehood of future recollection. In addition, it fosters positive associations toward the brand.

The development of a brand community and positive word of mouth is a common objective for brands (Balter, 2008). Internet and social media are an amazing medium, thus companies should try to develop eWOM (any positive or negative statement made by potential, actual, or former consumers about a product or company, which is made available to a multitude of people and institutions via the Internet) (Hennig-Thurau et al. 2004).

In analysing the content of the scenario, the feeling of being in control might be taken in consideration, as people appear to be more influenceable when they deal with a situation of low control (Briñol et al., 2007). Action is expected to be a method to restore control, in particular online share (Consiglio, et al., 2018) (thus, increase in word of mouth), which could also mean that purchasing has a similar effect. A strong image could influence the audience to an emotional level with a higher possibility of influencing the subject (Nisbett and Ross, 1980).

Mood has also been proved to have an impact on the message perception, people avoid to elaborate messages which could have a negative impact on their state of mind (Wegener and Petty, 1994). This suggest that it has to be understood which idea prevails in the consumer's mind, if it is the negative one of "we are destroying the world" and if it could have a dissonant effect with the humour, or if it is the one of "I can do something to change" that could also improve brand perception.

To evaluate the effects of the process of influence they are usually used three characteristics, intensity, resistance (to negative pressions) and persistence in time (Faina, 2012).
The choice of the channel is particularly relevant as while a television or online ad would need a strong persistence in time, a different matter is for a in loco poster would influence the buying behaviour of the consumers in the moment they are seen. In addition the presence of other people, as it could be in a shop, could influence the buying behaviour since people want to give a positive image of themselves, particularly when confronted with a large majority and in taking relatively simple actions (Faina, 2012; Asch, 1951). It is true that the idea of being judged by others could also persist in the online environment.

A big problem that consumers have when confronted with a sustainable brand is trust, often they do not have proof of the company's behaviour, or they only have partial information (information asymmetry). The two fundamental elements that make a source trustable are competence and reliability, in particular for the last is the motivation of the source has to appear sincere, unbiased and without a hidden agenda (Faina, 2012).
Motivation for a company is easily sensed by costumers: sales. To increase sales companies can use certifications (D'Amico et al., 2016; Giannakas, 2001) but as consumers are not able of being sure, they usually use, unconsciously, peripheral elements of the message (i.e. form of appeal and source); in addition it was shown that it can be divided in two dimensions, authenticity (e.g. proper certification, transparency...) and functionality (the potential benefit) (Vega-Zamora et al.,2018).

From these elements, six hypotheses have been elaborated.

2. Hypothesis

H1) Humour could be used to rise attention on environmental problems in a positive way (I can do something to change), but the effect on WTB and online share is stronger if the previous interest on sustainability is moderate (neither too strong nor too weak).

H2) If the humoristic sustainable ad is related to a situation of "low control" rather than "high control" WTB increases.

H3) If the humoristic sustainable ad is related to a situation of "low control" rather than "high control" online share increases.

H4) If the humoristic sustainable ad is produced by a brand with good reputation rather than bad reputation WTB increases.

H5) If the humoristic sustainable ad is produced by a brand with good reputation rather than bad reputation online share increases.

H6) Humoristic sustainable ad, in the short term, has a stronger positive impact on online share than on WTB.

3. Procedure

The research consists of an online experiment, a questionnaire. Each participant is randomly exposed to different conditions, and has to answer some questions about it, in a between-subjects experimental design. The sample is a convenience sample and the survey was shared trough social media. The languages in which the survey was are Italian and English.

It is composed by four sections, demographics, scenario presentation, questions about the scenarios, and question about the interest in environmental issues of the respondents.

The total number of respondents is 219 and ranged from 17 to 89 years; the majority of the sample came from Italy, (n = 190). Because some incoherencies in the responses were found, the respondents were reduced to 169, with an age between 17 and 49.

The participants were randomly assigned one of the six possible scenarios, which all contain a sustainable ad (*100% recyclable materials. The same unrivalled flavour in a new packaging, thought for the everyday fight in aid of the environment.*).

To moderate humour two different jokes were added.

To moderate the feeling of being in control it was used the topic of the jokes, one concerned global warming (i.e. two polar bears need to leave their home, and they go south where it is snowing out of season), which is something which respondents have less control, the other was about garbage (i.e. a paper glass despairs because its immortality), which respondents could avoid, meaning they have more control of.

Finally, the scenarios were branded, Starbucks and McDonalds, two brands which sell food in disposable packaging, so that scenarios could have the design and the logo of one or the brand. The reputation and the trust towards McDonalds was lower than the one towards Starbucks.

In the third section different questions about the scenario are asked (seven-point scales going from 1= "Strongly disagree", to 7 = "Strongly agree" and were presented in a random order), to measure different variables: willingness to buy (Dodds et al., 1991), willingness to share online (adapted from Walsh and Beatty 2007), message strength (Wheeler, Petty, and Bizer 2005), customer satisfaction (Walsh and Beatty 2007), how reputation would influence positive word of mouth and advocacy (Walsh and Beatty 2007), trust (Walsh and Beatty 2007) and reputation in relation to environmental issues (Walsh and Beatty 2007).

The last section contains questions about interest in the environment (Haws et al., 2014), to understand respondent's interest in environmental issues.

4. Hypothesis testing

H1) The first hypothesis could not be tested because almost no respondents answered to have a high interest in environmental sustainability.

The questions were still important because previous test which used the same scale showed to have a definitely higher mean ($\text{mean}_{2017} = 4.1; \text{mean} = 2.1$), which means that something could have interacted with the tests. It could be related to the kind of scenario used: they were multinational brands which deal with lot of waste considering the disposable packaging and the food, the fact that

they were related to green marketing, could have influenced the way in which respondents think about themselves and influenced the responses.

In addition the convenience sample could have caused a concentration of well-educated people that are aware that what they do for the environment is not enough (even if they do simple things as recycling), thus, who underestimated their impact, causing a Dunning-Kruger effect (Kruger and Dunning 1999).

H2 and H3) Regarding the second and third hypothesis, which observed the moderating effect of humour between control and willingness to buy and control and online share. It was conducted a two-way ANOVA (one for each hypothesis), neither was statistically significant.

These results could have different explanations; it could be related to the low interest in environmental problems the respondents showed, low care about the topic would mean that they lacked the emotional component, which is important when dealing with control, thus it could have decreased the sense of lack of control.

Otherwise it could mean that the scenarios caused a lack of control in a generic way, maybe because the respondents had to face environmental problems, which could also decrease the difference between scenarios.

H4) The fourth hypothesis had willingness to buy as dependant variable and humour and brand reputation as independent, again it was tested using a two-way ANOVA ($F(3,165)=4.56$, $p<0.05$). The experiment pinpointed an interesting trend; the dependent variable resulted to be influenced by the brand reputation ($F(1,165)=3.79$, $p<0.05$), while the direct effect of humour was not significant ($F(1,165)=1.33$, $p= 0.98$), however, an interaction effect between the two independent variables ($F(1,165)=4.49$, $p<0.05$).

The result of this test could mean that humour is a moderating effect between brand reputation and willingness to buy, meaning that the use of humour influences how the brand is perceived. In particular when the brand was Starbucks, the effect of humour was weak and positive and slightly increased the willingness to buy, but when the brand was McDonalds the effect was negative and the willingness to buy decreased.

These findings could be explained by the assumption that the respondents might have considered the brand as not interested in the environment, to the point of being damaging even, leading them to perceive the use of humour as hypocritical. Additional tests could be done on the emotional reactions triggered by such adds.

The interaction effect could also have another explanation: it could be the brand which moderates the effect of humour, making people finding more or less appreciable the joke. Thus, increasing the purchase intention. This interpretation is supported by the concepts of framing effect (Behavioraleconomics.com | The BE Hub, n.d.), the brand characteristics convey a certain message, and the halo effect (Behavioraleconomics.com | The BE Hub, n.d.), the negative reputation of the brands influences the perception of anything related to it.

H5) Hypothesis 5 was tested with a two-way ANOVA ($F(3,165)=6.58$, $p<0.05$), which had online share (wom) as dependent variable and humour and brand as independent.
As for willingness to buy, online share is influenced by the brand reputation ($F(1,165)=1.49$, $p=0.22$), while the use of humour is not significant ($F(1,165)=1.33$, $p= 0.98$). Regarding the interaction effect it is not statistically significant, but could be identified a trend ($F(1,165)=2.61$, $p=0.108$), which deserves to be further investigated: observing the interaction, it can be seen that there is a positive effect if the brand is Starbucks and negative if the brand is McDonalds, confirming the previous observations.
Again, the research should understand if is the humour which moderates the effect of brand reputation or the other way around.

H6) In the last hypothesis the effect of humour on willingness to buy and on online share should have been compared, but neither test was statistically significant, so the null hypothesis cannot be rejected.

5. Conclusion

To recapitulate, the experiments lead to interesting results:
The first hypothesis had to be excluded from the analysis for a lack of data, as the large majority of the respondents told that they have an extremely low interest in environmental issue, this however, raises an important question: Why is the mean of these questions so low?
A hypothesis is that they were influenced by the advertisement, something in the ad could have triggered this behaviour; it could be the incongruous association between mainstream brands which use great disposable packaging and sustainability, it could have made respondents think about wasting and how much they waste and made them underestimate their interest. It could also be

involved a Dunning-Kruger, which is a cognitive bias which makes unskilled individuals overestimate their abilities and skilled one underestimate them (Kruger and Dunning 1999). It is also a reminder of how important it is to keep talking about environmental issues to increase awareness and interest in people.

Regarding the concept of control, in H2 and H3, neither the direct effect of control nor the moderating effect of humour resulted to be significant, this could mean different things, one is the fact that the discussion about environmental issues might influence the perception of feeling in control, so the effect of the single scenario would not strongly affect the effect. Another interpretation could be the opposite, people did not feel the loss of control in neither the scenario, so they simply did not need to restore it. This second interpretation could be considered coherent with the result of interest in environment, it being so low it suggests a low emotional involvement, which would decrease the effect of feeling in control of lack of thereof.

This experiment provides good support in pinpointing a trend in H4, in fact there are different clues that suggest there is an interaction between humour and brand type (and reputation) in influencing purchase intention. In particular, even if there is not significant proof that the use of humour in sustainable advertisement directly increases or decreases willingness to buy, it is evident that it has a negative effect when dealing with McDonalds, which resulted to have a lower reputation than the neutral value (mean = 4) and than Starbucks, for which the trend is the opposite (positive), even if weaker. The weaker effect could be caused by the fact that the reputation of the second brand, even if it is positive, is not extremely high.

Regarding H5 the effect seems to be similar, even if the significance is weaker.

This suggests to brands which want to use humour in relation to sustainable advertising to cautiously investigate their reputation and how they are perceived.

The results of H4 and H5 could also be interpreted in a slightly different way: it is not the humour which moderates the effect of the brand on willingness to buy, but the other way round, the brand creates a frame/halo effect with regards to humour and moderates the perception that people have of the joke, thus willingness to buy.

About H6 there are not significant results, but the responses to questions related to online share suggest that this element may be better tested in other ways.

Further researches could be done to investigate the effects identified. In addition, it would be interesting to observe the effects of different kinds of media, as it could be a video. Finally, it would be useful to study the effects that this ad could have after some time, to understand if there is a difference between scenarios in how people remember the content.

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