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The Overview effect: an application to green consumption

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1. Introduction

In 1950, the world produced only 2 million tonnes of plastic waste per year. By 2015, annual production had increased nearly 200-fold, reaching 381 million tonnes. For context, this is roughly equivalent to the mass of two-thirds of the world population. Over the period from 1950 to 2015, cumulative production reached 7.8 billion tonnes of plastic — more than one tonne of plastic for every person alive today (Geyer, Jambeck and Law, 2017). Of the global plastic produced over the period from 1950 to 2015: 55% straight to landfill; 30% was still in use; 8% was incinerated; 6-7% was recycled. Of 5.8 billion tonnes of plastic no longer in use, ~9% was recycled. Geyer, Jambeck and Law, 2017)

Public concern for environmental issues has gradually increased over the past three decades since the inception of Earth Day on April 22th 1970. Today, the issue of sustainable development is increasingly present in every aspect of human society and will doubtlessly shape future progress as a whole. With increasing affluence derived from rapid economic development, citizens in various parts of the world are becoming more and more concerned about the hazardous impacts of environmental deterioration on their enjoyment of life. Some of the serious repercussions of environmental damage are global warming, increased environmental pollution, and decline in flora and fauna (Chen and Chai, 2010). Various countries across the globe are beginning to realize this threat and have started working towards minimizing the harmful impact of their business activities on the environment (Joshi and Rahman, 2015).

Today the environmental ethics has become an important issue among organizations as well as consumers. Corporate Social Responsibility (CSR) has become central for consumers, employees and most of stakeholders in companies' evaluation (Carrol and Brown, 2018). Johnson & Johnson have focused on reducing their impact on the planets leveraging the power of the wind to providing safe water to communities around the world; The Coca-Cola Company made major changes to its supply chain practices including investing in new alternatively fuelled trucks, its initiatives are intended to reduce of 25% carbon footprint; Ford has planned to introduce 40 electrified vehicles by 2022, in an investment of $11 billion[1].

The continuous deterioration of the natural environment has raised the issue of protecting the natural environment which in turn resulted in ethical consumption known as green consumerism (Moisander, 2007). As green products have gained popularity in the market, more consumers have looked for greener products (Kim, H.Y., Chung, J.E., 2011). The increasing demand for natural resource exploration and exploitation has generated greater attention to the impact of such activity on both the organization and its stakeholders. Developing eco-sustainable campaigns and products, pursuing and spreading sustainable goals will generate consumers' approval. The 2015 Cone Communications/Ebiquity Global CSR[2] study found that a staggering 91% of global consumers expect businesses to operate responsibly to address social and environmental issues. Furthermore, 84% say they seek out responsible products wherever possible.

[1] SOURCE: https://digitalmarketinginstitute.com/blog/corporate-16-brands-doing-corporate-social-responsibility-successfully
[2] SOURCE: http://www.conecomm.com/research-blog/2015-cone-communications-ebiquity-global-csr-study

Despite the increasing eco-awareness in contemporary Western market economies, it is generally recognized that there are still considerable barriers to the diffusion of more ecologically oriented consumption styles (Moisander, 2007). Despite the alarming situation, the fact is that people in many countries around the globe still lack environmental consciousness and motivation that would initiate them into acting environmentally responsibly and in accordance with the needs of nature and their future survival (United Nations, 2015; Prothero, Dobscha, Freund, Kilbourne & Thogersen, 2011). On the other hand, while exploring green purchase behaviour, many studies have reported a discrepancy or "gap" between consumers' expressed favourable attitudes and actual purchasing practices (Joshi and Rahman, 2015). Hughner (2007) found that while many consumers showed a positive attitude towards purchases of organic food products (67%), only a small number of consumers (4%) actually purchased those products.

The overview effect, as the experience is called, refers to a profound reaction to viewing the earth from outside its atmosphere (White, 1987). Several astronauts have attributed deep feelings of awe and even self-trascendence to this experience (e.g Linenger, 2000; Mitchell & Williams, 1996; White, 1987).

Starting from the overview effect, theorized by Frank White in 1987, the aim of this research is to investigate if it could influence purchase intention through green products in order to increase the overall green consumption. The research has been divided into different parts: first of all, the overview effect will be analysed, exposed and explained; then, in the pre-tests section, exploratory research will be conducted to address the main and final study, where findings of pre-tests section will be implemented in more complex models.

2. The Overview effect

In his 1987 book, The Overview effect: Space exploration and Human evolution, American author Frank White coined "*The overview effect*" to describe a collection of positive mental experiences reported by astronauts and cosmonauts returning from outer space.

2.1 Overview effect's antecedents

Here, elements that influenced White's theory of "*Overview effect*" are investigated.

The concept of Earth as a single bounded system has deep military history. Beginning in the 1960s, scientists working within the American military industrial academic complex fashioned several ideas about the "whole Earth" as a "total system", in service of the space race and other globally-scaled projects, motivated by the fear of Soviet expansion. Two ideas and one image from this work are continually evoked by White in "*The Overview Effect*": Buckminster Fuller's concept of "Spaceship Earth" developed in 1969; the "*Blue Marble*" picture taken in 1972; James Lovelock and Lynn Margulis's "*Gaia hypothesis*" matured in 1974.

2.1.1 "Spaceship Earth"

In 1950s, Richard Buckminster Fuller, an American inventor and system theorist, took part at one conference of the Congress of the American Association for the Advancement of Science, held in Philadelphia. Here, between others, two papers, one in anthropology and one in biology, caught Fuller's attention: researches had found that extinction in both cases was the consequence of over-specialization. These researches inspired his following studies and theories.

In his book *Operating manual for Spaceship Earth*, Fuller claimed that, after the world-paralyzing economic crash of 1929, society consisted almost entirely of specialized people. From then, all great ideological groups in history "*assumed Armageddon due to man's tendency to specialize himself only toward weaponry, thus developing the ability to destroy themselves totally with no comprehensively organized oppositional thinking capability and initiative powerful enough to co-ordinate and prevent it*". In this scenario, Fuller introduced two concepts: "*Spaceship Earth"* and humans as astronauts. Fuller called the Earth "*Spaceship Earth*" and all humans on it are "astronauts"; we live on this spaceship cause it's the only place where life is possible, so we have to preserve it.

Spaceship Earth was so extraordinary well invented and designed as to be able to keep life regenerating on board despite the phenomenon by which all local physical systems lose energy, so humans obtain biological life-regenerating energy from another spaceship: the Sun. As Fuller stated:*" man is unique among all the living phenomena as the most adaptable omni-environment organism being initially equipped to invent intellectually and self-disciplined, to make the tools with which thus to extend himself. The bird, the fish, and other livings are all specialized, and their special capability-functioning tools are attached integrally with their bodies, making them incapable of penetrating hostile environments. Man externalizes, separates out, and*

increases each of his specialized function capabilities by inventing tools as soon as he discovers the need through oft-repeated experiences with unfriendly environmental challenges". Fuller's idea was that humans have to focus on their wealth, defined as the capability to cope effectively with the environment in sustaining our healthy regeneration, to survive on the spaceship. Fossil-fuel could be very effective if used to build new machinery to support life and humanity at even more effective standards of vital physical energy and re-inspiring metaphysical sustenance. Only by understanding this may we continue for all time ahead to enjoy and explore universe as we progressively harness evermore of the celestially generated tidal and storm generated wind, water, and electrical power concentrations.

2.1.2 Earth pictures

Over the past 80 years there has been a stunning assortment of images of our planet taken from space. In this paragraph we first expound Earth's pictures history, then, their effects of these pictures on society will be discussed.

2.1.2.1 First Earth pictures

Until the XX century people had no idea how the planet Earth could look like seen from the space. Human beings had to wait till 1930s to see the surface of the planet from above it.

2.1.2.1.1 Explorer II

In January 1934, the National Geographic Society (NGS) and the U. S. Army Air Corps decided to collaborate on a program to build and launch a manned balloon to the then record altitude of 24 km (15 mi). The *Explorer II* balloon reached a peak altitude of 22,066m; the crew became the first humans to witness the curvature of the Earth. So, the first picture of the Earth was taken in 1935 from a high-altitude balloon. It was taken 22km from the ground, high enough to discern the curvature of the Earth[3].

2.1.2.1.2 V-2 rockets

On October 24, 1946, not long after the end of World War II and years before the Sputnik satellite opened the space age, a group of soldiers and scientists sent a V-2 rocket hurtling up into the atmosphere. The rocket was equipped with a 35mm camera, the aim of the launch was to take the first pictures of Earth seen from space. It reached an altitude of 105 km and successfully took the first ever images of Earth from an altitude five times higher than any other previously photographed. Clyde Holliday, the engineer who developed the camera, wrote in National Geographic in 1950 that, when the movie frames were stitched together, the V-2 photos showed for the first time "*how our Earth would look to visitors from another planet coming in on a space ship*"[4].

[3] SOURCE: https://www.airspacemag.com/space/the-first-photo-from-space-13721411/
[4] SOURCE: https://www.airspacemag.com/space/the-first-photo-from-space-13721411/

2.1.2.1.3 Effects on society

Until the 1950s there were no images of the whole Earth taken from the space, nevertheless these launches did not go unappreciated.

Regarding to the Explorer II launch, the success of the mission was much celebrated in the press and the aeronauts were invited to an audience with U.S. President Franklin D. Roosevelt. They became national heroes and both men were presented with the Hubbard Medal of the National Geographic Society by General John J. Pershing[5].

Regarding the V-2 rockets, after the images where distributed to media, Walt Disney and Collier's magazine planted the idea of space exploration for the first time in people's imagination: from 1952 to 1954, Collier's magazine published a series of articles to discuss space realistically and to offer a blueprint for space exploration; developed on these articles, "Man in Space", "Man and the Moon" and "Mars and Beyond" (1955) were first three episodes about space exploration in the Disneyland anthology. In the following years, more than 1000 pictures of the Earth were taken from the space exploiting V-2 rockets; Holliday speculated that "the entire land area of the globe might be mapped in this way".

2.1.2.2 Space race

During the Cold War, United States and Soviet Union started the *"Space Race"* to achieve first in spaceflight capability. In 1958 U.S. president Dwight Eisenhower founded the National Aeronautics and Space Administration (NASA) with the aim of putting a man in orbit around the Earth.

In 1961, the Soviet Union first sent a man into the space; on the other side of the planet, the U.S. president John F. Kennedy announced that NASA would send the first man on the Moon during that decade: to achieve this goal, NASA started the "*Apollo program*". In 1966, Lunar Orbiter 1 provided the first white and black picture of the Earth taken from the Moon and, in 1967, ATS-3 (an experimental geostationary weather and communications satellite of NASA) provided a new photo of the Earth, but it was only in 1968 that the vision of the Earth changed

2.1.2.2.1 Earthrise

Apollo 8 was the second crewed spaceflight mission flown in the United States Apollo space program, the first having been Apollo 7, which stayed in Earth orbit; Apollo 8 was launched on December 21, 1968, and became the first crewed spacecraft to leave low Earth orbit, reach the Moon, orbit it, and return on Earth. On December 24, astronaut William Anders took one of the most famous pictures of the Earth from the space. It was called *"Earthrise"* cause "*There's the Earth coming up*" (astronaut William Anders during a conversation with Frank Borman on the Moon)[6].

[5] SOURCE: "Honoured on Flight into Stratosphere", *The New York Times, December 12, 1935*, retrieved 2013-04-21.
[6] SOURCE: https://www.nytimes.com/2018/12/21/science/earthrise-moon-apollo-nasa.html

2.1.2.2.2 The Blue Marble

On December 7, 1972, Apollo 17 spacecraft was launched and approximately 500,000 people were estimated to have observed the launch in the immediate vicinity of Kennedy Space Center. Apollo 17 was the final mission of NASA's Apollo program and the aim was: crewed lunar landing. The crew successfully reached the lunar surface, but what was sent to us from the space this time was spectacular and totally changed human vision of Earth and life: Apollo 17's crew took a picture of the Earth at 45.000 km away from it while the spaceship was going to the Moon. The picture shows Earth turned upside down (South Pole is up above) because of the position of the spaceship when the picture was taken. In the photo the Earth looked like a blue marble alone in a dark ocean: from here the name *"The Blue Marble"*[7].

2.1.2.2.3 Effect on society

Just few years earlier than "*Earthrise*" photo was taken, some scientist started talking about warning towards environment: Rachel Carson, an American biologist, in her *"Silent Spring"* (1962) condemned the negative effects humans have on the natural world, starting by observing birds die in her property due to pesticides; Barbara Ward, a British economist, in her book *"Spaceship Earth"* (1966) said: "*Our planet is not much more than the capsule within which we have to live as human beings [...] We depend upon a little envelope of soil and a rather larger envelope of atmosphere for life itself. And both can be contaminated and destroyed*" .

"*Earthrise*" was taken on December 24 by William Anders, NASA released it on December 30, but it did not have an immediate impact. Otherwise, after Nasa put it on a stamp in 1969, Time and Life magazine highlighted it as an era-defining image. "*It gained this iconic status*," Anders said. "*People realized that we lived on this fragile planet and that we needed to take care of it*"[8].

Several people were powerfully influenced by Earthrise, here a singular example is reported. Peace activist John McConnell printed "*Earthrise*" on flags and handed them out in Central Park, New York, the following summer as Apollo 11 became the first mission to land on the moon. His actions would later lead to the founding of Earth Day – an annual celebration of awareness and appreciation of Earth's natural environment that is still held today in more than 175 countries[9]. "*Earthrise*" is without doubt one of the most profound events in the history of human culture, for at this moment we truly saw ourselves from a distance for the first time.

Just 4 years later *"The Blue Marble"* was taken. Actually, it shows the Earth from afar as the complex system of air, water, and land we all recognize: "*Its blue expanse of ocean, its thin yet dynamic veil of atmosphere, and its brown and green jigsaw of continents all give the Earth a vitality not seen anywhere else in the known universe*"[10].

American poet Archibald MacLeish, in his book "*Riders on the Earth: Essays and Recollections*" (1978), went a step further to imagine how this would affect humanity: "*To see the Earth as we now see it, small and*

[7] SOURCE: https://www.worldsciencefestival.com/2015/07/blue-marble-shot-history/
[8] SOURCE: https://www.theguardian.com/science/2018/dec/24/earthrise-how-the-iconic-image-changed-the-world
[9] SOURCE: https://www.theguardian.com/science/2012/dec/16/apollo-legacy-moon-space-riley
[10] SOURCE: http://science.nationalgeographic.com/science/ space/solar-system/earth/).

beautiful in that eternal silence where it floats, is to see ourselves as riders on the Earth together, brothers on that bright loveliness in the unending night...who see now they are truly brothers."

Apollo 17 astronaut Eugene Cernan has reflected about his experience on that flight: "*You have to literally just pinch yourself and ask yourself the question, silently: Do you know where you are at this point in time and space, and in reality and in existence, when you can look out the window and you're looking at the most beautiful star in the heavens—the most beautiful because it's the one we understand and we know, it's home, it's people, family, love, life—and besides that it is beautiful. You can see from pole to pole and across oceans and continents and you can watch it turn and there's no strings holding it up, and it's moving in a blackness that is almost beyond conception*"[11].

No study can quantify how the "*Blue Marble*" image has changed societal attitudes. However, it's an iconic image we have all seen hundreds of times, possibly thousands, and one of the most widely reproduced photographs in history: it's in the public domain and it has been used for everything from car commercials to the Earth Day flag, printed on T-shirts, postage stamps, billboards, book covers, mouse pads -- mostly any surface you can print on. It even has its own Facebook page.

The reader is now invited to take a break to observe and analyse these images trying to understand how much power the vision of the Earth from the space can have (see Fig 1 and Fig 2). Nowadays it could sound obvious, but in 1980s no one had never seen anything like that before.

Fig. 1. The "Earthrise" shot

Fig. 2. "The Blue Marble" shot

[11] SOURCE: https://www.theatlantic.com/technology/archive/2011/04/the-blue-marble-shot-our-first-complete-photograph-of-earth/237167/

2.1.3 The Gaia Hypothesis

In 1960s, while James Lovelock, a British scientist and environmentalist, was working on detecting life on Mars for NASA, he started to develop the "Gaia hypothesis".

Lovelock based his studies on the concept that life could be detected on a planetary scale by the chemical composition of the atmosphere. Planets like Mars or Venus had atmospheres in chemical equilibrium. This difference with the Earth atmosphere was considered to be a proof that there was no life on those planets. Thus, in 1969 for the first time he proposed the idea of a self-regulating Earth controlled by the community of living organisms as explanation for the atmospheres' difference[12].

In 1971 Lovelock met Lynn Margulis, an American biologist and evolutionary theorist. She was looking for his help for her researches when Lovelock explained to her his theory of Earth as a self-regulating system. They started working together on that theory and in 1972 and in 1974 they published two journal articles where the Gaia hypothesis was presented and proved by their researches.

In 1979 Lovelock published a book: "Gaia: a new look at life on Earth" where their hypotheses were well explained. They started with observations of atmospheric chemistry. The simultaneous presence of several gases in perfect proportion required not to react chemically "*to keep the Earth's extraordinary atmospheric mixture constant was improbable on an abiological basis by at least 100 orders of magnitude"*.

Lovelock stated that the complexity and the perfecting balance of the whole planet could have a singular explanation: *"the entire range of living matter on Earth, from whales to viruses, and from oaks to algae, must be regarded as constituting a single living entity, capable of manipulating the Earth's atmosphere to suit its overall needs and endowed with faculties and powers."* Without hesitation he recommended that this creature be called Gaia, after the Greek Earth goddess also known as Ge, from which root the sciences of geography and geology derive their names.

Thus, we defined Gaia as a complex entity involving the Earth's biosphere, atmosphere, oceans, and soil; the totality constituting a feedback or cybernetic system which seeks an optimal physical and chemical environment from life on this planet. The maintenance of relatively constant conditions by active control may be conveniently described by the term "homoeostasis".

About pollution, Lovelock argues that this concept of pollution is anthropocentric. "*It seems therefore that the principal dangers to our planet arise from man's activities. Here man may sap the vitality of Gaia by reducing productivity and by deleting key species in her life-support system; and he may then exacerbate the situation by releasing into the air or the sea abnormal quantities of compounds which are potentially dangerous on a global scale."* Lovelock also cites Rachel Carson's "Silent spring" to charge human beings (look above) and ends the chapter about pollution on Earth citing Garret Hardin, *"the optimum number of people is not as large as the maximum the Earth can support; or, as it has been more bluntly expressed, - There is only one pollution. . . People -"*

[12] This paper by James E. Lovelock and C. E. Giffin was submitted September 1968 to the American Astronautical Society and published in *Advances in the Astronautical Sciences*, **25**, pp.179-193, 1969.)

The author of the "*Gaia hypothesis*" argued that the amount of regimentation, self-discipline, and sacrifice of personal freedom that would of necessity be imposed on everyone in an over-crowed world would be unacceptable to many by our present standards.

Lovelock is very harsh to man in the last part of his book comparing man to Orwell's "Animal Farm": *"From a Gaian viewpoint, all attempts to rationalize a subjugated biosphere with man in charge are as doomed to failure as the similar concept of benevolent colonialism. They all assume that man is the possessor of this planet; if not the owner, then the tenant. The allegory of Orwell's Animal Farm takes on a deeper significance when we realize that all human societies in one way or another regard the world as their farm. The Gaia hypothesis implies that the stable state of our planet includes man as a part of, or partner in, a very democratic entity."*

2.2 White's overview effect

The social context in which Frank White developed his theory in now defined: people looking out their windows fantasizing about space, fascinated by the beauty of our planet while the awareness for global problems was growing and the environmental movement was born thanks to the push by spreading out Earth images.

On an internet radio show in 2007, White described the overview effect as: "*That experience of seeing the Earth from orbit, or from the Moon, and having a realization of the inherent unity and oneness of everything on the planet. It's a realization that we are all one in terms of our place in the universe and our destiny… It's a shift in consciousness, a shift in awareness, and identity, and a harbinger of many more evolutionary transformations*"[13].

White's primary sources are the self-reported experiences of astronauts and cosmonauts: "*Looking down at Earth. It's very, very beautiful. There are wars going on, there's pollution down there, but these are not visible from up above. It just looks like a very beautiful planet, particularly when you see it interface along the edge with space. There you suddenly get the feeling that, - Hey, this is just one small planet which is lost in the middle of space -"* (astronaut Marc Garneau in "*The Overview effect*" by F. White, 1987)

Many of the astronaut conversation narratives that make up White's body of evidence include a common pivot point: the sudden appreciation of the "whole Earth" as "a total system". Those feelings are caused by the view of something from far away (is also what we feel when we are on the top of a mountain looking down to the valley) which suggests us enormity and totality and that is also meaningful to us. This also is the effect to see something from a completely different prospective.

Astronauts' descriptions of this experiences suggest something deeper and more intense than a mere acknowledgment of beauty; their language reflects feelings of wonder, reverence, humility, and unity. *"Before I flew, I was already aware how small and vulnerable our planet is; but only when I saw it from space, in all*

[13] SOURCE: http://archive.thespaceshow.com/shows/732-BWB-2007-06-17.mp3 The Space Show (17 June 2007)

its ineffable beauty and fragility, did I realize that humankind's most urgent task is to cherish and preserve it for future generations." (German Cosmonaut Sigmund Jahn, as cited in Hassard & Weisberg, 1999, p. 40).

Among other things, the feeling of viewing Earth from space might be identified as awe. Social psychologists characterize awe as an intense emotion resulting from the perception of something vast; it also has psychological and behavioural correlates connected to wonder and the witnessing of power, including mimicking behaviour, submissiveness, and heightened attention. Awe alone might not be sufficient to explain some of the longer-lasting changes astronauts report in connection with the overview effect.

Cohen, Gruber and Keltner (2010) found that aesthetic beauty by itself does not exert the same kind of long-term changes found in more meaningful experiences such as spiritual transformations. The overview effect may trigger more powerful subjective states, most notably "self-transcendent" experiences (STEs). STEs are temporary feelings of unity characterized by reduced self-salience and increased feelings of connection. During these experiences, people can feel a sense of connection with other individuals, humankind, and even the entirety of existence. In the case of the overview effect, that sense of connection may encompass the entirety of Earth and its inhabitants. Thus, the overview effect might be best understood as a state of awe with self-transcendent qualities, precipitated by a particularly striking visual stimulus.

Neuroscience has begun assembling a model of brain activity that appears to be associated with self-transcendence (Newberg et al., 2001; Urgesi et al., 2010). Feelings of unity with other people, existence, and even conceptions of the divine, for instance, seem to include temporary reduction in activity in regions associated with spatial awareness (the posterior superior and inferior parietal lobes), contributing to reduce awareness of one's physical self and of their separation from objects in their environment (Newberg et al., 2001; Urgesi et al., 2010).

"The feeling of unity is not simply an observation. With it comes a strong sense of compassion and concern for the state of our planet and the effect humans are having on it. It isn't important in which sea or lake you observe a slick of pollution or in the forests of which country a fire breaks out, or on which continent a hurricane arises. You are standing guard over the whole of our Earth." (Russian Cosmonaut Yuri Artyushkin, as cited in Jaffe, 2011, p. 9). "*Although feelings of awe and self-transcendence associated with the overview effect are episodic, astronauts' experiences may sometimes settle into long-term changes in personal outlook and attitude involving the individual's relationship to Earth and its inhabitants. These changes seem primarily to entail greater affiliation with humanity as a whole, as well as, an abiding concern and passion for the well-being of Earth*" (White, 1987, p. 39). American astronauts Russell Schweikart stated, "*When you travel around the Earth in an hour a half, you begin to recognize that your identity is with that whole thing*" (White, 1987, p.11)

Extreme subjective experiences can shape the ways in which individuals understand and approach new concepts, and even affects the salience of familiar concepts. These changes are conscious and propositional and seem to be able to influence individuals' broader beliefs and values. Due to the human tendency to find some symbolic value in personal experiences, particularly intense ones call forth a motivated attempt to make sense of how the experience fits into one's life narrative (Vaillant, 2008).

One way to understand this powerful influence might be in terms of changes to a schema, an organized conceptual framework through which individuals approach new information and make sense of old experiences. Each of an individual's schemas entails a set of memories, beliefs, and attitudes that create a general cognitive orientation, guiding the interpretation of and the response to incoming stimuli (Piaget, 2005). When individuals encounter something that cannot be reduced to pre-existing elements in a given schema, they must "accommodate", expanding that framework to take new information into account (Markus, 1977).

Thus, even after its ends, a self-transcendent experience would be personally meaningful to the individual and influential in shaping his sense of self. The view of Earth from space presents well-known natural and human features from a distant vantage point, providing an all-encompassing view of Earth and obscuring demographic differences and natural boundaries. Taken together, these features may dispose the viewer to an enhanced sense of international unity and perhaps even humanitarian attitudes.

Ed Gibson asserted that, once you are able to view Earth from space, "you see how diminutive your life and concerns are compared to other things in the universe. Your life and concerns are important to you, of course. But you can see that a lot of the things you worry about do not make much difference in an overall sense." (White, 1987, p.41).

Positive aspects of space flights have begun to receive greater acknowledgement for their potential influence. Researchers have suggested that space flight itself can result in psychological growth (Suedelf, 2005). The overview effect might be counted as one such aspects of space flight. Giving astronauts cameras to photograph the Earth, though originally intended for research purposes, has also turned out to be an effective form of positive intervention.

As evident, the researchers conducted up to now on the overview effect have been limited to the study of the effect that this has to the inner state of humans. The aim of this research was to investigate whether it is possible to recreate this effect through an advertisement to push people to change their attitudes towards the Earth and their behavioural patterns in a vision of safeguarding the planet.

Two different pre-tests were conducted to address the research towards more complex models in order to answer the research's question: does the overview effect improve the purchase and the usage of eco-friendly products?

3. Pre-test 1

The purpose of Pre-test 1 is to verify whether the simple exposure to a visual stimulus of the Earth from space generates overview effect, bringing people to "be" eco-friendlier under several aspects.

First of all, literature review will be provided. Thus, a theorical model will be proposed and the hypotheses formulated; furthermore, research's methodology will be explained, analysis' results exposed, and findings explicated. Finally, results will be discussed, and direction of following studies exposed.

3.1 Literary Review

Constructs used in Pre-test 1 has been built as follow:

3.1.1 Ecoliteracy

Eco-literacy refers to the extent to which consumers understand environmental issues and eco-friendly products (Cheah and Phau, 2011).

Eco-literacy can be conceptualized as either objective or subjective knowledge about the environment. According to Amyx et al. (1994), eco-literacy as objective knowledge is the consumer's ability to identify/define a number of ecologically-related symbols and concepts, assessed by performance on factual tests; in contrast, eco-literacy as subjective knowledge is the consumer's perception of the amount he knows in the ecological domain, measured by self-evaluation and self-report of knowledge. Subjective knowledge involves the consumer's self-confidence in the adequacy of his knowledge level.

It's assumed experimenting the overview effect can determine feelings of higher eco-literacy.

3.1.2 Environmental Identity

Identity is defined as an individual's self-concept which gives meaning to personal experiences and shapes individuality, dispositions, and responses to situations (Stryker & Burke, 2000).

Individuals can have multiple and competing identities that reflect dominant attitudes through self-validating behaviour (Owens, Robinson & Smith-Lovin, 2010). Individuals with strong environmental identity perform behaviours which are consistent with a sense of connectedness to nature (Clayton & Opotow, 2003). Further, environmental identity is predictive of pro-environmental behaviours (van Der Werff, Steg & Keizer, 2013).

Engagement in nature-based experiences have been shown to strengthen the intention toward pro-environmental practices (Ballantyne et al., 2007). Emotional engagement and reflection on the experience have been found to be related to visitors' intentions to act in ways which protect the environment (Ballantyne et al., 2011).

Research by Sparks and Shepherd (1992) found that people who identify themselves as 'green consumers' are more likely to buy eco-friendly products than those who do not, irrespective of past behaviour. Given the

possible interaction of past behaviour and identity, our research considers both factors in relation to pro-environmental behaviour.

It's assumed experimenting the overview effect can help increasing consumers' environmental identity.

3.1.3 Perceived consumer effectiveness

Perceived Consumer Effectiveness (PCE) refers to the extent to which individuals believe that their actions make a difference in solving a problem (Ellen, Weiner & Cobb-Walgren, 1991). PCE, defined as "the evaluation of the self in the context of the issue" (Berger and Corbin, 1992), differs from an attitude that reflects an evaluation of an issue (Tesser and Shaffer, 1990).

The degree to which a person feels that he has little control over the performance of a certain behaviour has been shown to uniquely reduce intentions and behaviour itself, even under circumstances where attitudes and/or social norms toward the action are very favourable (Ajzen 1985; Ajzen and Madden 1986).

Ellen, Weiner and Cobb-Walgren (1991) demonstrate that PCE for environmental issues is also distinct from environmental concerns or attitudes and make a unique contribution to the prediction of environmentally conscious behaviours such as eco-friendly purchase. Consumer concerns about the environmental issues might not easily translate into pro-environmental behaviour; however, individuals with a strong belief that their environmentally conscious behaviour will result in a positive outcome are more likely to engage in such behaviours in support of their concerns for the environment.

Accordingly, self-efficacy beliefs may influence the likelihood of performing eco-friendly behaviours.

It's assumed experimenting the overview effect can help increasing consumers' perceived effectiveness toward environmental issues.

3.1.4 Eco-purchase intention

Behaviour intention is an indication of individuals' readiness to perform a given behaviour, it's assumed to be an immediate antecedent of behaviour (Ajzen, 2002).

The behaviour investigated in this research is the purchase of eco-friendly products (eco-purchase).

It's assumed experimenting the overview effect can help increasing consumers' purchase intention toward eco-friendly products.

3.1.5 Eco-purchase behaviour

Performing behaviour is an indication of how often consumers perform a specific behaviour.

In this research it's assumed to be an indication of how often consumers buy sustainable products, it's defined as habits in purchasing behaviour towards eco-friendly products (eco-purchase).

It's assumed experimenting the overview effect can help increasing consumers' purchase behaviour toward eco-friendly products.

3.1.6 Willingness to pay

Willingness to pay (WTP) is the maximum price at or below which a consumer will definitely buy one unit of a product (Varian, 1992).

Many methods to measure WTP were presented in the literature: the approaches to measure consumer WTP can be differentiated whether they measure WTP directly or indirectly and whether they measure consumer hypothetical or actual WTP (Miller et al., 2011). In practice, some researchers favor the direct approach, asking consumers directly to state their WTP for a specific product through. Others prefer an indirect approach, in which WTP is calculated on the basis of consumers' choices among several product alternatives and a "none" choice option.

Shen (2008) found a positive association has been found between the environmental concern and willingness to pay for green products in studies about furniture, the same results found Moon and Balasubramanian (2002) about environmentally friendly food products.

It's assumed experimenting the overview effect determine higher Willingness to Pay toward eco-friendly products.

3.1.7 Willingness to pay more

Price is always considered as one of the most important factors that determines the consumer decision process. Price is the most important barrier to green consumption (Gleim at. Al, 2013) and willingness to pay more prices for green products may be considered as pro-environmental behaviour (Ajzen, 1991). A positive association has been found between the environmental concern and willingness to pay for green products in a few studies such as eco-labelled appliances and furniture (Shen, 2008) and environmentally friendly food products (Moon and Balasubramanian, 2002) which further influence the consumers intention to buy green products.

It's assumed experimenting the overview effect determine higher willingness to pay more toward eco-friendly products.

3.1.8 Attitude

Attitude can be defined as an individual's positive/negative evaluation of performance of a particular behaviour (Ajzen and Fishbein, 1980).

Attitude is the result of behavioural belief and outcome evaluation. The former refers to the individual belief about the consequences of engaging in a particular behaviour, the latter refers to the corresponding favourable or unfavourable judgment about the possible consequences of the behaviour (Ajzen, 1991).

It's assumed experimenting the overview effect determine higher attitude towards eco-friendly products.

3.1.9 Value orientation

Respondents' preference for eco-friendly products depended also on personality characteristics as value orientation; personality aspects might play a role in consumer preferences for suboptimal products. For example, consumers have been found to demonstrate a higher likelihood to act environmentally friendly when they are personally committed to environmental sustainability (Alcock, 2012), when they value biospheric aspects such as natural resources and other species as relatively more important than egoistic aspects such as power or wealth (de Groot & Steg, 2008).

Values are distinguished in: egoistic (in which one's own well-being is important); altruistic (the welfare of the community is important in decisions); biospheric (the well-being of the environment is important in expressions). Values are found to have an excellent predictive ability of beliefs and data. More specifically, altruistic and biospheric values are those that give a stronger and more unified contribution to problems concerning environmental issues (de Groot & Steg, 2008).

It's assumed experimenting the overview effect can determine higher altruistic and biospheric values against egoistic ones toward eco-friendly products.

3.2 Model and hypotheses

3.2.1 Proposed model

In this chapter the statistical model proposed is exposed and relationships supposed are explained.

The purpose of this study was to assess the arise of the overview effect and prove its influence on consumers' evaluation and behaviour towards eco-friendly products.

In this research, it's assumed that the exposure to a picture of the Earth taken from the outer space has a positive influence on consumers' eco-literacy, environmental identity, perceived consumer effectiveness, eco-purchase intention, eco-purchase behaviour, willingness to pay, willingness to pay more, attitude towards and value orientation.

An independent two sample t-test for each of the variables measured was computed; the grouping variable was the exposure to one of the two the visual stimuli.

3.2.2. Hypotheses formulation

Here, the hypotheses are exposed.

H1: the vision of the Earth from space has positive influence on consumers' eco-literacy.

H2: the vision of the Earth from space has positive influence on consumers' environmental identity.

H3: the vision of the Earth from space has positive influence on Perceived Consumer Effectiveness toward environmental issues.

H4: the vision of the Earth from space has positive influence on consumers' eco-purchase intention toward eco-friendly products.

H5: the vision of the Earth from space has positive influence on consumers' eco-purchase behaviour toward eco-friendly products.

H6: vision of the Earth from the space has positive influence on consumers' Willingness To Pay toward eco-friendly products.

H7: the vision of the Earth from space has positive influence on consumers' Willingness to Pay Premium toward eco-friendly products.

H8: the vision of the Earth from space has positive influence on consumers' Attitude toward eco-friendly products.

H9: the vision of the Earth from space has positive influence on consumers' altruistic value orientation.

H10: the vision of the Earth from space has positive influence on consumers' biospheric value orientation.

H11: the vision of the Earth from space has positive influence on consumers' egoistic value orientation.

3.3 Methodology

3.3.1 Data collection and sample composition

Pre-test 1 was conducted through an online survey created on Qualtrics.

The research was a between subject experimental design, respondents have been randomly divided in two groups, control and experimental one. Those assigned to the control one a steel water bottle; those assigned to the experimental one saw a steel water bottle accompanied by a picture of the Earth taken from the outer space.

The complete dataset was made up of 250 respondents, from which 71 respondents were cut off: the one who completed the survey in less than 5' and who showed incoherence in the answers, failing items reverse. The final dataset was made up of 186 respondents: 95 in the experimental group and 91 in the control group (see Table 1 for complete information on survey sample).

3.3.2 Manipulation

In the first step of the survey, after a brief introduction, respondents were invited to carefully watch randomly one of two pictures (see Appendix A):

- Earth from the outer space plus a steel water bottle;
- Steel water bottle.

The rest of the survey was exactly the same for all respondents.

	%	#	Ag	SD
Genre				
Male	46	85		
Female	54	101		
Age			38,74	16,02
Instruction level				
Medium licence	3	6		
High school diploma	37	69		
Bachelor's degree	26	48		
Master's deegre	26	49		
PhD	8	14		
Occupation				
Employed	41	77		
Freelancer	9	16		
Unemployed	2	4		
Student	35	66		
Other occupation	12	23		
Income				
< 25000€	12	22		
25000€ - 50000€	31	58		
50000€ - 75000€	19	35		
>75000€	16	30		
Preferred not to reply	22	40		
Provenience				
Northern Italy	13	24		
Centre Italy	58	107		
Southern Italy or islands	30	55		

Table 1: Pre-test 1 - Descriptive statistics of the sample (n=186)

3.3.3 Measures

The rest of the survey was divided into 9 different sections, each one to test a different hypothesis, and a final section to collect socio-demographic data (see Appendix B to complete information about items used):

- Eco-literacy, adapting items from Wei, Ang and Jancenelle's research (Wei, Ang and Jancenelle, 2018) for H1;
- Environmental identity, using items from Whitmarsh and O'Neill's research (*Whitmarsh, L., O'Neill S., 2010)* for H2;
- Perceived consumer effectiveness, adapting items from de Hooge's research (*de Hooge et al., 2016*), for H3;
- Eco-purchase intention, adapting items from Afroz's research (*Afroz et al., 2015*), for H4;
- Eco-purchase behaviour, adapting items from Afroz's research (*Afroz et al., 2015*), for H5;
- Willingness to pay, asking them how much they were willing to pay for a steel water bottle, for H6;
- Willingness to pay more, adapting items from La Roche's research (*La Roche et al., 2001*), for H7;
- Attitude towards eco-friendly products, using items from Afroz's research (*Afroz et al., 2015*), for H8;
- Value orientation, using *Value Orientation Scale* from De Groot and Steg's research (*De Groot & Steg, 2008*), for H9, H10 and H11.

3.4 Results

In this section, first the methodology to analyse data to test hypotheses is exposed, then the results are shown. To test hypotheses, for each of the investigated construct:

- Computed Chronbach's α to verify whether the scaled used was reliable (scales have been considered reliable if $\alpha > .6$);
- Conducted Principal Component Analysis (PCA) to verify how many latent factors there were: principal components have been chosen following Kaiser's rule (many principal factors as many eigenvalues (it measures the variability retained by each PC) greater or equal to 1);
- After computed index variable, an independent two-paired t-test was computed to test whether there was any significative difference between the control group and the experimental one (hypotheses was accepted with an interval of confidence of 95% ($\alpha/2 = .025$).

Scales' reliability tests revealed that all the scales used were reliable ($\alpha > .7$), except for Environmental Identity's scale ($\alpha = .49$); scale's reliability has been improved cutting off item 3 and 4 ($\alpha = .66$) (see Table 3 for complete information about scales reliability).

PCA revealed 1 PC for each variable, except for value orientation (PCA revealed 3 PCs), as expected.

Each PC was computed for each group (control and experimental one) using the mean value of relative items (see Table 3 for further information about scales' PCA).

An independent two-paired t-test on difference between means has been run for each investigated construct to test hypotheses. The analysis revealed that there was not any significative difference on chosen variables between the control group and the experimental one (see Table 4 for complete information about t-tests' results).

T-tests revealed that there is no significative difference between control and experimental group among these variables. For this reason, H1, H2, H3, H4, H5, H6, H7, H8, H9, H10 and H11 were rejected (see Table 5 for complete hypothesis check).

	α	**ε** > 1
Eco-literacy	.78	1.65
Environmental identity (items 1:2)	.66	3.17
Perceived consumer effectiveness	.75	2.807
Eco-purchase intention	.89	3.039
Eco-purchase behaviour	.92	3.295
Willingness to pay premium	.93	3.325
Attitude towards eco-friendly products	.74	2.137
Value orientation		
Altruistic	.81	4.8
Biospheric	.89	2.27
Egoistic	.78	1.16

Table 3: Pre-test 1 - Cronbach's α and PCA results

	t	p-value (α/2 = .025)	interval (95%)	
Eco-literacy	-2.089	.038	-.68700	-.01959
Environmental identity	-.976	.330	-.60767	.20535
Perceived consumer effectiveness	.890	.375	-.150554	.39805
Eco-purchase intention	-.053	.958	-.43011	.40749
Eco-purchase behaviour	-1.304	.194	-.66650	.13613
Willingness to pay	1.366	.173	.-23651	.26823
Willingness to pay premium	-.393	.695	-.52763	.35221
Attitude towards eco-friendly products	-.366	.714	-.42024	.28860
Value orientation				
Altruistic	1.698	.091	-.03888	.51985
Biospheric	.056	.956	-.25201	.26664
Egoistic	-.492	.623	-.45432	.27300

Table 4: Pre-test 1 - T-tests

	accepted/rejected
H1	rejected
H2	rejected
H3	rejected
H4	rejected
H5	rejected
H6	rejected
H7	rejected
H8	rejected
H9	rejected
H10	rejected

Table 5: Pre-test 1 - Hypothesis check

3.5 Discussion

3.5.1 Theorical implications

Here the results of Pre-test 1 are explained and theorical implications are exposed.

Different independent two-paired t-tests were conducted to test if the vision of a picture of the Earth taken from the outer space could generate the overview effect. No one of them revealed a significative difference between the two groups: the respondents of the experimental group (who see a picture of a steel water bottle and a picture of the Earth taken from the outer space) had no significative difference from the ones of the control group (who see a picture of a steel water bottle) among studied variables. This means that no effect is produced by the viewing of a picture of the Earth taken from the outer space.

T-tests did not reveal any other significative differences between the two groups among all the variables chosen: Perceived Consumer Effectiveness; Environmental Identity; Purchase intention; Purchase behaviour; Willingness to pay; Willingness to pay more; Attitude towards; Value orientation. This means that the vision of a picture of the Earth taken from the outer space does not generate overview effect and so it does not influence respondents' perceived effectiveness or environmental identity, neither their purchase intention or

behaviour, neither their willingness to pay or willingness to pay more, neither their attitude nor value orientation. This does not confirm the assumptions done at the beginning.

3.5.2 General discussion

There could be several aspects that did not work or were neglected. First of all, the online survey did not provide for a real manipulation effect and, perhaps, the literary review done until now is not enough to explain these results.

3.5.2.1 No real manipulation effect

Visual stimulus used in the online survey did not provide for a real manipulation check: two static pictures (a steel water bottle and the Earth from the outer space) are not enough to be considered able to generate a real manipulation effect. The visual stimulus should be re-thought more involving and persuasive.

Furthermore, no directly measure or check of the overview effect has been provided. It is unknown if respondents saw the visual stimulus, for how much time and with which effort. For this reason, new researches will provide a way to check and measure the overview effect.

3.5.2.2 Other analysis on data

Could seem strange that no hypothesis was accepted but all rejected; further investigations on available literature are needed to support the developed theories.

First of all, the ideal aim of this research was to find a way to positively influence the purchasing of eco-friendly products, so it was necessary to discover how to increase costumers' purchase behaviour or purchase intention.

Pre-test 1 revealed that no overview effect incurred in costumers' purchase intention or behaviour after being exposed to a static visual stimulus (see or Table X or p X). Further studies on purchase intention and purchase behaviour revealed that the former is a predictor of the latter; as a general rule, the stronger the intention to engage in a behaviour, the more likely it should be its performance (Ajzen, 1991).

For this reason, predictors of purchase intention were needed before further investigating the overview effect.

4. Pre-test 2

The purpose of Pre-test 2 was to examine potential predictors of purchase intention. Specifically, a new analysis on the dataset obtained during Pre-test 1 was conducted to support new theories, in order to build a better model to further investigate the overview effect.

The constructs utilized in this study were the same of Pre-test 1; for this reason, they will not be discussed further in this chapter. First of all, a new theorical model will be provided, then the research's methodology will be explained, analysis' results exposed, and findings explicated. Finally, results will be discussed, and the direction of the following studies exposed.

4.1Model and hypotheses

4.1.1Proposed model

In this chapter the statistical model proposed are exposed and the relationships supposed are explained.

The purpose of this study was to find potential predictors of purchase intention in order to address the following studies.

It's assumed that eco-literacy, environmental Identity, perceived consumer effectiveness, willingness to pay, willingness to pay more, attitude towards and value orientation are predictors of purchase intention.

One model is presented: purchase intention is considered as dependent variable; eco-literacy, environmental Identity, perceived consumer effectiveness, willingness to pay, willingness to pay more, attitude towards as independent variables.

4.1.2 Hypothesises formulation

Here, new hypotheses are exposed:

H1b: Eco-literacy positively influences Purchase intention of eco-friendly products.

H2b: Environmental identity positively influences Purchase intention of eco-friendly products.

H3b: Perceived Consumer Effectiveness positively influences Purchase intention of eco-friendly products.

H4b: Willingness to pay more positively influences Purchase intention of eco-friendly products.

H5b: Attitude towards green products positively influences Purchase intention of eco-friendly products.

H6b: Altruistic value orientation positively influences Purchase intention of eco-friendly products.

H7b: Biospheric value orientation positively influences Purchase intention of eco-friendly products.

H8b: Egoistic value orientation negatively influences Purchase intention of eco-friendly products.

4.2 Methodology

In this chapter, first sample composition is exposed, then the measures used are clarified.

4.2.1 Sample composition

Pre-test 2 study was conducted on the same dataset of Pre-test 1. Therefore, the final dataset was made up of 186 respondents (see Table 1 for complete information on survey sample). This time the final dataset was not split in two group to be analysed, it was considered as a whole.

4.2.2 Measures

Pre-test 2 study was conducted on the same dataset of Pre-test 1. Therefore, scales' reliability tests and Principal Component Analysis were not conducted because scales had been already tested during Pre-test 1 (see Table 3 for details);

4.3 Results

Here, first the methodology to analyse data to test hypothesises is exposed, then results are shown.

- Multiple regression analysis has been conducted to verify the presence of potential predictors of Purchase intention;
- A new multiple regression has been conducted to improve results of the previous one;
- A last multiple regression has been conducted to confirm results of the previous one.

A multiple regression model was computed to test hypothesis: purchase intention has been treated as DV (Dependent Variable) while eco-literacy, environmental identity, perceived consumer effectiveness, willingness to pay more, attitude towards eco-friendly products and the 3 different value orientations have been treated as IVs (Independent Variables). The first multiple regression revealed that environmental identity, perceived consumer effectiveness, willingness to pay more and attitude towards eco-friendly products were significant predictors of purchase intention (see Table 6 for details).

A second multiple regression was computed cutting off variables that just revealed to be no significant. In this model, purchase intention has been treated again as DV while the variables that were significant in the previous model (environmental identity, perceived consumer effectiveness, willingness to pay more and attitude towards eco-friendly products) as IVs. Analysis on this model revealed that environmental identity, willingness to pay more and attitude towards eco-friendly products were significant predictors of purchase intention (see Table 7 for details).

A third multiple regression was computed to confirm the results of the previous model. In this model, purchase intention has been treated again as DV while the variables that were significant in the previous model (environmental identity, willingness to pay more and attitude towards eco-friendly products) as IVs. Analysis on this model revealed that all the IVs were significant predictors of purchase intention. This means that

environmental identity, willingness to pay more and attitude towards eco-friendly products are predictors of purchase intention (see Table 8 for details).

Finally, we decided to accept H2b, H4b and H5b (see Table 9 for details of hypotheses check).

Indipendent variable	Coefficient	β	t	p-value (α = .05)
Eco-literacy	-.118	-1944	.054	-.147
Environmental identity	.235	.229	3.300	.001
Perceived consumer effectiveness	.243	.160	2.222	.028
Willingness to pay premium	.373	.392	5.659	.000
Attitude towards eco-friendly products	.188	.159	2.357	.020
Value orientation				
Altruistic	-.183	-.123	-1.711	.089
Biospheric	.166	.103	1.364	.174
Egoistic	-.020	-.017	-.305	.760
Model				
DF	R^2	R^2_{adj}	F	p-value (α = .05)
8,177	.503	.481	22.412	0.000

Table 6: Pre-test 2 - First multiple regression

Indipendent variable	Coefficient	β	t	p-value (α = .05)
Environmental identity	.209	.204	3.208	.002
Perceived consumer effectiveness	.195	.128	1.837	.068
Willingness to pay premium	.364	.383	5.505	.000
Attitude towards eco-friendly products	.189	.160	2.465	.015
Model				
DF	R^2	R^2_{adj}	F	p-value (α = .05)
4,181	.483	.472	42.354	0.000

Table 7: Pre-test 2 - Second multiple regression

Indipendent variable	Coefficient	β	t	p-value (α = .05)
Environmental identity	.242	.236	3.838	.000
Willingness to pay premium	.399	.420	6.269	.000
Attitude towards eco-friendly products	.231	.195	3.133	.002
Model				
DF	R^2	R^2_{adj}	F	p-value (α = .05)
3,182	54.634	0.000	.474	.465

Table 8: Pre-test 2 - Third multiple regression

Hypothesys	**accepted/rejected**
H1b	rejected
H2b	**accepted**
H3b	rejected
H4b	**accepted**
H5b	**accepted**
H6b	rejected
H7b	rejected
H8b	rejected

Table 9: Pre-test 2 - Hypothesis check

4.4 Discussion

4.4.1 Theorical implications

Three different multiple linear regressions have been conducted to test whether there were any predictors of Purchase Intention among the available variables (eco-literacy, environmental identity, perceived consumer effectiveness, willingness to pay more, attitude towards eco-friendly products, altruistic value orientation, biospheric value orientation, egoistic value orientation).

The final results revealed a significant model where environmental identity, willingness to pay more and attitude towards eco-friendly products are predictors of purchase intention.

This means that, all together, these variables influence consumers' purchase intention towards eco-friendly products. Specifically, the greater these variables, the greater the purchase intention.

This partially confirms the assumptions done at the beginning of this study.

4.4.2 General discussion

Following Ajzen's studies, predictors of purchase intention in the first model have been investigated: the analysis revealed that environmental identity, willingness to pay more and attitude towards eco-friendly products are predictors of purchase intention of eco-friendly products.

This means that the higher environmental identity, willingness to pay more and attitude towards eco-friendly products are, the higher purchase intention towards eco-friendly products will be.

As expected, different predictors of purchase Intention have been found. However, the discovery of "Attitude towards" as a significant predictor of purchase intention directs the present research to take into account Ajzen's Theory of Planned Behaviour.

For this reason, the following part of this research will take in account Theory of Planned Behaviour's findings to further investigate the overview effect.

5. Final study – phase 1

The aim of Final study – phase 1 is to verify whether the exposure to a visual stimulus of the Earth from the space generates overview effect, bringing people to have more intention to perform sustainable purchasing behaviours.

The research will be conducted joining previous the findings with new variables.

First of all, a new literature review will be provided. Thus, two theorical models will be proposed and hypotheses formulated; furthermore, the research's methodology will be explained, analysis' results exposed, and findings explicated. Finally, theorical implication will be discussed and the direction of the last study will be addressed.

5.1 Literature review

5.1.1 Subjective norms

In his book, Ajzen introduces a social factor termed "subjective norm"; it refers to the perceived social pressure to perform or not the behaviour. It is defined as social pressure exerted on an individual to engage in a particular behaviour (Ajzen and Fishbein, 1980).

Subjective norms are also assumed to be a function of beliefs, but different ones, namely the person's beliefs that specific individuals or groups approve or disapprove of performing the behaviour; or that these social referents themselves engage or not in it (for many behaviours, the important referents include a person's parents, spouse, close friends, co-workers, and, depending on the behaviour involved, perhaps such experts as physicians or tax accountants) (Ajzen, 2005).

Subjective norms can be comprehended as the perceived social force to carry out a particular behaviour (Ajzen, 1991). A vast number of research studies declared that social pressure encourages consumers to purchase green products (GPs) and is one of the dominant factors influencing sustainable consumption (Biswas and Roy, 2015; Zhao et al., 2014; Lorek and Fuchs, 2013; Wang et al., 2014; Ritter et al., 2015). Following studies where TBP has been applied on green products GPs, subjective norms reveal the extent to which an individual feel morally responsible for others by buying GPs and how positive social image is important to him/her (Barber et al., 2014). Vermeir and Verbeke (2008) discovered that subjective norms positively influence behavioural intention towards purchasing sustainable dairy products. However, other authors found that subjective norms are related to purchase intention insignificantly (Kumar, 2012). Lin and Huang (2012) declared that social value does not have a significant impact on choice behaviour. This may occur because some respondents did not feel that "going green" increases social approval or makes a good impression.

5.1.2 Perceived Behavioural Control

Ajzen gets out of several previous definition of perceived behavioural control (Rotter, 1966; Atkinson, 1964) and accosts his definition to Bendura's concept of perceived self-efficacy which "*is concerned with judgments of how well one can execute courses of action required to deal with prospective situations*" (Bandura, 1982).
In Ajzen's opinion, Perceived Behavioral Control is also assumed to be a function of beliefs, this time beliefs about the presence or absence of factors that facilitate or impede the performance of the behaviour. These beliefs are based partly on past experience with the behaviour, partly on second-hand information about the behaviour (usually observing the experiences of acquaintances and friends), partly on other factors that increase or reduce the perceived difficulty of performing the behaviour in question (e.g. time, money and opportunity). The more required resources and opportunities individuals think they possess, and the fewer obstacles or impediments they anticipate, the greater should be their perceived control over the behaviour.
Thus, Perceived Behavioural Control can be explained as the perceived easiness or difficulty of performing the behaviour and it is assumed to reflect past experience as well as anticipated impediments and obstacles.
During the last years, two studies found Perceived Behavioural Control to have a significant and positive impact on intention and actual purchase of green products (Ma, Littrell, and Niehm, 2012; Wang et al., 2014).

5.1.3 Environmental behavioural intention

Behavioural intention is an indication of an individual's readiness to perform a given behaviour.
Finally, given a sufficient degree of *actual* control over the behaviour, people are expected to carry out their intentions when the opportunity arises. Intention is thus assumed to be the immediate antecedent of behaviour (Ajzen, 2002). The Intention to engage in a behaviour is a strong predictor for subsequent behaviour (Nigbur, Lyons, & Uzzell, 2010).
During his researches, Ajzen applied the TPB to environmental behaviours and defined environmental behavioural intention as "*an individual's determination of the subjective probability of a person's performance of a certain environmental behaviour*" (Ajzen, 1991). Steg and Vlek (2009) define pro-environmental behaviour as '*behaviour that harms the environment as little as possible or even benefits the environment*'.
The TPB model has been used in several studies to measure the pro-environmental intention as well as behaviour. Environmental behavioural intention has prominent mediating effect on the relationship between attitude toward environmental behaviour, subjective norm, perceived behavioural control and environmental behaviour (Wang et al., 2016). Some studies have confirmed that tourists' environmental behavioural intentions are able to directly predict their environmental behaviours (Lee et al., 2015; Liu, 2010).

5.1.4 Willingness to pay more

This construct has been already exposed during Pre-test 1, here a brief recap and some reference are presented.
Price is always thought as the determinant factor in making purchasing decision. In general, green products/environmentally friendly are priced higher than the conventional non-green products due to the higher cost incurred in the processes, materials and to certain extend the cost involve in getting a certified eco-

label on the products. Willingness to pay is defined as how much a consumer is willing to pay for a specific product/service; Willingness to Pay Premium, instead, is operationalized as consumers' willingness to pay premium prices for the green version of a product (Wei, 1018).

Spanish consumers have been found be willing to pay a price premium of 22–37% for green food products (Sanjuán et al., 2003). A similar result has been found among Japanese consumers who were reported to be willing to pay a premium of 8–22% for green food products (Sakagami et al., 2006). The best result was found in Argentina, where consumers have been found be willing to pay 6-300% more for green products (Rodríguez et al., 2009).

However, customers' positive perceptions and attitudes towards environmental issues do not necessarily lead to a willingness to pay for a company's green initiatives. According to Choi and Parsa (2006), many customers remained hesitant to pay premiums for green products, thus pricing for green practices should consider customers' sensitivities to additional costs incurred by implementing green initiatives.

5.1.5 Environmental self-identity

Identity is defined as an individual's self-concept which gives meaning to personal experiences and shapes individuality, dispositions, and responses to situations (Stryker & Burke, 2000). Individuals can have multiple and competing identities that reflect dominant attitudes through self-validating behaviour (Owens, Robinson, & Smith-Lovin, 2010). Self-identity has been defined as the label used to describe oneself (Cook et al., 2002), which relates to a particular behaviour (Conner & Armitage, 1998). Here, environmental self-identity is defined as the extent to which someone sees oneself as a type of person who acts environmentally friendly.

Environmental self-identity's concept differs from environmental identity's one. Namely, environmental identity reflects whether one sees oneself as part of nature, whereas environmental self-identity reflects the view of self as a person who acts pro-environmentally. Although environmental self-identity and environmental identity may be related, they are not necessarily the same. For example, you may see yourself as part of nature, but not as a person who acts pro-environmentally; for example because you do not acknowledge environmental problems, or do not link such problems to individual actions (van der Werff, Steg, & Keizer, 2013).

Environmental self-identity is particularly relevant in understanding pro-environmental actions, as it more directly them, rather than only the importance of the environment as such for the self. Such general environmental self-identities may be promising pointers for strategies aimed at promoting pro-environmental actions, because by targeting environmental self-identity, a range of preferences and behaviours may change simultaneously (van der Werff, Steg, & Keizer, 2013). Self-identity and values have been viewed as important influences on environmental preferences, intentions and behaviour (e.g., Gatersleben, Murtagh, & Abrahamse, 2012; Sparks & Shepherd, 1992; Steg & De Groot, 2012). Environmental self-identity has been found being predictive of pro-environmental behaviours (van der Werff, Steg, & Keizer, 2013).

5.1.6 Word-of-Mouth

Word-of-mouth is defined here as the extent to which a customer informs friends, relatives and colleagues about an event that has created a certain level of satisfaction. It's an oral, informal, person-to-person communication between a perceived non-commercial communicator and a receiver regarding a brand, a product, an organization, or a service (Higie, Feick, & Price, 1987).

Prior research suggested that engaging in word-of-mouth activities can be a means to bolster a person's self-concept (Dichter, 1966); there is correlational evidence for the link between self-enhancement and positive word-of-mouth (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004).

There are reasons to believe that positive events produce a stronger response than negative events under certain conditions (a ''positivity bias''). For instance, Holmes and Lett (1977) found that customers with positive experiences were more inclined than those with negative experiences to communicate their feelings to others. One reason is that pleasant items are processed more accurately and efficiently by human perceptual-cognitive structures (cf. Fornell and Westbrook, 1984, p. 70). This seems to suggest that the basis for interaction with others (the items to discuss) is more accessible when the individual has been exposed to a positive event. Moreover, it has been argued that most individuals have a general propensity to strive for interpretation in positive rather than negative terms.

5.1.7 New visual stimulus

Visual stimulus used in Pre-test 1 has not provided for a real manipulation check: two static pictures (a steel water bottle and the Earth from the outer space) are not enough to be considered able to generate a real manipulation effect.

When White (1987) write down about astronauts' experiences talks about "*feelings of awe and self-transcendence*". Thus, stimulus used should almost try to recreate those feelings.

For this reason, a new visual stimulus has been developed for the final study. The two static pictures have been replaced by a 1-minute video that shows the Earth recorded from satellites orbiting around our planet. This new visual stimulus is more powerful and, for sure, more involving than the previous one.

Furthermore, in the first survey no directly measure or check of the overview effect had been provided. Previously problems were about the miss of a manipulation check and the single version of the product shown. For these reasons, two versions (green and no-green) of a plastic water bottle has been implemented in the survey flow.

5.2 Model and hypothesis

5.2.1 Proposed model

In this chapter statistical models proposed are exposed and relationships supposed are explained.

The purpose of this study was to assess the arise of the overview effect and prove its influence on consumers' evaluation and behaviour towards eco-friendly products.

This research investigates the influence that the overview effect, exposing respondents to a video of the Earth recorded from a satellite in orbit, has on word-of-mouth and willingness to pay more for eco-friendly products. It's assumed that the exposure to a video of the Earth recorded from a satellite in orbit has a positive influence on the future word-of-mouth and willingness to pay more for eco-friendly products.

Two different principal models are presented: the first one considered word-of-mouth of eco-friendly products as dependent variable; the second one considered willingness to pay more for eco-friendly products as dependent variable. Both models took in account a mediation variable and moderator variables. In both models purchase intention was considered as mediator in the relationship between the condition and the dependent variable. In both models three different variables were considered, one by one, as moderators in the relationship between the condition and purchase intention of eco-friendly products.

In sum, in each model two aspects remained always the same:

- Word-of-mouth or Willingness to pay more were set as DV;
- Purchase intention was set as moderator variable in the relationship between Condition and DV.

Furthermore, in each model one variable among subjective norms, perceived behavioural control and Environmental self-identity was set as mediator in the relationship between Condition and Purchase intention. At the end all the moderatos variables were tested (see Fig 3 and Fig 4 for further explanation).

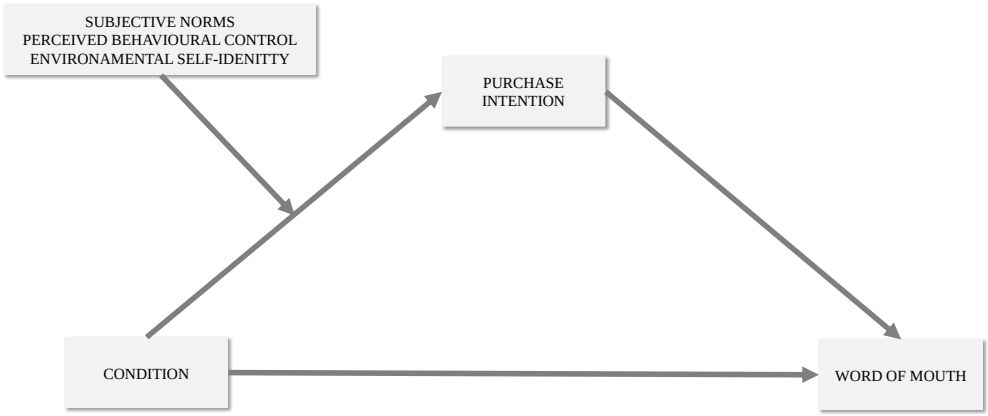

Fig. 3. Conceptual model 1

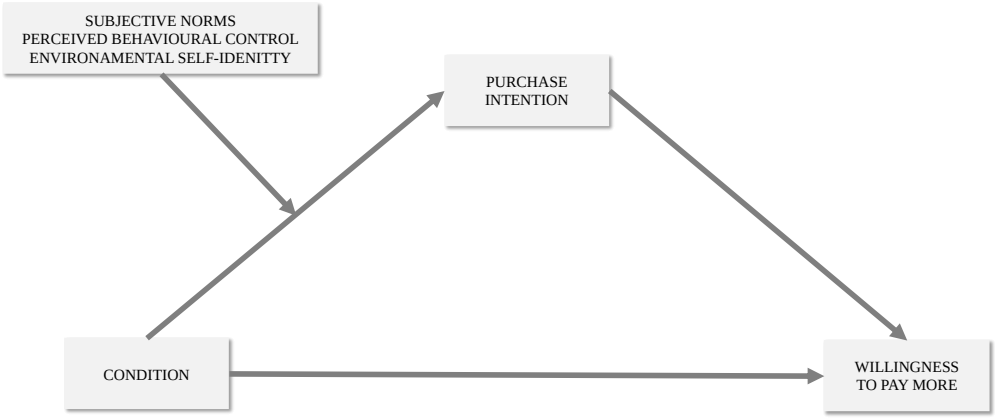

Fig. 4. Conceptual model 2

5.2.2 Hypothesis formulation

Here hypothesis for both models are exposed.

Regarding the first model:

H1a: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on the word-of-mouth of eco-friendly products.

H2a: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on the purchase intention of eco-friendly products.

H3a: A high subjective norms towards eco-friendly products amplifies the intensity of the positive effect of the exposure to a video of the Earth recorded by satellite in orbit on the purchase intention.

H4a: A high purchase intention of eco-friendly products has a positive effect on the word-of-mouth of eco-friendly products.

H5a: A high perceived behavioural control towards eco-friendly products amplifies the intensity of the positive effect of the exposure to a video of the Earth recorded by satellite in orbit on the purchase intention.

H6a: A high environmental self-identity towards eco-friendly products amplifies the intensity of the positive effect of the exposure to a video of the Earth recorded by satellite in orbit on the purchase intention.

Regarding the second model:

H1b: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on willingness to pay for eco-friendly products.

H2b: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on the purchase intention of eco-friendly products.

H3b: A high subjective norms towards eco-friendly products amplifies the intensity of the positive effect of the exposure to a video of the Earth recorded by satellite in orbit on the purchase intention.

H4b: A high purchase intention of eco-friendly products has a positive effect on the word-of-mouth of eco-friendly products.

H5b: A high perceived behavioural control towards eco-friendly products amplifies the intensity of the positive effect of the exposure to a video of the Earth recorded by satellite in orbit on the purchase intention.

H6b: A high environmental selfidentity control towards eco-friendly products amplifies the intensity of the positive effect of the exposure to a video of the Earth recorded by satellite in orbit on the purchase intention.

5.3 Methodology

In this chapter, first methods for data collection and sample composition are exposed, then the manipulation is explained and finally the measures used are clarified.

5.3.1 Data collection and sample composition

Data for Final Study – phase 1 were collected through an online survey created on Qualtrics. The survey was randomly distributed through students enrolled at Luiss University (Rome).

A total of 240 participated in the study; because of the data mining activity 92 respondents were cut off: those who completed the survey in less than 5', who failed the manipulation check and who showed incoherence in the answers, failing items reverse. The final dataset was made up of 148 respondents. Of the respondents, 40% were male and 60% were female (see Table 10 for complete details of the sample).

5.3.2 Manipulation

In the first step of the survey, after a brief introduction, respondents were invited to watch a 1-minute length video showing the Earth from space, recorded by a satellite in orbit (see Appendix C).

After the video, respondents were randomly exposed to one of the two visual stimuli:

- A plastic water bottle;
- A 100% recycled plastic water bottle (see Appendix D).

The rest of the survey was exactly the same for all respondents.

	%	#	Ag	SD
Genre				
Male	40	59		
Female	60	89		
Age			29.14	10.83
Instruction level				
Medium licence	0	0		
High school diploma	5	8		
Bachelor's degree	43	63		
Master's deegre	32	47		
PhD	15	22		
Occupation				
Employed	21	31		
Freelancer	11	16		
Unemployed	9	14		
Student	46	68		
Other occupation	13	19		
Income				
< 25000€	47	70		
25000€ - 50000€	11	17		
50000€ - 75000€	4	6		
>75000€	3	4		
Preferred not to reply	34	51		
Provenience				
Northern Italy	14	21		
Centre Italy	20	30		
Southern Italy or islands	66	97		

Table 10: Final test - Phase 1 - Descriptive statistics of the sample (n=148)

5.3.3 Measures

After the manipulation check all the variables were measured. All the measures were adopted, or adapted, from established scales (see Appendix E for complete items).

To be sure that the scales were reliable, for each construct:

- Chronbach's α was computed to verify whether the scale was reliable ($\alpha > .6$);
- A Principal Component Analysis (PCA) was conducted to verify hoe many latent factors there were following Kaiser's rule (many principal factors as many eigenvalues greater or equal to 1).

5.3.3.1 Subjective norms

Subjective norm was measured on a 7-point Likert's scale from "strongly disagree" (1) to "strongly agree" (7) adopted from Yadav and Pathak (2017). The two items were "most of the people that are important to me want me to buy eco-friendly products" and "most of the people that are important to me think I should buy eco-friendly products".

Scale revealed reliable ($\alpha = .88$) and PCA revealed only one latent factor ($\boldsymbol{\varepsilon}$ = 1.8), as expected.

5.3.3.2 Perceived behavioural control

Perceived behavioural control was measured on a 7-point Likert's scale from "strongly disagree" (1) to "strongly agree" (7) adopted from Chan and Lau (2002). The three items were "whether or not I will buy eco-friendly products for personal use in the next month depends completely on me", "I have full control over the number of eco-friendly products I will buy during the next month" and "whether or not I will buy eco-friendly products for personal use in the next month is completely under my control".

Scale revealed reliable ($\alpha = .84$) and PCA revealed only one latent factor ($\boldsymbol{\varepsilon}$ = 2.29), as expected.

5.3.3.3 Environmental self-identity

Environmental self-identity was measured on a 7-point Likert's scale from "strongly disagree" (1) to "strongly agree" (7) adopted from Whitmarsh and O'Neill (2010). The four items were "I think of myself as an environmentally friendly consumer", "I think of myself as someone who is very concerned about environmental issues", "I would be embarrassed to be seen as I follow an environmentally friendly lifestyle" and "I wouldn't want my family or friends to think of me as someone who is worried about environmental issues".

Scale revealed not reliable ($\alpha = .26$), for this reason, items 3 and 4 were eliminated. Scale was now reliable ($\alpha = .62$) and PCA revealed only one latent factor ($\boldsymbol{\varepsilon}$ = 1.5).

5.3.3.4 Purchase intention

Purchase intention to eco-friendly products was measured on a 7-point Likert's scale from "impossible" (1) to "surely" (7) adopted from Chan and Lau (2002). Respondents were asked how likely they will perform certain

behaviours: “over the next month and for personal use, I will consider buying green products because they are less polluting”, “over the next month and for personal use, I will consider switching to other brands because of ecological reasons”, “over the next month and for personal use, I am willing to switch to a green-version of a product”.

Scale revealed reliable ($\alpha = .87$) and PCA revealed only one latent factor ($\boldsymbol{\varepsilon} = 2.41$), as expected.

5.3.3.5 Word-of-mouth

Word-of-mouth of eco-friendly products was measured on a 7-point Likert’s scale from “never” (1) to “always” (7) adapting items from Filieri (2015). The four items were “I talk to others about how I like using eco-friendly products”, “I make sure that others know that I buy eco-friendly products”, “I speak positively of eco-friendly products” and “I recommend eco-friendly products”.

Scale revealed reliable ($\alpha = .89$) and PCA revealed only one latent factor ($\boldsymbol{\varepsilon} = 3.07$), as expected.

5.3.3.6 Willingness to pay more

Willingness to pay more for eco-friendly products was measured adopting items from Kang et al. (2012). The first item was measured on a 7-point Likert’s scale from “strongly disagree” (1) to “strongly agree” (7), “I would pay more for an eco-friendly product to be sustainable from an ecological point of view”; then, respondents were asked to choose which extra on green products they would pay to support environmental costs, choice was between 0%, 1-2%, 2-5%, 6-10%, 11-15%, 16-20% and more than 20%.

Scale revealed reliable ($\alpha = .74$) and PCA revealed only one latent factor ($\boldsymbol{\varepsilon} = 1.58$), as expected.

5.4 Results

In this chapter, hypothesis tests will be explained.

The dataset was imported in IBM-SPSS 25 for the statistical analysis.

To test H1a and H4a, a multiple linear regression was computed.

Word-of-mouth was considered as dependent variable while the condition and purchase intention were considered as explanatory variables.

The model proved to be reliable ($F(2,145) = 51.81; p < .05$), this means that at least one of the explanatory variables was a significant predictor of the dependent variable; furthermore, the model explains 41% ($R^2 = .41$) of the variability of the dependent variable.

The condition revealed not to be a significant predictor of word-of-mouth ($Coef = -.17\,; t = -.78; p > .05$), for this reason, H1a was rejected.

Purchase intention proved to be a significant predictor of word-of-mouth ($Coef = .81; t = 10.16; p < .05$), for this reason, H4a was accepted.

To test H2a/b and H3a/b, a multiple linear regression was computed.

Purchase intention was considered as dependent variable while the condition and the interaction effect, between the condition and subjective norms, as explanatory variables.

The model proved to be reliable ($F(2,145) = 3.4; p < .05$), this means that at least one of the explanatory variables was a significant predictor of the dependent variable; furthermore, the model explains 4% ($R^2 = .04$) of the variability of the dependent variable.

The condition revealed not to be a significant predictor of purchase intention ($Coef = -.13; t = -.38; p > .05$), for this reason, H2a/b were rejected.

Interaction effect (condition*subjective norms) proved to be a significant predictor of purchase intention of eco-friendly products($Coef = .1; t = 1.98; p < .05$), for this reason, H3a/b were accepted.

To test H5a/b, a simple linear regression was computed.

Purchase intention was considered as dependent variable while the interaction effect, between the condition and perceived behavioural control, as explanatory variables.

The model turned out to be significant ($F(1,146) = 14.49;\ p < .05$), this means that the explanatory variable was a significant predictor of the dependent variable; furthermore, the model explains 9% ($R^2 = .09$) of the variability of the dependent variable.

Interaction effect (condition*perceived behavioural control) revealed to be significant predictor of purchase intention of eco-friendly products ($Coef = .13; t = 3.8; p < .05$), for this reason, H5a/b were accepted.

To test H6a/b, a simple linear regression was computed.

Purchase intention was considered as dependent variable while the interaction effect, between the condition and perceived behavioural control, as explanatory variables.

The model proved to be significant ($F(1,146) = 24.8;\ p < .05$), this means that the explanatory variable was a significant predictor of the dependent variable; furthermore, the model explains 14% ($R^2 = .14$) of the variability of the dependent variable.

Interaction effect (condition*environmental self-identity) proved to be significant predictor of purchase intention of eco-friendly products($Coef = .16; t = 4.98; p < .05$), for this reason, H6a/b were accepted.

To test H1b and H4b, a multiple linear regression was computed.

Willingness to pay more was considered as dependent variable while the condition and purchase intention of eco-friendly products were considered as explanatory variables.

The model revealed to be significant ($F(2,145) = 14.11; p < .05$), this means that at least one of the explanatory variables was a significant predictor of the dependent variable; furthermore, the model explains 16% ($R^2 = .16$) of the variability of the dependent variable.

The condition does not reveal to be a significant predictor of Willingness to pay more ($Coef = .2; t = 1.02; p < .05$). For this reason, H1b was rejected.

Purchase intention revealed to be a significant predictor of Willingness to pay more ($Coef = .35; t = 5.02; p < .05$). For this reason, H4b was accepted.

In sum:

- In model 1, H3a, H4a, H5a and H6a were accepted while H1a and H2a were rejected;
- In model 2, H3b, H4b, H5b and H6b were accepted while H1b and H2b were rejected.

(see Table 11 for complete information about hypotheses check).

Hypothesis	accepted/rejected
H1a	rejected
H2a	rejected
H3a	**accepted**
H4a	**accepted**
H5a	**accepted**
H6a	**accepted**
H1b	rejected
H2b	rejected
H3b	**accepted**
H4b	**accepted**
H5b	**accepted**
H6b	**accepted**

Table 11: Final study - Phase 1 - Hypotheses check

5.5 Discussion

5.5.1 Theorical implications

Here the results of the Final study – Phase 1 are explained and the theorical implications are exposed.

In order to answer the overall research questions (Does the overview effect improve the purchase and the usage of eco-friendly products?) the current study examined the effect of the exposure to the Earth on consumers' word-of-mouth and willingness to pay more for eco-friendly products.

According to the proposed model 1, the condition should have a positive influence on word-of-mouth of eco-friendly products thanks to the moderator effect of Purchase intention, and this effect should be intensified by the interaction of the condition with subjective norms, or perceived behavioural control or Environmental self-identity. The model proved that the exposure to a video of the Earth recorded by a satellite in orbit positively influences the word-of-mouth of eco-friendly products through the mediator effect of Purchase intention; furthermore, the model proved also proved that the influence of the exposure to a video of the Earth recorded by a satellite in orbit on purchase intention of eco-friendly products is intensified by the moderator effect of subjective norms, perceived behavioural control and environmental self-identity. At last, model 1 proved that the exposure to a video of the Earth recorded by a satellite in orbit does not have a direct effect on neither word-of-mouth nor Purchase intention. This means that, after being exposed to a video of the Earth recorded by a satellite in orbit, consumers with high subjective norms, high perceived behavioural control, or high

environmental self-identity will have a greater purchase intention towards eco-friendly products and, furthermore, will generate more positive word-of-mouth of eco-friendly products.

According to the proposed model 2, the condition should have a positive influence on willingness to pay more for eco-friendly products thanks to the moderator effect of purchase intention, and this effect should be intensified by the interaction of the condition with subjective norms, or perceived behavioural control or environmental self-identity. The model proved that the exposure to a video of the Earth recorded by a satellite in orbit positively influences the word-of-mouth of eco-friendly products through the mediator effect of purchase intention; furthermore, the model also proved that the influence of the exposure to a video of the Earth recorded by a satellite in orbit on purchase intention of eco-friendly products is intensified by the moderator effect of subjective norms, perceived behavioural control and environmental self-identity. At last, model 2 proved that the exposure to a video of the Earth recorded by a satellite in orbit does not have a direct effect on neither willingness to pay more nor purchase intention of eco-friendly products. This means that, after being exposed to a video of the Earth recorded by a satellite in orbit, consumers with high subjective norms, or high perceived behavioural control, or higher environmental self-identity will have a greater purchase intention and, furthermore, will be willing to pay more for eco-friendly products.

6. Final study – phase 2

The aim of Final study - phase 2 is to validate the findings of phase 1 and extend its model.

The research will be conducted taking into account previous findings and proposing a new model adding a new variable in the relationship.

First of all, a literature review for the new variable will be provided. Thus, two theorical models will be proposed and hypotheses formulated; furthermore, the research's methodology will be explained, the analysis' results exposed, and findings explained. Finally, theorical and managerial implications will be discussed, and conclusions drown.

6.1 Literature review

In this chapter the new variable will be introduced and its applicability in the "green world" context will be explained.

6.1.1 Attitude towards

Ajzen (1991) defines attitude as: "the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question". It can be defined as an individual's positive/negative evaluation of the performance of particular behaviour (Ajzen and Fishbein, 1980).

Attitude is the result of behavioural belief and outcome evaluation. The former refers to the individual belief about the consequences, or outcomes, of engaging in a particular behaviour, the latter refers to the corresponding favourable or unfavourable judgment about the possible consequences of the behaviour. By combining beliefs strength and outcome evaluation, an estimate about the behaviour based on the person's accessible beliefs can be obtained (Ajzen, 2005). In conclusion, attitude represents what consumers like and dislike (Blackwell et al., 2006) and consumers' product purchasing decisions are often based on their environmental attitudes.

Regarding attitude toward "green" world, there is a general belief among researchers and environmental activists that through purchasing environmentally friendly products or green products consumers can contribute significantly to improve the quality of the environment (Abdul-Muhmim, 2007). Numerous studies supported positive relationships between environmental attitudes and green purchase intention in different cultures and in different product categories, such as organic food, timber-based products, organic products and environmental friendly vehicles (Sinnappan and Rahman, 2011; Ahmad and Juhdi, 2010; Tarkiainen and Sundqvist, 2005; Kalafatis, Pollard, East and Tsogas,1999).

According to Schultz and Zelezny (2000), "attitudes of environmental concern are rooted in a person's concept of self and the degree to which an individual perceives him or herself to be an integral part of the natural environment".

Thus, according to TPB, the stronger a consumer's attitude toward purchasing green eco-friendly products is, the higher his intention to purchase eco-friendly products will be.

The other variables used in this study are some of the previous one (purchase intention, word-of-mouth and willingness to pay more for eco-friendly products), for this reason, they will not be discussed further in this chapter.

6.2 Model and hypothesis

6.2.1 Proposed model

In this chapter the statistical model proposed are exposed and relationships supposed are explained.

The purpose of this study was to validate the influence of the overview effect on word-of-mouth and on willingness to pay more for eco-friendly products and extend the already proven model taking in account attitude towards eco-friendly products.

According with the model of the previous study, in this research it's assumed that the exposure to a video of the Earth recorded from a satellite in orbit has a positive influence on the future word-of-mouth and willingness to pay more for eco-friendly products.

As before, two models were developed, one for each dependent variable (word-of-mouth and willingness to pay more).

For the first model, a mediation model was proposed. word-of-mouth of eco-friendly products was considered as dependent variable and the condition was treated as independent variable; this relationship was mediated by two variables: the condition was proposed to be mediated from Attitude towards and then from Purchase intention of eco-friendly products (see Fig 5 for further explanation).

For the second model, a mediation model was proposed. Willingness to pay more for eco-friendly products was considered as dependent variable and the condition was treated as independent variable; this relationship was mediated by two variables: the condition was proposed to be mediated from attitude towards and then from Purchase intention of eco-friendly products (see Fig 6 for further explanation).

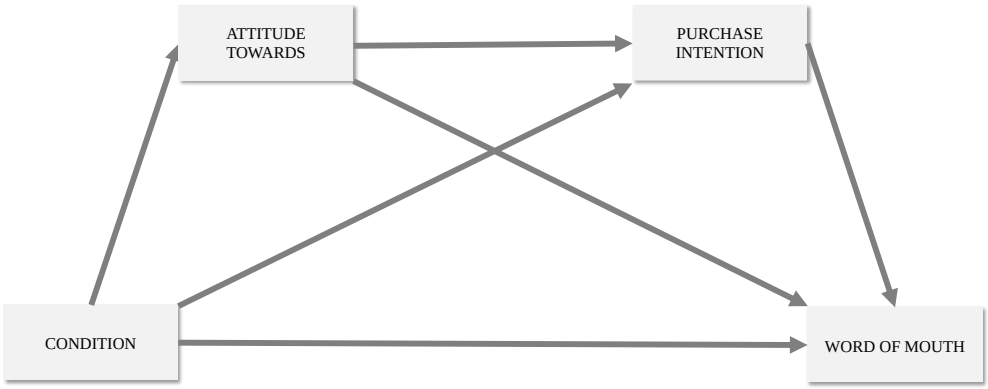

Fig. 5. Conceptual model 1

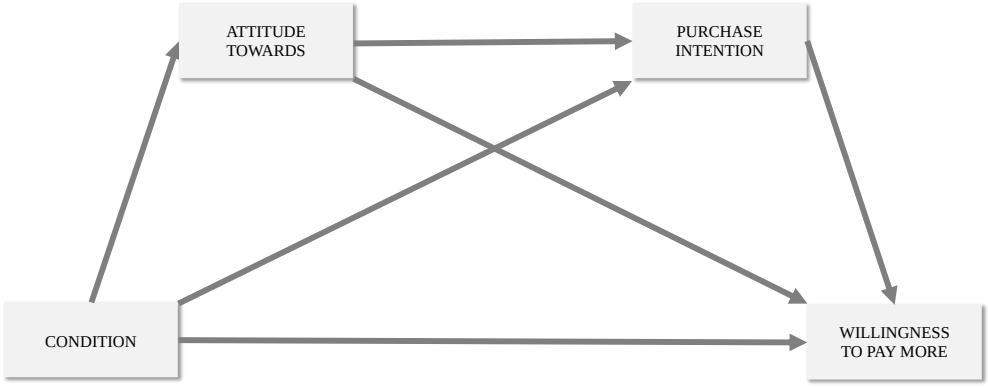

Fig. 6. Conceptual model 2

6.2.2 Hypothesis formulation

Here hypotheses for both models are exposed.

Regarding model 1:

H1a: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on word-of-mouth of eco-friendly products.

H2a: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on attitude towards eco-friendly products.

H3a: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on purchase intention of eco-friendly products.

H4a: A high attitude towards has a positive effect on the word-of-mouth of eco-friendly products.

H5a: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on purchase intention of eco-friendly products.

H6a: A high purchase intention of eco-friendly products has a positive effect on the word-of-mouth of eco-friendly products.

Regarding model 2:

H1b: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on willingness to pay more for eco-friendly products.

H2b: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on attitude towards eco-friendly products.

H3b: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on purchase intention of eco-friendly products.

H4b: A high attitude towards has a positive effect on willingness to pay more for eco-friendly products.

H5b: The exposure to a video of the Earth recorded by a satellite in orbit has a positive effect on purchase intention of eco-friendly products.

H6b: A high purchase intention of eco-friendly products has a positive effect on willingness to pay more for eco-friendly products.

6.3 Methodology

In this chapter, first methods for data collection and sample composition are exposed, then the manipulation is explained and finally measures used are clarified.

6.3.1 Data collection and sample composition

Data for Final Study – phase 1 were collected through an online survey created on Qualtrics. The survey was randomly distributed through Amazon Mechanical Turk.

A total of 967 participated in the study; because of the data mining activity 446 respondents were cut off: those who completed the survey in less than 5', who failed the manipulation check and who showed incoherence in the answers. The final dataset was made up of 521 respondents. Of the respondents, 40% were male and 60% were female (see Table 12 for complete details of the sample).

	%	#	Ag	SD
Genre				
Male	53	276		
Female	47	245		
Age			36.6	12.02
Instruction level				
Medium licence	0	1		
High school diploma	0	0		
Bachelor's degree	22	114		
Master's deegre	56	294		
PhD	20	103		
Occupation				
Employed	73	378		
Freelancer	12	62		
Unemployed	8	43		
Student	4	19		
Other occupation	4	19		
Income				
< 25000€	38	196		
25000€ - 50000€	42	217		
50000€ - 75000€	14	74		
>75000€	4	23		
Preferred not to reply	2	11		
Provenience				
United States	61	316		
United Kingdom	2	10		
Other	37	194		

Table 12: Final Study - Phase 2- Descriptive statistics of the sample (n=521)

6.3.2 Manipulation

The manipulation was not changed from the previous study, a brief recap is here reported.

In the first step of the survey, respondents watched a 1-minute length video of the Earth from space, recorded by a satellite in orbit (see Appendix B).

After the video, respondents were randomly exposed to one of the two visual stimuli:

- A plastic water bottle;
- A 100% recycled plastic water bottle (see Appendix C).

The rest of the survey was exactly the same for all respondents.

6.3.3 Measures

After the manipulation check all the variables were measured. All the measures were adopted, or adapted, from established scales (see Appendix F for the complete items).

To be sure that the scales were reliable, for each construct:

- Chronbach's α was computed to verify whether the scale was reliable ($\alpha > .7$);
- A Principal Component Analysis (PCA) was conducted to verify hoe many latent factors there were following Kaiser's rule (many principal factors as many eigenvalues greater or equal to 1).

6.3.2.1 Attitude

Attitude towards eco-friendly products was measured on a 7-point semantic differential scale adopting six items from Yadav and Pathak (2017), "buying sustainable products is (extremely bad/good, undesirable/desirable, unpleasant/pleasant, foolish/wise, unfavourable/favourable, negative/positive)".

Scale revealed reliable ($\alpha = .94$) and PCA revealed only one latent factor ($\boldsymbol{\varepsilon} = 4.77$), as expected.

6.3.2.2 Purchase intention

Purchase Intention to eco-friendly products, as before, was measured on a 7-point Likert's scale from "impossible" (1) to "surely" (7) adopted from Chan and Lau (2008). Respondents were asked how likely they will perform certain behaviours: "over the next month and for personal use, I will consider buying green products because they are less polluting", "over the next month and for personal use, I will consider switching to other brands because of ecological reasons", "over the next month and for personal use, I am willing to switch to a green-version of a product".

Scale revealed reliable ($\alpha = .87$) and PCA revealed only one latent factor ($\boldsymbol{\varepsilon} = 2.41$), as expected.

6.3.2.3 Word of mouth

Word-of-mouth of eco-friendly products was measured on a 7-point Likert's scale from "never" (1) to "always" (7) adapting items from Filieri (2010). The four items were "I talk to others about how I like using eco-friendly products", "I make sure that others know that I buy eco-friendly products", "I speak positively of eco-friendly products" and "I recommend eco-friendly products".

Scale revealed reliable ($\alpha = .93$) and PCA revealed only one latent factor ($\boldsymbol{\varepsilon}$ = 2.66), as expected.

6.3.2.4 Willingness to pay more

Willingness to pay more for eco-friendly products, as before, was measured adopting items from Kang et al. (2012). The first item was measured on a 7-point Likert's scale from "strongly disagree" (1) to "strongly agree" (7), "I would pay more for an eco-friendly product to be sustainable from an ecological point of view"; then, respondents were asked to choose which extra on green products they would pay to support environmental costs, choice was between 0%, 1-2%, 2-5%, 6-10%, 11-15%, 16-20% and more than 20%.
Scale revealed reliable ($\alpha = .67$) and PCA revealed only one latent factor ($\boldsymbol{\varepsilon}$ = 1.51), as expected.

6.4 Results

In this chapter methodologies to test hypotheses are exposed and results are shown.
The dataset was imported in IBM-SPSS 25 for the statistical analysis.

To test H1a, H4a and H6a a multiple linear regression was computed.
Purchase intention, attitude towards eco-friendly products and the condition have been considered explanatory variables of word-of-mouth of eco-friendly products.
The model revealed to be reliable ($F(3,517) = 68.71; p < .05$), this means that at least one of the explanatory variables was a significant predictor of the dependent variable; furthermore, the model explains 28% ($R^2 = .28$) of the variability of the dependent variable.
Purchase intention revealed a significant predictor of word-of-mouth ($Coef = .78; t = 14.13; p < .000$), for this reason H6a was accepted.
Attitude towards eco-friendly products revealed to be a significant predictor of word-of-mouth ($Coef = -.15; t = -2.97; p < .00$), for this reason H4a was accepted.
The condition does not reveal to influence directly word-of-mouth ($Coef = .13; t = 1.16; p > .05$), for this reason H1a was rejected.

To test H3a and H5a a multiple linear regression was computed.
Attitude towards eco-friendly products and the condition have been considered explanatory variables of purchase intention to eco-friendly products.
The model revealed to be significant ($F(2,518) = 42.28; p < .05$), this means that at least one of the explanatory variables was a significant predictor of the dependent variable; furthermore, the model explains 14% ($R^2 = .14$) of the variability of the dependent variable.
Attitude towards eco-friendly products revealed to be a significant predictor of Purchase intention ($Coef = .35; t = 9.18; p < .000$), for this reason H3a was accepted.

The condition revealed not to influence directly Purchase intention ($Coef = -.17; t = -1.89; p = .05$), for this reason H5a was rejected.

To test H2a/b, a simple linear regression was computed.
The condition was considered the explanatory variable of attitude towards eco-friendly products.
The model revealed to be significant ($F(1,519) = 12.96; p < .000$), this means that the explanatory variable was a significant predictor of the dependent variable; furthermore, the model explains 2% ($R^2 = .02$) of the variability of the dependent variable.
The condition revealed to influence directly Attitude towards eco-friendly products ($Coef = .37; t = 3.6; p < .000$), for this reason H2a was accepted.

To test H1b, H4b and H6b a multiple linear regression was computed.
Purchase intention, attitude towards eco-friendly products and the condition have been considered explanatory variables of willingness to pay more for eco-friendly products.
The model revealed to be significant ($F(3,517) = 50.27; p < .000$), this means that at least one of the explanatory variables was a significant predictor of the dependent variable; furthermore, the model explains 22% ($R^2 = .22$) of the variability of the dependent variable.
Purchase intention revealed to be a significant predictor of Willingness to pay more ($Coef = .56; t = 12.16; p < .000$), for this reason H6b was accepted.
Attitude towards eco-friendly products revealed to be a significant predictor of Willingness to pay more ($Coef = -.13; t = -3.02; p < .00$), for this reason H4b was accepted.
The condition does not reveal to influence directly Willingness to pay more ($Coef = .05; t = .54; p > .05$), for this reason H1 was rejected.

To test H3b and H5b a multiple linear regression was computed.
Attitude towards eco-friendly products and the condition have been considered explanatory variables of purchase intention to eco-friendly products.
The model revealed to be significant ($F(2,518) = 42.28; p < .000$), this means that at least one of the explanatory variables was a significant predictor of the dependent variable; furthermore, the model explain 14% ($R^2 = .14$) of the variability of the dependent variable.
Attitude towards eco-friendly products revealed to be a significant predictor of Purchase intention ($Coef = .35; t = 9.18; p < .000$), for this reason H3b was accepted.
The condition revealed not to influence directly Purchase intention ($Coef = -.17; t = -1.89; p = .05$), for this reason H5b was rejected.

In sum:

- In model 1, H2a, H3a, H4a and H6a were accepted while H1a and H5a were rejected;
- In model 2, H2b, H3b, H4b and H6b were accepted while H1b and H5b were rejected.

(see Table 13 for complete information about hypotheses check)

Hypothesis	accepted/rejected
H1a	rejected
H2a	**accepted**
H3a	**accepted**
H4a	**accepted**
H5a	rejected
H6a	**accepted**
H1b	rejected
H2b	**accepted**
H3b	**accepted**
H4b	**accepted**
H5b	rejected
H6b	**accepted**

Table 13: Final study - Phase 2 - Hypotheses check

6.5 Discussion

6.5.1 Theorical implications

Here results of the Final study – Phase 2 are explained and theorical implications are exposed.

In order to answer the overall research questions (Does the overview effect improve the purchase and the usage of eco-friendly products?), the current study examined the effect of the exposure to the Earth on consumers' word-of-mouth and willingness to pay more for eco-friendly products.

According to the proposed model 1, the condition should have a positive influence on word-of-mouth of eco-friendly products thanks to the mediation effect of attitude towards and of purchase intention to eco-friendly products.The model proved that the exposure to a video of the Earth recorded by a satellite in orbit positively influences the word-of-mouth of eco-friendly products through first the mediation effect of attitude towards (H2a accepted) and then through the mediation effect of purchase intention to eco-friendly products (H3a and H6a accepted). Model 1 also proved that the exposure to a video of the Earth recorded by a satellite in orbit does not have a direct effect on neither word-of-mouth nor purchase intention (H1a rejected). At least model 1 proved that there was no mediation effect of attitude towards eco-friendly products in the relationship between the condition and word-of-mouth of eco-friendly products (H4a rejected). This means that, after being exposed to a video of the Earth recorded by a satellite in orbit, consumers' word-of-mouth will be higher if the exposure to the experimental condition is mediate by attitude towards and purchase intention to eco-friendly products.

According to the proposed model 2, the condition should have a positive influence on willingness to pay more for eco-friendly products thanks to the mediation effect of attitude towards and of purchase intention to eco-friendly products. The model proved that the exposure to a video of the Earth recorded by a satellite in orbit

positively influences willingness to pay more for eco-friendly products through first the mediation effect of attitude towards (H2b accepted) and through then the mediation effect of purchase intention to eco-friendly products (H3b and H6b accepted). Model 2 also proved that the exposure to a video of the Earth recorded by a satellite in orbit does not have a direct effect on neither willingness to pay more nor purchase intention (H1b rejected). At least model 2 proved that there was no mediation effect of attitude towards eco-friendly products in the relationship between the condition and willingness to pay more for eco-friendly products (H4b rejected). This means that, after being exposed to a video of the Earth recorded by a satellite in orbit, consumers' willingness to pay more for eco-friendly products will be greater if the relationship is mediated by attitude towards and purchase intention to eco-friendly products.

6.5.2 Managerial implications

The marketing discipline is often accused of the creation of unsustainable patterns of consumption and a hedonistic lifestyle without limitations that affect and damage the environment (Abela, 2006). That is why, nowadays, the implementation of the principles of sustainable marketing is very important for the differentiation of and building a positive brand image of a company and products in the marketplace.

It is argued that the sustainability debate 'has moved on from the ecological and environmental to the social and economic, such that 'social sustainability' has emerged as a theme in its own right' (Turkington R, Sangster K. 2006).

In the actual socio-cultural context, most of the companies and firms everyday develop and carry out products, marketing strategies, and sustainable campaigns in order to respond to the environmental emergency. In this scenario, it is necessary for managers to plan communication strategies that are effective.

This research offers a new approach to improve the effectiveness of these strategies. The results of this research indicate that processes of developing sustainable strategies should take in account the possibility to exploit consumers' attitude towards and purchase intention to eco-friendly products, in order to improve their positive word-of-mouth and willingness to pay more for eco-friendly products.

In the short term and at strategic level, marketing managers should, first of all, target consumers who have shown higher sustainable subjective norms, perceived behavioural control and environmental self-identity with new marketing strategies, implementing visual stimuli of the Earth in order to intensifies their purchase intention to eco-friendly products and, through it, their positive word-of-mouth of eco-friendly products (Final study – phase 1). Furthermore, marketing managers and adverting designers should implement visual stimuli of the Earth targeting consumers who have shown higher positive attitude towards and purchase intention to eco-friendly products, in order to exploit their mediator effects on positive word-of-mouth of eco-friendly products (Final study - phase 2). Finally, marketing managers should implement visual stimuli of the Earth in marketing strategies for premium-prices for eco-friendly products, targeting consumers' who have shown high attitude towards, in order to increase their willingness to pay more for eco-friendly products and the success of products themselves (Final study – phase 2).

In the short term and at operating level, from the moment that consumers who visit eco-friendly retailers and eco/bio department store should have higher attitude towards eco-friendly products, managers should implement visual stimuli of the Earth in their physical store, especially in sections much more dedicated to sustainable products, in order to increase their customers' willingness to pay for eco-friendly products (Final study – phase 2) and the success of those products.

In the long term and at institutional level, sensibilization campaigns with the aim of increase consumers' attitude towards eco-friendly products, sustainable subjective norms, perceived behavioural control and environmental self-identity should be developed in order to bring people to stimulate their sustainable behaviors through Earth's visual stimuli (Final study – phase 1 and 2).

6.5.3 Limits and future researches

In this section, first limits of the present research are exposed, then suggestions for future researches are explained.

The first limit of the present research to take in account is the limit of self-reporting, especially in the green context that often does not provide trustful data; for this reason, future researches are recommended to perform the measurement in controlled and safe environment.

Furthermore, the limit of the manipulation through an online survey and the impossibility to really test the reaction in the consumers' brain to the visual stimulus address future researches to provide tools for a more powerful and engaging manipulation (e.g. Virtual Reality) and to exploit methods of tracking for effective exposure and attention (eye tracking), physical response (galvanic skin response) and mental and emotional response (ECG and fMRI).

Another limit of the present research is that just few control conditions have been tested (Earth's picture with steel water bottle and Earth's video with plastic/recycled-plastic bottle; for this reason, future researches are recommended to test different combinations of control conditions.

One last limit to the developed theory could be represented by the attidude-behaviour gap: while exploring green purchase behaviour, many studies have reported a discrepancy or "gap" between consumers' expressed favourable attitudes and actual purchasing practices (Tanner and Kast, 2003; Vermeir and Verbeke, 2006; Vermeir and Verbeke, 2008). This discrepancy or gap between consumers' favourable attitude towards, and actual purchase behaviour of green products is referred to as 'green purchasing inconsistency' or 'green attitude-behaviour gap'. It signifies that consumers' positive attitude towards green products does not always translate into action. Hughner (2007) found that while many consumers showed a positive attitude towards purchases of organic food products (67%), only a small number of consumers (4%) actually purchased those products. Similarly, a research shows that 52% of consumers were interested in purchasing "earth-sustainable" foods but did not purchase those foods owing to the perceived barriers of lack of availability, inconvenience, price, habit and trust (Robinson and Smith, 2002).

Different explanations have been suggested for the gap between the positive attitude of consumers and their actual purchase behaviour, one of the most accreditate one, regarding the green context, is the "delayed

reward" factor. It is often said that, in order to preserve the Earth's environment, we must change from shot-term thinking to long-term thinking (Artbuthonott, 2010). The delay of gratification has implications for environmental behaviour in many of temptations that promote environmentally degrading actions, such as overconsumption or fossil fuel use. Vlek (2000) described environmental costs as long-term, complex, and uncertain, in contrast to personal and societal benefits of overconsumption, which are immediate, simple, and certain. Findings about the delay of gratification are particular problematic for environmental issues, because the beneficial results of many sustainable behaviour changes are likely to be extremely delayed, given the recovery rate of ecosystems.

8. Conclusions

The first aim of this research was to prove the arise of the overview effect and its influence on purchasing and usage of eco-friendly products. Results confirmed that the exposure to an Earth's visual stimuli determines higher word-of-mouth and willingness to pay for eco-friendly products. Finally, this research provides useful starting points for further investigation on the overview effect itself and its relationship with the "green" context; from an economic point of view, this research provides useful insight for companies that target, or want to, green consumers.

Appendix

Appendix A – Manipulation Pre-test 1 (Earth plus steel water bottle Vs. Steel water bottle)

Appendix B – Pre-test measures

Construct	Items
Eco-literacy (1 = "totally disagree", 7 = "totally agree")	
	I have a good knowledge about environmental problems
	I have a good knowledge of environmentally friendly products sold on the market
	I don't need any assistance when I read environmental sustainability information on product labels
	How confident are you when you discuss environmental problems with others?
Environmental identity (1 = "totally disagree", 7 = "totally agree")	
	I think of myself as an environmentally-friendly consumer
	I think of myself as someone who is very concerned with environmental issues
	I would be embarrassed to be seen as having an environmentally- friendly lifestyle' (scoring reversed)
	I would not want my family or friends to think of me as someone who is concerned about environmental issues' (scoring reversed)
Perceived consumer effectiveness (1 = "totally disagree", 7 = "totally agree")	
	I feel able to solve environmental problems (1)
	I can protect the environment by buying sustainable products (2)
	I feel I can help solve environmental problems by buying an environmentally friendly product (3)
	What I buy has an effect on the environment (4)
	Buying sustainable products has a positive effect on society (5)
	Anyone can make a difference in protecting the environment by carefully choosing the products to buy (6)
Eco-purchase intention (1 = "totally disagree", 7 = "totally agree")	
	I would buy an eco-sustainable bottle, even if the quality is lower than a conventional product (1)
	I would buy an eco-sustainable bottle, even if the performance is lower than a conventional product (2)
	I would buy an eco-sustainable bottle, even if it has a less appealing design (3)
	I would buy an eco-sustainable bottle, even if it's less comfortable (4)
Eco-purchase behaviour (1 = "never", 7 = "always")	
	I often purchase environmentally friendly products (1)
	I often purchase environmentally friendly products, to reduce plastic waste (2)
	I often purchase environmentally friendly products, to protect the natural environment (3)
	I often think of the environment and health before buying something (4)

Willingness to pay (open question)	
	How much would you be willing to pay for the product shown in the picture?
Willingness to pay premium (1 = "totally disagree", 7 = "totally agree")	
	I would pay more for the product made using environmentally friendly materials (1)
	I am willing to spend more money to buy an environmentally friendly product (2)
	I think it is acceptable to pay 25% more for a product made using environmentally friendly materials (3)
	I believe it is acceptable to pay a surcharge for a product made using environmentally friendly materials (4)
Attitude toward eco-friendly products (1 = "totally disagree", 7 = "totally agree")	
	Using an eco-friendly water bottle can reduce plastic waste (1)
	Using an eco-friendly water bottle can reduce ocean pollution (2)
	Using an eco-friendly water bottle can reduce water waste (3)
Altruistic value orientation (1 = "not all important", 7 = "extremely important")	
	Control over others, dominance
	Material possessions, money
	The right to lead or command
	Having an impact on people and events
Biospheric alue orientation (1 = "not all important", 7 = "extremely important")	
	Equal opportunity for all
	A world free of war and conflict
	Correcting injustice, care for the weak
	Working for the welfare of others
Egoistic value orientation (1 = "not all important", 7 = "extremely important")	
	Protecting natural resources
	Harmony with other species
	Fitting into nature
	Preserving nature

Table 2: Pre-test 1 - constructs measures

Appendix C – Visual stimuli Final Study (1-minute length video of the Earth recorded by a satellite in orbit)

Appendix D – Manipulation Final Study (Plastic water bottle Vs. 100% recycled water bottle)

Appendix E – Final study – phase 1 survey

Construct	Items
SN1:	Most of the people that are important to me want me to buy eco-friendly products
SN2:	Most of the people that are important to me think I should buy eco-friendly products
PBC1:	Whether or not I will buy eco-friendly products for personal use in the next month depends completely on me
PBC2:	I have full control over the number of eco-friendly products I will buy during the next month
PBC3:	Whether or not I will buy eco-friendly products for personal use in the next month is completely under my control
ENV1:	I think of myself as an environmentally friendly consumer
ENV2:	I think of myself as someone who is very concerned about environmental issues
ENV3:	I would be embarrassed to be seen as I follow an environmentally friendly lifestyle
ENV4:	I wouldn't want my family or friends to think of me as someone who is worried about environmental issues
PI1:	Over the next month and for personal use, I will consider buying green products because they are less polluting
PI2:	Over the next month and for personal use, I will consider switching to other brands because of ecological reasons
PI3:	Over the next month and for personal use, I am willing to switch to a green-version of a product
WOM1:	I talk to others about how I like using eco-friendly products
WOM2:	I make sure that others know that I buy eco-friendly products
WOM3:	I speak positively of eco-friendly products
WOM4:	I recommend eco-friendly products
WTPM1:	I would pay more for an eco-friendly product to be sustainable from an ecological point of view
WTPM2:	I would pay this extra percentage on green products to support environmental costs

Final Study - Phase 1 - constructs measures

Appendix F - Final study – phase 2 survey

Construct	Items
ATT1:	Buying sustainable products is: Etremely bad/good
ATT2:	Buying sustainable products is: Etremely undesiderable/desiderable
ATT3:	Buying sustainable products is: Etremely unpleasant/pleasant
ATT4:	Buying sustainable products is: Etremely foolish/wise
ATT5:	Buying sustainable products is: Etremely unfavourable/favourable
ATT6:	Buying sustainable products is: Etremely negative/positive
PI1:	Over the next month and for personal use, I will consider buying green products because they are less polluting
PI2:	Over the next month and for personal use, I will consider switching to other brands because of ecological reasons
PI3:	Over the next month and for personal use, I am willing to switch to a green-version of a product
WOM1:	I talk to others about how I like using eco-friendly products
WOM2:	I make sure that others know that I buy eco-friendly products
WOM3:	I speak positively of eco-friendly products
WOM4:	I recommend eco-friendly products
WTPM1:	I would pay more for an eco-friendly product to be sustainable from an ecological point of view
WTPM2:	I would pay this extra percentage on green products to support environmental costs

Final Study - Phase 2 - Constructs measures

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Summary

Introduction

In 1950, the world produced only 2 million tonnes of plastic waste per year. By 2015, annual production had increased nearly 200-fold, reaching 381 million tonnes.

In this context, public concern for environmental issues has gradually increased over the past three decades since the inception of Earth Day on April 22th 1970. Nowadays, the issue of sustainable development is increasingly present in every aspect of human society and will doubtlessly shape future progress as a whole. Today the environmental ethics has become an important issue among organizations as well as consumers. Corporate Social Responsibility (CSR) has become central for consumers, employees and most of stakeholders in companies' evaluation (Carrol and Brown, 2018).

The continuous deterioration of the natural environment has raised the issue of protecting the natural environment which in turn resulted in ethical consumption known as green consumerism (Moisander, 2007). Despite the increasing eco-awareness in contemporary Western market economies, it is generally recognized that there are still considerable barriers to the diffusion of more ecologically oriented consumption styles (Moisander, 2007). Despite the alarming situation, the fact is that people in many countries around the globe still lack environmental consciousness and motivation that would initiate them into acting environmentally responsibly and in accordance with the needs of nature and their future survival (United Nations, 2015).

The overview effect, as the experience is called, refers to a profound reaction to viewing the earth from outside its atmosphere (White, 1987). Several astronauts have attributed deep feelings of awe and even self-trascendence to this experience (e.g Linenger, 2000; Mitchell & Williams, 1996; White, 1987).

Starting from the overview effect, theorized by Frank White in 1987, the aim of this research is to investigate if it could influence purchase intention through green products in order to increase the overall green consumption.

The research has been divided into different parts: first of all, the overview effect will be analysed, exposed and explained; then, in the pre-tests section, exploratory research will be conducted to address the main and final study, where findings of pre-tests section will be implemented in more complex models.

Overview effect

In his 1987 book, The Overview effect: Space exploration and Human evolution, American author Frank White coined "*The overview effect*" to describe a collection of positive mental experiences reported by astronauts and cosmonauts returning from outer space.

On an internet radio show in 2007, White described the overview effect as: "*That experience of seeing the Earth from orbit, or from the Moon, and having a realization of the inherent unity and oneness of everything on the planet. It's a realization that we are all one in terms of our place in the universe and our destiny… It's a shift in consciousness, a shift in awareness, and identity, and a harbinger of many more evolutionary transformations*".

White's primary sources are the self-reported experiences of astronauts and cosmonauts. Many of the astronaut conversation narratives that make up White's body of evidence include a common pivot point: the sudden appreciation of the "whole Earth" as "a total system". Those feelings are caused by the view of something from far away (is also what we feel when we are on the top of a mountain looking down to the valley) which suggests us enormity and totality and that is also meaningful to us. This also is the effect to see something from a completely different prospective.

Extreme subjective experiences can shape the ways in which individuals understand and approach new concepts, and even affects the salience of familiar concepts. These changes are conscious and propositional and seem to be able to influence individuals' broader beliefs and values. Due to the human tendency to find some symbolic value in personal experiences, particularly intense ones call forth a motivated attempt to make sense of how the experience fits into one's life narrative (Vaillant, 2008).

One way to understand this powerful influence might be in terms of changes to a schema, an organized conceptual framework through which individuals approach new information and make sense of old experiences. Each of an individual's schemas entails a set of memories, beliefs, and attitudes that create a general cognitive orientation, guiding the interpretation of and the response to incoming stimuli (Piaget, 2005). When individuals encounter something that cannot be reduced to pre-existing elements in a given schema, they must "accommodate", expanding that framework to take new information into account (Markus, 1977).

The researchers conducted up to now on the overview effect have been limited to the study of the effect that this has to the inner state of humans. The aim of this research was to investigate whether it is possible to recreate this effect through an advertisement to push people to change their attitudes towards the Earth and their behavioural patterns in a vision of safeguarding the planet.

Two different pre-tests were conducted to address the research towards more complex models in order to answer the research's question: does the overview effect improve the purchase and the usage of eco-friendly products?

Pre-test 1

The purpose of Pre-test 1 is to verify whether the simple exposure to a visual stimulus of the Earth from space generates overview effect, bringing people to "be" eco-friendlier under several aspects.
First of all, literature review will be provided. Thus, a theorical model will be proposed and hypothesis formulated; furthermore, research's methodology will be explained, analysis' results exposed, and findings explicated. Finally, results will be discussed, and direction of following studies exposed.

Constructs used in preliminary study has been built as follow: Eco-literacy refers to the extent to which consumers understand environmental issues and eco-friendly products (Cheah and Phau, 2011). It's assumed experimenting the overview effect can determine feelings of higher eco-literacy.

Identity is defined as an individual's self-concept which gives meaning to personal experiences and shapes individuality, dispositions, and responses to situations (Stryker & Burke, 2000). It's assumed experimenting the overview effect can help increasing consumers' environmental identity.

Perceived Consumer Effectiveness (PCE) refers to the extent to which individuals believe that their actions make a difference in solving a problem (Ellen, Weiner & Cobb-Walgren, 1991). It's assumed experimenting the overview effect can help increasing consumers' perceived effectiveness toward environmental issues.

Behaviour intention is an indication of individuals' readiness to perform a given behaviour, it's assumed to be an immediate antecedent of behaviour (Ajzen, 2002). It's assumed experimenting the overview effect can help increasing consumers' purchase intention toward eco-friendly products.

Performing behaviour is an indication of how often consumers perform a specific behaviour. It's assumed experimenting the overview effect can help increasing consumers' purchase behaviour toward eco-friendly products.

Willingness to pay (WTP) is the maximum price at or below which a consumer will definitely buy one unit of a product (Varian, 1992). It's assumed experimenting the overview effect determine higher Willingness to Pay toward eco-friendly products.

Price is always considered as one of the most important factors that determines the consumer decision process. Price is the most important barrier to green consumption (Gleim at. Al, 2013) and willingness to pay more prices for green products may be considered as pro-environmental behaviour (Ajzen, 1991). It's assumed experimenting the overview effect determine higher willingness to pay more toward eco-friendly products.

Attitude can be defined as an individual's positive/negative evaluation of performance of a particular behaviour (Ajzen and Fishbein, 1980). It's assumed experimenting the overview effect determine higher attitude towards eco-friendly products.

Respondents' preference for eco-friendly products depended also on personality characteristics as value orientation; personality aspects might play a role in consumer preferences for suboptimal products. It's assumed experimenting the overview effect can determine higher altruistic and biospheric values against egoistic ones toward eco-friendly products.

An independent two sample t-test for each of the variables measured was computed; the grouping variable was the exposure to one of the two the visual stimuli.

Pre-test 1 was conducted through an online survey created on Qualtrics.

The research was a between subject experimental design, respondents have been randomly divided in two groups, control and experimental one: In the first step of the survey, after a brief introduction, respondents were invited to carefully watch randomly one of two pictures:

- Earth from the outer space plus a steel water bottle;
- Steel water bottle.

The rest of the survey was exactly the same for all respondents.

The final dataset was made up of 186 respondents: 95 in the experimental group and 91 in the control group.

Chronbach's α and Principal Component Analysis (PCA) were conducted to test reliability of the scales and them latent constructs. Independent two-paired t-test was computed to test whether there was any significative difference between the control group and the experimental one. T-tests revealed that there is no significative difference between control and experimental group among these variables. For this reason, all the hypotheses were rejected.

There could be several aspects that did not work or were neglected that caused the reject of all the hypotheses: first of all, the online survey did not provide for a real manipulation effect and, perhaps, the literary review done until now is not enough to explain these results. For these reasons, a new visual stimulus needed to be though and other analysis on data are required.

Pre-test 2

The purpose of Pre-test 2 was to examine potential predictors of purchase intention. Specifically, a new analysis on the dataset obtained during Pre-test 1 was conducted to support new theories, in order to build a better model to further investigate the overview effect. First of all, a new theorical model will be provided, then the research's methodology will be explained, analysis' results exposed, and findings explicated. Finally, results will be discussed, and the direction of the following studies exposed.

The purpose of this study was to find potential predictors of purchase intention in order to address the following studies.

It's assumed that eco-literacy, environmental Identity, perceived consumer effectiveness, willingness to pay, willingness to pay more, attitude towards and value orientation are predictors of purchase intention.

One model is presented: purchase intention is considered as dependent variable; eco-literacy, environmental Identity, perceived consumer effectiveness, willingness to pay, willingness to pay more, attitude towards as independent variables.

Pre-test 2 study was conducted on the same dataset of Pre-test 1. Therefore, the final dataset was made up of 186 respondents, this time considered as a whole.

A multiple regression model was computed to test hypothesis: purchase intention has been treated as DV (Dependent Variable) while eco-literacy, environmental identity, perceived consumer effectiveness, willingness to pay more, attitude towards eco-friendly products and the 3 different value orientations have been treated as IVs (Independent Variables). The first multiple regression revealed that environmental identity, perceived consumer effectiveness, willingness to pay more and attitude towards eco-friendly products were significant predictors of purchase intention.

A second multiple regression was computed cutting off variables that just revealed to be no significant. In this model, purchase intention has been treated again as DV while the variables that were significant in the previous model (environmental identity, perceived consumer effectiveness, willingness to pay more and attitude towards eco-friendly products) as IVs. Analysis on this model revealed that environmental identity,

willingness to pay more and attitude towards eco-friendly products were significant predictors of purchase intention.

A third multiple regression was computed to confirm the results of the previous model. In this model, purchase intention has been treated again as DV while the variables that were significant in the previous model (environmental identity, willingness to pay more and attitude towards eco-friendly products) as IVs. Analysis on this model revealed that all the IVs were significant predictors of purchase intention. This means that environmental identity, willingness to pay more and attitude towards eco-friendly products are predictors of purchase intention.

As expected, different predictors of purchase Intention have been found. However, the discovery of "Attitude towards" as a significant predictor of purchase intention directs the present research to take into account Ajzen's Theory of Planned Behaviour.

For this reason, the following part of this research will take in account Theory of Planned Behaviour's findings to further investigate the overview effect.

Final study – Phase 1

The aim of Final study – phase 1 is to verify whether the exposure to a visual stimulus of the Earth from the space generates overview effect, bringing people to have more intention to perform sustainable purchasing behaviours.

The research will be conducted joining previous the findings with new variables.

First of all, a new literature review will be provided. Thus, two theorical models will be proposed and hypotheses formulated; furthermore, the research's methodology will be explained, analysis' results exposed, and findings explicated. Finally, theorical implication will be discussed and the direction of the last study will be addressed.

Contructs utilized in this study have been built as follow:

Ajzen introduces a social factor termed "subjective norm"; it refers to the perceived social pressure to perform or not the behaviour. It is defined as social pressure exerted on an individual to engage in a particular behaviour (Ajzen and Fishbein, 1980).

Bendura's concept of perceived self-efficacy which "*is concerned with judgments of how well one can execute courses of action required to deal with prospective situations*" (Bandura, 1982). Perceived Behavioural Control can be explained as the perceived easiness or difficulty of performing the behaviour and it is assumed to reflect past experience as well as anticipated impediments and obstacles.

Behavioural intention is an indication of an individual's readiness to perform a given behaviour.

Finally, given a sufficient degree of *actual* control over the behaviour, people are expected to carry out their intentions when the opportunity arises. Intention is thus assumed to be the immediate antecedent of behaviour (Ajzen, 2002).

Price is always considered as one of the most important factors that determines the consumer decision process. Price is the most important barrier to green consumption (Gleim at. Al, 2013) and willingness to pay more prices for green products may be considered as pro-environmental behaviour (Ajzen, 1991).

Self-identity has been defined as the label used to describe oneself (Cook et al., 2002), which relates to a particular behaviour (Conner & Armitage, 1998). Here, environmental self-identity is defined as the extent to which someone sees oneself as a type of person who acts environmentally friendly.

Word-of-mouth is defined here as the extent to which a customer informs friends, relatives and colleagues about an event that has created a certain level of satisfaction. It's an oral, informal, person-to-person communication between a perceived non-commercial communicator and a receiver regarding a brand, a product, an organization, or a service (Higie, Feick, & Price, 1987).

Visual stimulus used in Pre-test 1 has not provided for a real manipulation and for a real manipulation check. For this reason, a new visual stimulus has been developed for the final study. The two static pictures have been replaced by a 1-minute video that shows the Earth recorded from satellites orbiting around our planet. This new visual stimulus is more powerful and, for sure, more involving than the previous one. Furthermore, in the first survey no directly measure or check of the overview effect had been provided. Previously problems were about the miss of a manipulation check and the single version of the product shown.

For this study, it's assumed that the exposure to a video of the Earth recorded from a satellite in orbit has a positive influence on the future word-of-mouth and willingness to pay more for eco-friendly products.

Two different principal models are presented: the first one considered word-of-mouth of eco-friendly products as dependent variable; the second one considered willingness to pay more for eco-friendly products as dependent variable. Both models took in account a mediation variable and moderator variables. In both models purchase intention was considered as mediator in the relationship between the condition and the dependent variable. In both models three different variables were considered, one by one, as moderators in the relationship between the condition and purchase intention of eco-friendly products.

In the first step of the survey, after a brief introduction, respondents were invited to watch a 1-minute length video showing the Earth from space, recorded by a satellite in orbit.

After the video, respondents were randomly exposed to one of the two visual stimuli:

- A plastic water bottle;
- A 100% recycled plastic water bottle.

The rest of the survey was exactly the same for all respondents.

Data for Final Study – phase 1 were collected through an online survey created on Qualtrics. The final dataset was made up of 148 respondents.

Chronbach's α and Principal Component Analysis (PCA) were conducted to test reliability of the scales and them latent constructs. Different multiple linear regressions have been computed to test the hypotheses.

According to the proposed model 1, it proved that the exposure to a video of the Earth recorded by a satellite in orbit positively influences the word-of-mouth of eco-friendly products through the mediator effect of Purchase intention; furthermore, the model proved also proved that the influence of the exposure to a video of

the Earth recorded by a satellite in orbit on purchase intention of eco-friendly products is intensified by the moderator effect of subjective norms, perceived behavioural control and environmental self-identity. At last, model 1 proved that the exposure to a video of the Earth recorded by a satellite in orbit does not have a direct effect on neither word-of-mouth nor Purchase intention.

According to the proposed model 2, it proved that the exposure to a video of the Earth recorded by a satellite in orbit positively influences the word-of-mouth of eco-friendly products through the mediator effect of purchase intention; furthermore, the model also proved that the influence of the exposure to a video of the Earth recorded by a satellite in orbit on purchase intention of eco-friendly products is intensified by the moderator effect of subjective norms, perceived behavioural control and environmental self-identity. At last, model 2 proved that the exposure to a video of the Earth recorded by a satellite in orbit does not have a direct effect on neither willingness to pay more nor purchase intention of eco-friendly products.

Final study – Phase 2

The aim of Final study - phase 2 is to validate the findings of phase 1 and extend its model.

The research will be conducted taking into account previous findings and proposing a new model adding a new variable in the relationship.

First of all, a literature review for the new variable will be provided. Thus, two theorical models will be proposed and hypotheses formulated; furthermore, the research's methodology will be explained, the analysis' results exposed, and findings explained. Finally, theorical and managerial implications will be discussed, and conclusions drown.

The new added variable is "Attitude towards eco-friendly products", Ajzen (1991) defines attitude as: "the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question". It can be defined as an individual's positive/negative evaluation of the performance of particular behaviour (Ajzen and Fishbein, 1980).

The other variables used in this study are some of the previous one (purchase intention, word-of-mouth and willingness to pay more for eco-friendly products).

As before, two models were developed, one for each dependent variable (word-of-mouth and willingness to pay more).

For the first model, a mediation model was proposed. word-of-mouth of eco-friendly products was considered as dependent variable and the condition was treated as independent variable; this relationship was mediated by two variables: the condition was proposed to be mediated from Attitude towards and then from Purchase intention of eco-friendly products (see Fig XX for further explanation).

For the second model, a mediation model was proposed. Willingness to pay more for eco-friendly products was considered as dependent variable and the condition was treated as independent variable; this relationship

was mediated by two variables: the condition was proposed to be mediated from attitude towards and then from Purchase intention of eco-friendly products (see Fig XX for further explanation).

The manipulation was not changed from the previous study, a brief recap is here reported.
In the first step of the survey, respondents watched a 1-minute length video of the Earth from space, recorded by a satellite in orbit.
After the video, respondents were randomly exposed to one of the two visual stimuli:

- A plastic water bottle;
- A 100% recycled plastic water bottle.

The rest of the survey was exactly the same for all respondents.
Data for Final Study – phase 1 were collected through an online survey created on Qualtrics. The final dataset was made up of 521 respondents.
Chronbach's α and Principal Component Analysis (PCA) were conducted to test reliability of the scales and them latent constructs. Different multiple linear regressions have been computed to test the hypotheses.
According to the proposed model 1, it proved that the exposure to a video of the Earth recorded by a satellite in orbit positively influences the word-of-mouth of eco-friendly products through first the mediation effect of attitude towards and then through the mediation effect of purchase intention to eco-friendly products. Model 1 also proved that the exposure to a video of the Earth recorded by a satellite in orbit does not have a direct effect on neither word-of-mouth nor purchase intention. At least model 1 proved that there was no mediation effect of attitude towards eco-friendly products in the relationship between the condition and word-of-mouth of eco-friendly products.
According to the proposed model 2, it proved that the exposure to a video of the Earth recorded by a satellite in orbit positively influences willingness to pay more for eco-friendly products through first the mediation effect of attitude towards and through then the mediation effect of purchase intention to eco-friendly products. Model 2 also proved that the exposure to a video of the Earth recorded by a satellite in orbit does not have a direct effect on neither willingness to pay more nor purchase intention. At least model 2 proved that there was no mediation effect of attitude towards eco-friendly products in the relationship between the condition and willingness to pay more for eco-friendly products.

Managerial implications

The marketing discipline is often accused of the creation of unsustainable patterns of consumption and a hedonistic lifestyle without limitations that affect and damage the environment (Abela, 2006). That is why, nowadays, the implementation of the principles of sustainable marketing is very important for the differentiation of and building a positive brand image of a company and products in the marketplace.
This research offers a new approach to improve the effectiveness of these strategies. The results of this research indicate that processes of developing sustainable strategies should take in account the possibility to exploit

consumers' attitude towards and purchase intention to eco-friendly products, in order to improve their positive word-of-mouth and willingness to pay more for eco-friendly products.

In the short term and at strategic level, marketing managers should, first of all, target consumers who have shown higher sustainable subjective norms, perceived behavioural control and environmental self-identity with new marketing strategies, implementing visual stimuli of the Earth in order to intensifies their purchase intention to eco-friendly products and, through it, their positive word-of-mouth of eco-friendly products (Final study – phase 1). Furthermore, marketing managers and adverting designers should implement visual stimuli of the Earth targeting consumers who have shown higher positive attitude towards and purchase intention to eco-friendly products, in order to exploit their mediator effects on positive word-of-mouth of eco-friendly products (Final study - phase 2). Finally, marketing managers should implement visual stimuli of the Earth in marketing strategies for premium-prices for eco-friendly products, targeting consumers' who have shown high attitude towards, in order to increase their willingness to pay more for eco-friendly products and the success of products themselves (Final study – phase 2).

In the short term and at operating level, from the moment that consumers who visit eco-friendly retailers and eco/bio department store should have higher attitude towards eco-friendly products, managers should implement visual stimuli of the Earth in their physical store, especially in sections much more dedicated to sustainable products, in order to increase their customers' willingness to pay for eco-friendly products (Final study – phase 2) and the success of those products.

In the long term and at institutional level, sensibilization campaigns with the aim of increase consumers' attitude towards eco-friendly products, sustainable subjective norms, perceived behavioural control and environmental self-identity should be developed in order to bring people to stimulate their sustainable behaviors through Earth's visual stimuli (Final study – phase 1 and 2).

Limits and future researches

The first limit of the present research to take in account is the limit of self-reporting, especially in the green context that often does not provide trustful data; for this reason, future researches are recommended to perform the measurement in controlled and safe environment.

Furthermore, the limit of the manipulation through an online survey and the impossibility to really test the reaction in the consumers' brain to the visual stimulus address future researches to provide tools for a more powerful and engaging manipulation (e.g. Virtual Reality) and to exploit methods of tracking for effective exposure and attention (eye tracking), physical response (galvanic skin response) and mental and emotional response (ECG and fMRI).

Another limit of the present research is that just few control conditions have been tested (Earth's picture with steel water bottle and Earth's video with plastic/recycled-plastic bottle; for this reason, future researches are recommended to test different combinations of control conditions.

One last limit to the developed theory could be represented by the attidude-behaviour gap: while exploring green purchase behaviour, many studies have reported a discrepancy or "gap" between consumers' expressed favourable attitudes and actual purchasing practices (Tanner and Kast, 2003; Vermeir and Verbeke, 2006; Vermeir and Verbeke, 2008). This discrepancy or gap between consumers' favourable attitude towards, and actual purchase behaviour of green products is referred to as 'green purchasing inconsistency' or 'green attitude-behaviour gap'. It signifies that consumers' positive attitude towards green products does not always translate into action.

Hughner (2007) found that while many consumers showed a positive attitude towards purchases of organic food products (67%), only a small number of consumers (4%) actually purchased those products. Similarly, a research shows that 52% of consumers were interested in purchasing "earth-sustainable" foods but did not purchase those foods owing to the perceived barriers of lack of availability, inconvenience, price, habit and trust (Robinson and Smith, 2002).

Different explanations have been suggested for the gap between the positive attitude of consumers and their actual purchase behaviour, one of the most accreditate one, regarding the green context, is the "delayed reward" factor. It is often said that, in order to preserve the Earth's environment, we must change from shot-term thinking to long-term thinking (Artbuthonott, 2010). The delay of gratification has implications for environmental behaviour in many of temptations that promote environmentally degrading actions, such as overconsumption or fossil fuel use. Vlek (2000) described environmental costs as long-term, complex, and uncertain, in contrast to personal and societal benefits of overconsumption, which are immediate, simple, and certain. Findings about the delay of gratification are particular problematic for environmental issues, because the beneficial results of many sustainable behaviour changes are likely to be extremely delayed, given the recovery rate of ecosystems.

Conclusions

The first aim of this research was to prove the arise of the overview effect and its influence on purchasing and usage of eco-friendly products. Results confirmed that the exposure to an Earth's visual stimuli determines higher word-of-mouth and willingness to pay for eco-friendly products. Finally, this research provides useful starting points for further investigation on the overview effect itself and its relationship with the "green" context; from an economic point of view, this research provides useful insight for companies that target, or want to, green consumers.