Personality Traits and Prosocial Behavior:

How Subjective Characteristics May Impact

on Consumption Habits

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SUMMARY

CHAPTER 1

1.1 A DESTRUCTING SPECIES

Starting from the 20th century, the human being experienced a tremendous growth, thanks to the introduction of the first automated technologies in the industrial sector (such as the first production chain invented by Ford for mass scale production), along with the huge improvements that such innovations gave to the quality of life. The peculiar characteristic of such innovations, with respect to the ones introduced up to the end of the 19th century, relies on their incredibly high growth rate: just think to the fact that a smartphone today is more powerful and reliable than all the electronic features of the shuttle that brought Armstrong on the moon in 1969. Parallel to technological innovations, thanks to which boundaries and borders became always more irrelevant, mankind gave birth in the last sixty years to a phenomenon that is known as globalization: it could be defined as the process of international integration arising from the interchange of world views, products, ideas, and other aspects of culture. If for certain aspects this phenomenon brought great improvements in the everyday life of those living in the most developed countries, on the other hand it also created several worries and issues that still today are at stake: the disappearing of originality in the production process, the always more precarious working conditions in less developed or emerging countries, the loss of human capital needed for production given by automated technologies and a lot of other environment-related issues. Because of the nature of this research, we will focus on those issues that are attempting to the wealth of our precious and delicate ecosystem. The Asahi Glass Foundation, in occasion of the Round Table Conference for Environmental Problems held in 2010, prepared a very detailed report to summarize issues and further material for discussion. Think for instance to the ongoing destruction of the amazon rainforest, known as "the lungs of the hearth" since it produces more than 40 percent of the oxygen present on our planet, given by the increasing demand for wood, the need for areas to be dedicated to pastureland and farmland, and the so-called "slash-and-burn" agriculture. Deforestation, moreover, is just a

ring of the chain, from which a lot of other environmental-related issues are arising. The accelerated loss of biodiversity for example, is becoming a real worry: because of the deforestation and the increasing rate of pollution, we are now entering in what the experts call the sixth mass extinction period. It is distant 65 million years from the fifth mass extinction period, the one in which the dinosaurs disappeared from the earth, but differently from the past periods, the sixth is the only one caused by the human being, with the result that the actual rate of extinction is about a thousand times faster than the previous ones, meaning that 40'000 species every year become extinct. Another issue currently at stake and than is supposed to become even more severe in the next decades according to the Asahi Foundation's report, is the scarcity and the disappearance of water resources. A sad example is the Aral Sea (the fourth largest lake in the world, filled with salty water) which lies between Kazakhstan and Uzbekistan: during the 50s, the former Soviet Union started an irrigation project aimed at diverting the Amu Darya and the Syr Darya, the two rivers that used to drain in the huge salty lake, in order to irrigate the desert to produce wheat and cotton. Even if the production of such products increased enormously in the years following the introduction of the project, starting from the 60s the amount of water in the lake started to drop dramatically.

Fig. 1 *The Aral Sea in 1989 and 2008 (SOURCE: Wordpress.com)*

As it happened in other similar circumstances, it's crucial to keep in mind that "the depletion of water resources generates a vicious circle": here, as the water level lowered,

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rainfall decreased, causing desertification around the lake area. Moreover, the salt concentration in the lake got higher, and so the cotton fields began to suffer. As an overall result, what at the beginning seemed the clear example of the mankind's ability to turn the natural flow of resources to its advantage, ended in the disappearance of more than 70 percent of the lake, desertification, destruction of fields, abandonment of the area by its former inhabitants because of the frequent sandstorms and the collapse of the local fishing industry. The Aral Sea is just one of many similar disaster all around the globe. Other cases of natural disasters caused by man are: the depletion of fossil fuels, enlarged by destructive techniques of perforation, the rapidly increasing energy consumption together with the dismantling of energy-related wastes, and global-warming-related problems such as melting of the arctic ice and decrease of precipitations, which translates into a real disaster in those areas where precipitations are historically low. To give an idea of the damages mankind has made so far, let's analyze the so-called "Trend in the Ecological Footprint of Humankind" supplied yearly by the notorious NGO WWF: it is an important indicator of the world environmental impact of human activities, which compares the amount of natural resources used by mankind and the capacity of our planet to absorb humans' activities and to regenerate resources.
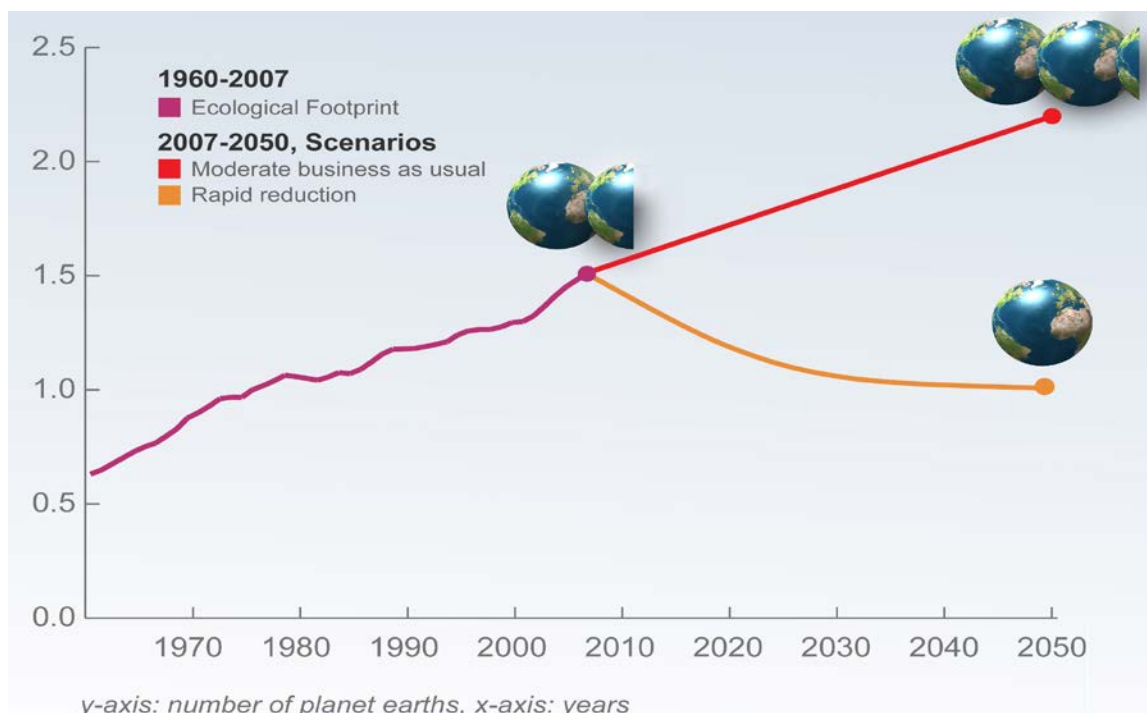

FIG. 2   *(SOURCE: footprintnetwork.com)*

The figure shows that now, the human being is consuming resources for whose regeneration and preservation would be required one and a half planets Earth, and so that by the half of the 1980s, humans started to consume, in term of natural resources, more than the amount that the Earth is able to regenerate. To simplify, it means that nowadays, in less than six months, we consume the amount that the planet is able to regenerate within a year, and for the remaining six months, we disrupt resources that won't be able to regenerate due to our massive, uninterrupted and unsustainable consumption.

As a result, by the end of that decade in which mankind realized it was killing its planet, an idea and a feeling of sustainability and "smart-consumption" began to spread all over the globe.

1.2 THE NEED FOR SUSTAINABILITY AND THE GREEN ECONOMY

Hence, starting from the mid 80s, the economic world started to organize in order to provide always more and more "eco-consumers" with the environmental-friendly and sustainable goods and services demanded. This decade, as stated by Peattie and Crane (2005), signs the beginning of the green marketing era. This new concept was defined in 1999 by Charter and Polonsky as "the marketing or promotion of a product based on its environmental performance". Banerjee, Gulas, and Iyer (1995), define green marketing as "meeting any one or more of the following characteristics: It addresses the relationship between the product or the service and the environment, it addresses a green lifestyle (whether promoting a specific product/service or not), or it presents the corporate image as environmentally friendly and/or responsible. Yet green advertising is multidimensional". More broadly, is the marketing of goods and services pivoted on the green and sustainable characteristics of the product, and on the benefits that the latter brings to both the consumer and the surrounding environment. Lee (2008), classifies the phenomenon of green marketing into seven specific categories to which the campaigns could be addressed:

- *General green products*. May refer to those products generally referred to as "ecological" or to those produced respecting the working conditions of employees and the ethical values of fair trade.

- *Recycled paper products*. Products produced using paper wastes and other carpentry-related wastes to minimize the use of resources and the demand for trees.

- *Products not tested on animals*. Goods, usually related to personal healthcare, not tested dermatologically.

- *Environmental-friendly products*. Any kind of bio-degradable product.

- *Organically-grown products*. Fruits or vegetables produced without the use of chemical pesticides.

- *Ozone-friendly products*. Goods whose functioning minimizes the emissions of CO_2.

- *Energy-efficient products*. Goods whose functioning minimizes energy consumption.

For the first time in human economic history, companies had to move their priorities, and range of benefits offered by their product, from a "consumer-centric" view to a broader dimension composed by consumers and the environment surrounding them. The path of green marketing and advertising, anyway, had to be discovered and, most important, studied, in order to understand what kind of communication was needed to reach a customer's mind.

As conceptualized by Lee (2008) green marketing passed through three different stages from its first appearance: the first stage, the dawn of this new concept, is the decade starting from the mid 80s. In this stage, marketers and producers tried to capture the growing enthusiasm and curiosity for this new way of living by addressing general consumers with their green offers. However, marketers bright expectations weren't fulfilled with concrete results. The second stage began in the mid 90s when marketers started to experience a backlash (Wong et al. , 1996) . Is among this first two failing stages of green marketing that producers and marketers realized that there was a gap between intentions showed by customers and actual behaviors, and that purchasing intentions hardly translated into actual purchasing decisions. More in details, Peattie and Crane (2005)

identified several reasons why this first stages failed to reach the desired results in terms of sales and profits:

– *Green Spinning*. Taking a reactive approach by using public relations to deny or discredit the public's criticisms against the company's practices.

– *Green Selling*. An opportunistic approach aimed at "fooling" the consumers by adding some green claims and sustainable features to existing products to increase sales and profits.

– *Green Harvesting*. Being green and prosocial only when it would result in cost savings, as for instance in terms of consumption, taxes reduction and so on.

– *Entrepreneur Marketing*. Developing sustainable and eco-friendly products based only on the producer's perception of what green means, without really getting in touch with consumers' needs and wants.

– *Compliance Marketing*. Using mandatory compliance with environmental regulations as an opportunity to promote the company's "green orientation" without really going beyond responding to regulations.

Since the early 2000s, green marketing evolved into its third and final (and still actual) stage, in which many green products, thanks also to more advanced technologies aimed at detecting always more precisely the unconscious needs and wants of consumers, such as neuromarketing techniques like fMRI or SSD, regained consumers confidence and loyalty.

Moreover, the whole concept of green marketing developed at first, obviously, because of the newborn and growing demand for green products driven by a more eco-targeted way of thinking. The movement we are referring to was conceptualized with the name of "green consumerism": Strong (1996) states that from the mid 90s "consumers started to become more and more environmentally and socially aware", and critical consumers became a growing force of green consumerism during an historical period in which customers started to openly request social responsibility from corporations (Gurau and Ranchhod, 2005). Still according to Strong (1996), green consumers are the ones that avoid any product that is

likely to endanger the health of individuals, as much as the environment during the production process, or that are likely to consume an unnecessary amount of energy or to produce an abnormal amount of waste, especially if the these waste are toxic or dangerous, or to harm to the health of other species or animals. Moreover, the concept of green consumerism further modified starting from the early 2000s, years in which an even broader consumption concept arose: the "ethical consumerism". This concept refer to a buying behavior associated with consumers concerned with those problems related to the unfair working conditions of workers along the whole productive chain, such as low-paid and child labour, reluctancy in the enforcement of human rights, unjust and unequal economic relationships with Third World or developing countries or labour union suppressions (Uusitalo and Oksanen, 2004).

This stable growth and evolution of the concept of green consumerism, marketers started to develop and enforce what is called "sustainability marketing": it refers to building and maintaining sustainable relationships with customers, the social and the natural environment (Charter and Polonsky, 1999). Or, using the definition given by Fowler et al. (2012) of the different agendas formerly explained, it is the simple marketing of green products deprived of the micro-level agenda of green advertisers that uses green claims to improve sales and profits.

1.3 A DEEPER INSIGHT

As we saw in the previous paragraphs, in the last three decades, researchers and academics has focused on the study and the analysis of the *green movement*, focusing especially on the connection between attitudes, knowledge and perceptions and actual behaviors. What emerged since the first studies, is the presence of what as been defined as "green-gap": Fowler et al. (2005) define such gap as the difference between what a consumer intend is a green or eco-friendly lifestyle and how he or she actually live. Is the difference between a person's intention to go green and to consume in a prosocial fashion and the way in which

such person behave in everyday life. The Global Online Environmental and Sustainability Survey reveals that although almost 83 percent of the interviewed sample agrees on the fact is important to implement activities and programs to protect the environment, only 22 percent would pay a premium to buy something labelled as eco-friendly. According to McNally (2011), much of this gap reflects the cost premium associated with a sustainable consumption, even if it's unclear whether this is a perceived or an actual cost premium. Even if on this topic little research has been done so far, an interesting finding comes from Black and Cherrier (2010), who found that such gap is not only the result of a resistance to the cost premium or quality associated with green products, but might also be linked to the fact that the range of green and sustainable products, do not "provide diversities of practice that are sufficiently flexible to allow for self-expression". Hence in some cases, the gap might be given by the reluctancy of a consumer to homologate to a pre-determined model driving consumption habits. Green advertising, as a result, had always been focused on trying to fill this gap from its first stage in the 80s, but without meeting the desired expectations: as explained by Fowler et al. (2012) this gap might be the result of diverging beliefs and agendas for consumers on one side, and for marketers and companies on the other. More in details, those differences pertain to the *macro-level agenda* of green advertisers seeking the salvation of the planet as a whole, the *micro-level agenda* of green advertisers that use green claims to boost sales, and the *micro-level agenda* of green consumers who are trying to save only their little portion of the planet, the one in which they live or work (Fowler et al. 2012). More broadly, using the reasoning presented by Gupta and Ogden (2008), the green gap could be seen as a social dilemma which is presented to the customer: for a restricted group of consumers, defined "true believers" (with respect to the issue of protection and preservation of the natural environment), the personal importance of the environmental

issue is likely to ensure unconditional participation. The vast majority of consumers anyway, despite their potential green-oriented attitude, make purchase decisions seeking for self-interest maximization, since the "costs of cooperation outweigh the uncertain utility obtained from it". Therefore, the decision to buy (collective social gain) or not buy (self-interest) could be conceptualized as a social dilemma (Gupta and Ogden, 2008)

These are basically the most important findings on the issue of *green gap* found so far.

Moreover, it's easy to find concrete evidences of this phenomenon in some of the most important recent studies conducted by the EU or other private companies.

The first report has been submitted by Eurobarometer, which is a series of public opinion surveys and analysis conducted regularly on behalf of the European Commission since 1973. It has been published on july 2013 with the title "Attitudes of Europeans Towards Building the Single Market for Green Products". Even though the report comprises 27 sections, each regarding one of the member state of the EU plus a summary with the overall data for the whole Union, we will analyze only the ones referring to Italy and on the entire Union in order to make a comparison between the two to detect possible anomalies or trends.

Before analyzing consumption trends, let's first of all look at the consciousness of Italian and EU citizens with respect to environmental issues, and the main reasons why they think sustainability-driven consumption should be adopted
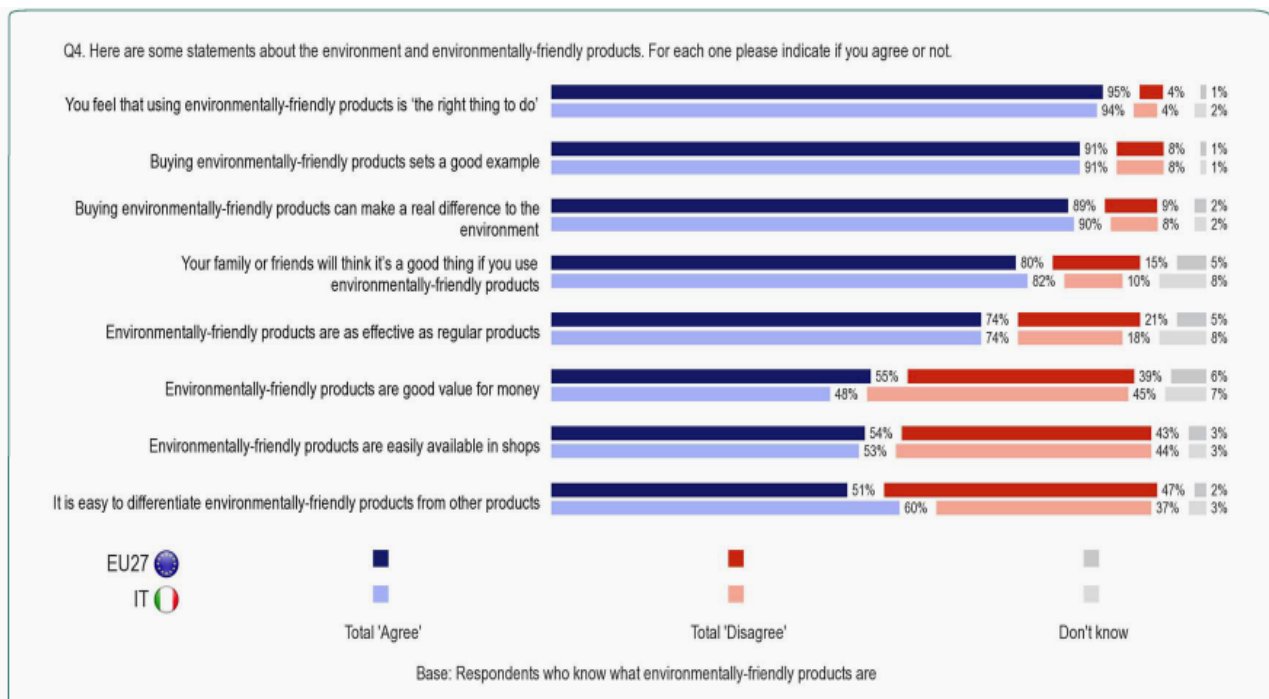

FIG. 3 *Reasons for Buying Green Products (SOURCE: Eurobarometer - EC)*

To give an idea of how big the *green phenomenon* is, let's rely on the fact that 95% of EU

consumers are aware of the fact that green products are "the right things to purchase". This first statement represents a strong evidence of how much EU citizens are informed about the green issue. If 95% of EU consumers believe that "going green" is the right thing to do, it implicitly means that 95% of buyers (and hence a huge share of EU total citizens) are already aware of the damages caused by mankind and of environment-related issues. Broadly speaking, this means that europeans present a deep consciousness and therefore a positive attitude toward consuming green products, and that, relying only on this statement, it would be likely to crosscheck a widely spread sustainable behavior around the whole Union. By scrolling down the subsequent statement, by the way, as long as the *reasons to go green* move from an ideological, almost philanthropic, aspect to more practical ones, it's easy to notice how the percentage of consumers willing to purchase green products for that reason tends to decline, as if consumers suddenly became aware during the survey that what they are really looking for is not something that would make them appear more eco-conscious, but rather something that maximizes their utility (theory of social dilemma). Is not easy to explain why 95% of consumers think that going green is the right thing to do, but then only 89% of total consumers thinks that a sustainable consumption would really make a difference for the environment. Moreover, even if there's such a large share of consumers that knows exactly why they should buy green products, 20% of them still perceive such products as less effective than their regular counterparts.

Let's now analyze how and if all those reasons mentioned above translate into actual buying behavior. The other set of questions surveyed by Eurobarometer is therefore aimed at detecting how a potentially positive attitude implicates a precise set of actions, hence how much coherent are a person's beliefs with the way in which he or she actually lives.
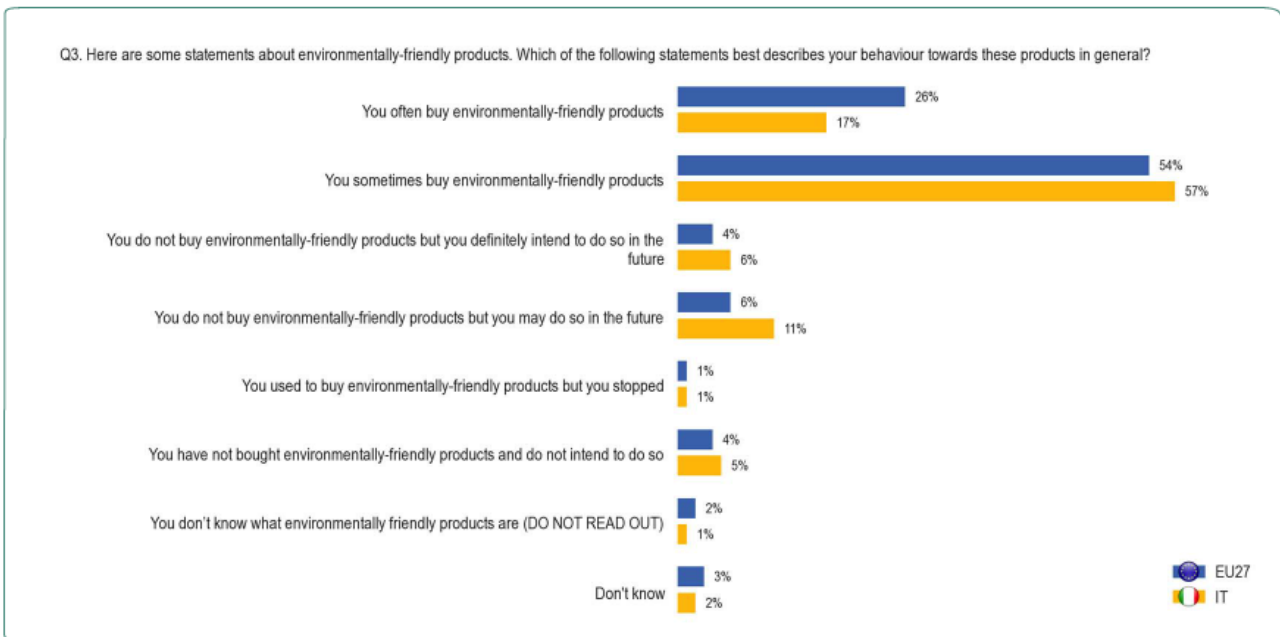
FIG. 4 *Behaviors and Attitudes Toward Green Products (SOURCE: Eurobarometer -EC)*

The first impression, suddenly reveals how low is the percentage of *true believers,* to use Gupta and Ogden's terminology, compared to the one showing consumers with a positive attitude toward green consumption that we've seen before. Some might argue that the percentage of green products purchasers should also encompass, partially or completely, the share of those who "sometimes" buy green products, but if we think about it, given the wide range of products and their related alternatives, and in particular given the ease with which the words *green*, *ecologic*, or *sustainable* are used, hence also including all those firms unfairly taking advantage of such words by using them as a means to boost sales, who doesn't *sometimes* buys any green product? Probably nobody. Paradoxically, it would be harder not to buy anything that has a green attribute on its package rather than doing it *sometimes*. Therefore, we will rely on this reasoning while analyzing this data even if it's likely that the percentage of *true believers* should actually be a bit higher.

Hence we see that the percentage of those regularly consuming green products, is more or less one fourth with respect to the ones believing that going green should be the norm. another evidence that supports and confirms the existence of an attitude-behavior gap, is given by the fact that a rough 20% of EU consumers is not a green purchaser, moving from "late-adopters positions" (intentions to begin to consume sustainably in the future), to more radical ones in which no intentions to *go green* are shown.

Furthermore, an aspect that requires to be analyzed for the consistency and relevance of

our study, are the differences between Italian consumers as opposed to the EU average.

For what regards the consumer's attitude (FIG. 3) we see that the differences are not particularly relevant, and hence the italian consumer tends to align its positions with the ones showed by its european counterparts. What seems to differ, instead, is the actual purchasing behavior: first of all, the percentage of *truly believers* drops by 9 percentage points (which is a quite large difference out of a EU average of 26%), while it's larger the percentage of those who *sometimes* buy green products and of those convinced that they will adopt a more eco-oriented behavior. The reasons for these divergences may be vary: a lower consumption of green products might be the result of the ongoing economic crisis, which has been and still is particularly harsh, since one of the disadvantages of green products is actually their higher price. Another reason might be the tendency of Italians to adhere more than other EU people to the topic of the survey, which would explain why the attitude shown is more or less the same as the EU average while in behavioral terms Italy shows an higher portion of those that could be defined as *fake* (or *not-deeply-convinced*) *believers.*

Anyway what is certain and immediately evident in both cases is the presence of a large attitude-behavior gap.

The theory of the attitude-behavior gap, what we've also referred to as green gap, refers exactly to this situation, in which almost the total of all Italian and EU consumers shows a positive attitude toward green products consumption, but then only a restricted portion of consumers regularly purchases green products.

Now, the questions that comes along with these evidences are: how to overcome, or to reduce, such gap? Once we've seen that, clearly, the vast majority of consumers is already conscious of the need for a more sustainable consumption, how is then possible that green products are still so lowly appealing to regular customers? What should marketers and policy makers do in order to augment the enforcing of a sustainable behavior?

In the next chapters we will first see what has been done so far in the behavioral field,

emphasizing in particular the analysis of personality traits as good predictors of a person's behavior, and how the study of such traits should reveal any potential answer to the questions outlined above. The aim of this paper, indeed, is to reveal, through the use of a survey, if there's any link between a person's positive attitude to go green and its personality traits, and hence how policy makers and marketers should address their messages and policies in order to reduce the attitude-behavior gap shown so far.

CHAPTER 2

2.1 THE EXTENSION OF THE SELF

RELATED TO A CONSUMER'S PERSONALITY TRAITS

Let's now try analyze and to understand which is the relationship between a consumer and the product he's buying, or how such consumer relates himself with what he's purchasing. When we refer to green products, or to all those brands producing sustainable goods or services, we must take into account some phenomena that occur regularly between what is going to be bought and the person who's performing the transaction.

Just to give an idea, try to think for instance at the concept of *brand love*. Batra, Ahuvia and Bagozzi (2012) define brand love as a bi-dimensional phenomenon: brand love as an emotion, which like all the other feelings is specific, short-term and episodic, versus brand love as a relationship, which involves numerous cognitive, affective and behavioral experiences. According to their study, brands, as well as particular kind of products like the ecological or sustainable ones, are preferred or even loved when they are able to connect with their customers at a deeper level, touching their feelings and emotions, or, as in our specific case, by representing or standing for something that the individual identifies as higher. The reason why I used the term individual instead of customers is because by evidences, as the case of *brand love* suggests, individuals do not only purchase in order to maximize a given utility, as it might happen I some cases, but rather in order to express themselves.

Now, if there are cases in which a person feeling and perceptions about a given brand or product (as in our case) improves the chances that such brand or product will be chosen, should we theorize there exist similar set of phenomena involving a real consumer and a lifestyle?

This further let us approach the question of this study, because it's clear that individuals

express themselves, their feelings and their beliefs through the acquisition of products, and therefore, possession. Indeed, is quite impossible to investigate on the sources and the determinants of a particular buying behavior without first analyzing and understanding the deeper relationship that consumers establish with what they purchase.

Possession is generally defined as the dominion over, and exclusive control and use of an object. In the field of social studies, however, the notion of possession related to anthropological features, hence to an individual's personality, has been widely studied: according to Van Esterick (1986), Feirstein (1986) and Rosenbaum (1972), "we are what we have". An even more precise explanation of this concept is given by Tuan (1980), according to who our self is so fragile that it necessarily needs support, which comes from having and possessing things, and hence to a certain degree we are what we have and possess. According to Tuan the s*elf* is our inner part, our soul, to some degree, what we truly are, believe and feel. For Schultz et al (1989) possessions involve many actions in people's self-development tasks at various level: *affiliation possessions*, the ones related to interdependent *self* where people establish interpersonal connections in a given group, or society, through shared meanings; *autonomy possessions*, associated to the independent self, the sphere in which people seeks autonomy from others trying to adopt and to maintain an original and personal identity; and *temporal orientation*, which identifies the moments in individuals' lives when possession is used to characterize a person's identity, as in the case for instance of a young couple trying to create some kind of shared history through purchases and hence possession.

In all of this past researches, authors agree in identifying possession as something that characterizes the individual and that, to some extent, *extends* its personality. Belk (1988) properties and objects in our possession can literally extend the *self*, as this allows us (as in the case of a tool or a weapon) to do things that we could have never done with our natural resources. Very important, for Belk, is the relationship among *having*, *doing* and *being*. If we think for instance at the case of a weapon, much of its power on a person's self is not actually what it does, but rather what it's able to do, in the sense that our possessions can impact on the sense of *self*, and hence "*having* possession can contribute to our capabilities of *being* and *doing*. According to Sartre (1943), doing is simply a

transitional state or manifestation of the deeper desire to have or to be something in particular. This means that for Sartre, *having* and *being* means something inseparable, something that merges together in the exact moment when an object becomes possession.

Moreover, still according to Belk (1989) and Sartre (1943), there are different ways in which a product could be considered and defined as an extension of one own's *self*:

- through purchase, since by choosing a given product instead of another, we are reflecting and communicating something about us, might that be our personality or our actual situation and mood.

- Through the creation of an object or product, since that product is (supposedly) the realization and the manifestation of something that has been first created in our mind, and then in the *outer* world. The reason why the term "supposedly" appears above is because we have to keep in mind that possession by an individual over a self-constructed object in this case requires not to be seen in marxist terms involving the deprivation of the possession rights over an object in a capitalistic optic.

- Through knowledge of an object, since according to Sartre, knowing the object is inspired by a carnal (even sexual, since in interpersonal relationships *knowing* often merges with *having,* as for instance for two lovers) desire to have the object. To know an object in fact implies making it a subject, and hence an extension of the *self*.

This three ways through which is possible for an individual to extend its *self* are voluntary, in the sense that are moved and controlled by the individual who performs this extension: cars, fixed properties and clothes are for us what a second skin is for a snake, hence are the ways in which we want to be seen in the outer world, are what our *self* wants to look like on the outside (Solomon 1986, Jager 1983).

Belk (1989), furthermore, adds a fourth category to the three first identified by Sartre, which is the extension of the *self* through contamination: this term is used by the author not in terms of medical contamination, but rather in terms of the symbolic contamination involved in involuntarily incorporating another into one's extended self (see for example the case of teenage girls exchanging clothes and therefore their self and identity, or the case of burying a dead person with its possessions to avoid contamination).

One last evidence supporting the self-extension theory comes from the psychoanalytical field, more precisely from Heinz Kohut (1971) whose reasoning is basically similar to the ones performed by its colleagues in the economic and behavioral field, even if it's seen from a different perspective: according to the psychoanalytical theory, the *self* doesn't necessarily seeks a way to express itself, but rather the individual is the one who seeks the so-called *self-object* in order to revitalize its *self*: the *self-object* in psychoanalysis is an item which might be either tangible (for instance a car) or intangible (as for a job) and which is intimately related to a person's inner feelings, emotions and perceptions. Therefore the *self* is satisfied when it comes in touch with a *self-object* through which it's revitalized. If a car has a deeper meaning for the individual (a status-based significance like a sport car , or any emotional-based meaning) then the its *self* will be satisfied (in our case would be *extended*, in the sense that it would constitute an inner revelation about a person's inner characteristics), if instead the car doesn't really mean anything special to that person, than the object cannot be said to be a *self-object*, but rather, in economical terms, the simple and rational maximization of a given utility performed by a consumer through the use of an object. If a given job is the result of a person's ability, capacities and passion, then that job would be an extension of that person's *self*, since it's a *self-object,* but if that job is a simple exchange of professional performances aimed at the satisfaction of a particular need for that person (so the compensation), then the job doesn't express the self of that person, resulting in alienation from that job.

Thanks to all of these evidences, we are now able to investigate whether a given set of perceptions about a particular issue as well as a given set of personality traits can constitute the determinants for the prediction of a given buying behaviors and habits. Once we have established this intriguing relationship between an individual in the society and the set of its past, present and future possessions, we will now see in this study if this relationship might be explicable through the study of a person's personal traits and how, and to which degree, such traits are able to modify or to push a buying behavior targeted at a more sustainable and environmental-preservation-oriented consumption.

2.2 PERSONALITY TESTS AND DIMENSIONS

In order to investigate which are the predictors of a sustainable and eco-targeted buying behavior and consumption, it's key to understand which are the the best techniques nowadays available to determine an individual's personality traits.

H.J. Eysenck (1967) was one of the first to develop a personality test, the so-called *Big Three Personality Test*, which from that moment on became the basis for the development of personality tests that are used currently in a multitude of cases, from companies requiring personality traits assessment techniques in order to make a better understanding of the candidates during the selection process, to researchers who find the tests useful or pertinent to their studies.

In his book, *The Biological Basis of Personality* (1967), Eysenck identifies in what is called the Three Factor Model (TFM) three distinct dimensions of personality, which are:

- *Extraversion* (E)

- *Neuroticism* (N)

- *Psychoticism* (P)

Extraversion (E) was originally associated by Eysenck to the term *arousal,* arguing that extraverts used to show low levels of cortical arousal, while introverts were seen as over-aroused, and, because of their higher arousal, introverts were found to be more susceptible for what implied social relationships and were therefore more "socialized", hence more sensitive to social constraints. This dimension is associated with specif personality traits such as warmth, gregariousness or assertiveness.

The Neuroticism (N) dimension was in principle explained as reflecting the differences in the intensity of emotional experiences, and is closely related to specific traits such as anxiety, hostility or vulnerability.

The last dimension, Psychoticism (P), was subsequently added to the model and is also the only one that do not appear in the recent Five Factor Model (FFM) for personality traits. Indeed, this dimension was added because it was clearly needed another dimension for the model to be sufficiently explicative, but it's also the one explained in the less exhaustive way. The author, in fact, wanted to suggest, at that time, that the dimension explained personality traits related to psychosis just as well as (N) seemed to measure traits related to anxiety and depression. Individuals who are high on psychoticism (P) are considered tough-minded, non-conformist, willing to take risks and potentially to engage in antisocial behaviors.

Later on, after decades of studies from its first appearance edited by Tupes and Christal (1961), Costa and McCrae (1985) finally developed the Five Factor Model as it's known and used today. The FFM is basically developed on the theories of Eysenck, and in fact comprises two out of three dimensions, Extraversion (E) and Neuroticism (N), presented in 1967 in the book *The Biological Basis of Personality* . The Five Factor Model, also known as the *Big Five Model*, developed by Costa and McCrae in 1985 presented the following dimensions:

- Extraversion (E)
- Agreeableness (A)
- Conscientiousness (C)
- Neuroticism (N)
- Openness to Experience (O)

As we can notice, the first two dimensions, (E) and (N), are originally form Eysenck's model. Anyway, is worth to recall their meaning in light of the recent contributions on the issues given by other researchers.

Extraversion (E), is best seen by Costa and McCrae (1989) as located midway between dominance and warmth, given that the tendencies to experience positive or negative emotions are not opposites, but rather "orthogonal dimensions that define an affective

plane" (Watson and Clark, 1984). Individuals low in (E), can be seen as shy, quiet, reserved and withdrawn (John, 1990).

Agreeableness (A), has been defined by Digman (1990) as a dimension encompassing "the more human aspect of humanity", which presents characteristics such as altruism, nurturance, caring and emotional support on one end, and characteristics such as jealousy, indifference to others, hostility and egocentrism on the other. According to Wiggins (1979), Extraversion and Agreeableness together define the Interpersonal Circumplex, a model for the assessment and the conceptualization of interpersonal behaviors, traits and motives, whereof traditional axes are Dominance (or status) and Affiliation (or love).

Conscientiousness (C) as well as (A), represent the classic dimensions of character, opposing *good* with *evil*, and *strong-willed* against *weak-willed* individuals. Indeed, both Conscientiousness and Agreeableness represent "objectively observable dimensions of individual differences" (McCrae and John, 1991). More precisely, according to Hogan (1986), *Prudence* reflects an inhibitive view of (C) as it holds impulsive behavior in check, while *Will to Achieve* represents a proactive view of the Conscientiousness dimension, since it organizes and directs behavior (Digman and Takemoto-Chock, 1981).

The Neuroticism (N) dimension is defined as representing individual differences in both the tendency to experience distress, and in the "cognitive and behavioral styles that follow from this tendency" (McCrae and John, 1991). Individuals scoring an high level of (N) are likely to experience chronic negative feelings and are more exposed to the development of some psychiatric disorders (Zonderman, Stone and Costa, 1989), while individuals low in (N) may be defined as calm, relaxed and even-tempered.

The last dimension is the so-called Openness to Experience, and can be seen " structurally in the depth, scope, and permeability of consciousness, and motivationally in the need for variety and experience" (McCrae and John, 1991). Moreover things such as fantasies, feelings and values are also seen as experiences toward which individuals might be more or less open.

Now that we've seen how the FFM is structured, together with the meanings of the five distinct dimensions, how is it possible to develop a test that would reveal such personality

traits?

In order to collect and to evaluate datas clustered to their dimension, a specific type of questionnaire developed according a Likert scale is often used: the Likert scale is a psychometric scale in which a certain number of subjective-like statements (generally called *items*) is developed, and through which respondents specify their level of agreement or disagreement on a symmetric agree-disagree scale with respect to a given issue. In general, the agree-disagree scale offers between 5-10 possibilities to express the appropriate answer. The following is a scheme in which for each dimension, ten items are offered in order to assess the degree to which an individual may be considered high/low with respect to the five dimensions:

DIMENSION	OUTCOMES	ITEMS (I,He or She)
<u>*EXTRAVERSION*</u>	*outgoing/energetic* vs. *solitary/reserved*	• Am the life of the party • Don't talk a lot • Feel comfortable around people • Keep in the background • Start conversations • Have little to say • Talk to a lot of different people at parties • Don't like to draw attention to myself • Don't mind being the center of attention • Am quiet around strangers
		• Feel little concern for others • Am interested in

AGREEABLENESS	*friendly/compassionate* vs. *cold/unkind*	• people • Insult people • Sympathize with others' feelings • Am not interested in other people's problems • Have a soft heart • Am not really interested in others • Take time out for others • Feel others' emotions • Make people feel at ease
CONSCIENTIOUSNESS	*efficient/organized* vs. *easy-going/careless*	• Am always prepared • Leave my belongings around • Pay attention to details • Make a mess of things • Get chores done right away • Often forget to put things back in their proper place • Like order • Shirk my duties • Follow a schedule • Am exacting in my work
NEUROTICISM	*sensitive/nervous* vs. *secure/confident*	• Get stressed out easily • Am relaxed most of the time • Worry about things • Seldom feel blue • Am easily disturbed • Get upset easily • Change my mood a lot • Have frequent mood swings • Get irritated easily • Often feel blue

		• Have a rich vocabulary
OPENNESS TO EXPERIENCE	inventive/curious vs. consistent/cautious	• Have difficulty understanding abstract ideas • Have a vivid imagination • Am not interested in abstract ideas • Have excellent ideas • Do not have a good imagination • Am quick to understand things • Use difficult words • Spend time reflecting on things • Am full of ideas

FIG. 5 *Author's elaboration of the Big 5 Personality Test (Items' SOURCE: personality-testing.info)*

As we can notice, the statement are generally subjective, or referred to an hypothetical third person since often researchers use a brief history to eliminate biases during the data collection process.

Another important personality test, pertinent to our study, is the so-called Hexaco personality test. Differently from the Five Factor Model of personality, the Hexaco personality test presents six distinct dimensions, each divided into four sub-domains. The structure of the test, by the way, is similar to the FFM in the sense that it uses a Likert scale as well, hence subjective-like statements in which respondents assess a certain degree of accordance with respect to each of them. The developers of this test are Lee and Ashton (2004, 2009) who starting from the early 2000s developed two version of the Hexaco test, one with 60 items and another one with 100 items. For the purpose of our research, we will refer to the 60 items Hexaco test.

Let's now define the Hexaco personality test's six dimension and relative sub-domains, as explained in the official Hexaco test website by its authors:

- *Honesty/Humility (H)*: persons with very high scores on the Honesty-Humility scale avoid manipulating others for personal gain, feel little temptation to break rules, are uninterested in lavish wealth and luxuries, and feel no special entitlement to elevated social status. Conversely, persons with very low scores on this scale will flatter others to get what they want, are inclined to break rules for personal profit, are motivated by material gain, and feel a strong sense of self-importance. This dimension's sub-domains are

    - *Sincerity*, which assesses a tendency to be genuine in interpersonal relations. Low scorers will flatter others or pretend to like them in order to obtain favors, whereas high scorers are unwilling to manipulate others;

    - *Fairness*, which assesses a tendency to avoid fraud and corruption. Low scorers are willing to gain by cheating or stealing, whereas high scorers are unwilling to take advantage of other individuals or of society at large;

    - *Greed Avoidance*, which assesses a tendency to be uninterested in possessing lavish wealth, luxury goods, and signs of high social status. Low scorers want to enjoy and to display wealth and privilege, whereas high scorers are not especially motivated by monetary or social-status considerations;

    - *Modesty*, which assesses a tendency to be modest and unassuming. Low scorers consider themselves as superior and as entitled to privileges that others do not have, whereas high scorers view themselves as ordinary people without any claim to special treatment.

- *Emotionality (E)*: persons with very high scores on the Emotionality scale experience fear of physical dangers, experience anxiety in response to life's stresses, feel a need for emotional support from others, and feel empathy and sentimental attachments with others. Conversely, persons with very low scores on this scale are not deterred by the prospect of physical harm, feel little worry even in stressful situations, have little need to share their concerns with others, and feel emotionally detached from others. The *emotionality*'s sub-domains are

    - *Fearfulness*, which assesses a tendency to experience fear. Low scorers feel

little fear of injury and are relatively tough, brave, and insensitive to physical pain, whereas high scorers are strongly inclined to avoid physical harm.

- *Anxiety*, which assesses a tendency to worry in a variety of contexts. Low scorers feel little stress in response to difficulties, whereas high scorers tend to become preoccupied even by relatively minor problems.

- *Dependence*, which assesses one's need for emotional support from others. Low scorers feel self-assured and able to deal with problems without any help or advice, whereas high scorers want to share their difficulties with those who will provide encouragement and comfort.

- *Sentimentality*, which assesses a tendency to feel strong emotional bonds with others. Low scorers feel little emotion when saying good-bye or in reaction to the concerns of others, whereas high scorers feel strong emotional attachments and an empathic sensitivity to the feelings of others.

- **eXtraversion (X)**: persons with very high scores on the Extraversion scale feel positively about themselves, feel confident when leading or addressing groups of people, enjoy social gatherings and interactions, and experience positive feelings of enthusiasm and energy. Conversely, persons with very low scores on this scale consider themselves unpopular, feel awkward when they are the center of social attention, are indifferent to social activities, and feel less lively and optimistic than others do. This dimension's sub-domains are

  - *Social Self-Esteem*, which assesses a tendency to have positive self-regard, particularly in social contexts. High scorers are generally satisfied with themselves and consider themselves to have likable qualities, whereas low scorers tend to have a sense of personal worthlessness and to see themselves as unpopular.

  - *Social Boldness*, which assesses one's comfort or confidence within a variety of social situations. Low scorers feel shy or awkward in positions of leadership

or when speaking in public, whereas high scorers are willing to approach strangers and are willing to speak up within group settings.

- *Sociability*, which assesses a tendency to enjoy conversation, social interaction, and parties. Low scorers generally prefer solitary activities and do not seek out conversation, whereas high scorers enjoy talking, visiting, and celebrating with others.

- *Liveliness*, which assesses one's typical enthusiasm and energy. Low scorers tend not to feel especially cheerful or dynamic, whereas high scorers usually experience a sense of optimism and high spirits.

- **Agreeableness (A)**: persons with very high scores on the Agreeableness scale forgive the wrongs that they suffered, are lenient in judging others, are willing to compromise and cooperate with others, and can easily control their temper. Conversely, persons with very low scores on this scale hold grudges against those who have harmed them, are rather critical of others' shortcomings, are stubborn in defending their point of view, and feel anger readily in response to mistreatment. The agreeableness dimension's sub-domains are

  - *Forgivingness*, which assesses one's willingness to feel trust and liking toward those who may have caused one harm. Low scorers tend "hold a grudge" against those who have offended them, whereas high scorers are usually ready to trust others again and to re-establish friendly relations after having been treated badly.

  - *Gentleness*, which assesses a tendency to be mild and lenient in dealings with other people. Low scorers tend to be critical in their evaluations of others, whereas high scorers are reluctant to judge others harshly.

  - *Flexibility*, which assesses one's willingness to compromise and cooperate with others. Low scorers are seen as stubborn and are willing to argue, whereas high scorers avoid arguments and accommodate others' suggestions,

even when these may be unreasonable.

- *Patience*, which assesses a tendency to remain calm rather than to become angry. Low scorers tend to lose their tempers quickly, whereas high scorers have a high threshold for feeling or expressing anger.

- **Conscientiousness (C)**: persons with very high scores on the Conscientiousness scale organize their time and their physical surroundings, work in a disciplined way toward their goals, strive for accuracy and perfection in their tasks, and deliberate carefully when making decisions. Conversely, persons with very low scores on this scale tend to be unconcerned with orderly surroundings or schedules, avoid difficult tasks or challenging goals, are satisfied with work that contains some errors, and make decisions on impulse or with little reflection. The relative sub-domains are

  - *Organization*, which assesses a tendency to seek order, particularly in one's physical surroundings. Low scorers tend to be sloppy and haphazard, whereas high scorers keep things tidy and prefer a structured approach to tasks.

  - *Diligence*, which assesses a tendency to work hard. Low scorers have little self-discipline and are not strongly motivated to achieve, whereas high scorers have a strong "'work ethic" and are willing to exert themselves.

  - *Perfectionism*, which assesses a tendency to be thorough and concerned with details. Low scorers tolerate some errors in their work and tend to neglect details, whereas high scorers check carefully for mistakes and potential improvements.

  - *Prudence*, which assesses a tendency to deliberate carefully and to inhibit impulses. Low scorers act on impulse and tend not to consider consequences, whereas high scorers consider their options carefully and tend to be cautious and self-controlled.

- **Openness to Experience (O)**: similarly to the FFM, persons with very high scores on the Openness to Experience scale become absorbed in the beauty of art and nature, are inquisitive about various domains of knowledge, use their imagination freely in everyday life, and take an interest in unusual ideas or people. Conversely, persons with very low scores on this scale are rather unimpressed by most works of art, feel little intellectual curiosity, avoid creative pursuits, and feel little attraction toward ideas that may seem radical or unconventional. This last dimension's sub-domains are

  - *Aesthetic Appreciation*, which assesses one's enjoyment of beauty in art and in nature. Low scorers tend not to become absorbed in works of art or in natural wonders, whereas high scorers have a strong appreciation of various art forms and of natural wonders.

  - *Inquisitiveness*, which assesses a tendency to seek information about, and experience with, the natural and human world. Low scorers have little curiosity about the natural or social sciences, whereas high scorers read widely and are interested in travel.

  - *Creativity*, which assesses one's preference for innovation and experiment. Low scorers have little inclination for original thought, whereas high scorers actively seek new solutions to problems and express themselves in art.

  - *Unconventionality*, which assesses a tendency to accept the unusual. Low scorers avoid eccentric or nonconforming persons, whereas high scorers are receptive to ideas that might seem strange or radical.

Below, the table shows the Hexaco Test's items related to their relative dimension and sub-domain:

DIMENSION	SUB-DOMAINS	ITEMS (I,He or She)

HONESTY-HUMILITY	Sincerity Fairness Greed Avoidance Modesty	1. I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed 2. If I knew that I could never get caught, I would be willing to steal a million dollars 3. Having a lot of money is not especially important to me 4. I think that I am entitled to more respect than the average person is 5. If I want something from someone, I will laugh at that person's worst jokes 6. I would never accept a bribe, even if it were very large 7. I would get a lot of pleasure from owning expensive luxury goods 8. I want people to know that I am an important person of high status 9. I wouldn't pretend to like someone just to get that person to do favors for me 10. I'd be tempted to use counterfeit money, if I were sure I could get away with it
EMOTIONALITY	Fearfulness Anxiety Dependence Sentimentality	11. I would feel afraid if I had to travel in bad weather conditions 12. I sometimes can't help worrying about little things 13. When I suffer from a painful experience, I need someone to make me feel comfortable 14. I feel like crying when I see other people crying 15. When it comes to physical danger, I am very fearful 16. I worry a lot less than most people do 17. I can handle difficult situations without needing emotional support from anyone else 18. I feel strong emotions when someone close to me is going away for a long time 19. Even in an emergency I wouldn't feel like panicking 20. I remain unemotional even in situations where most people get very sentimental
		21. I feel reasonably satisfied with myself overall 22. I rarely express my opinions in

		group meetings
EXTRAVERSION	Social Self-Esteem Social Boldness Sociability Liveliness	23. I prefer jobs that involve active social interaction to those that involve working alone 24. On most days, I feel cheerful and optimistic 25. I feel that I am an unpopular person 26. In social situations, I'm usually the one who makes the first move 27. The first thing that I always do in a new place is to make friends 28. Most people are more upbeat and dynamic than I generally am 29. I sometimes feel that I am a worthless person 30. When I'm in a group of people, I'm often the one who speaks on behalf of the group
AGREEABLENESS (vs. Anger)	Forgiveness Gentleness Flexibility Patience	31. I rarely hold a grudge, even against people who have badly wronged me 32. People sometimes tell me that I am too critical of others 33. People sometimes tell me that I'm too stubborn 34. People think of me as someone who has a quick temper 35. My attitude toward people who have treated me badly is "forgive and forget" 36. I tend to be lenient in judging other people 37. I am usually quite flexible in my opinions when people disagree with me 38. Most people tend to get angry more quickly than I do 39. Even when people make a lot of mistakes, I rarely say anything negative 40. When people tell me that I'm wrong, my first reaction is to argue with them
	Organization Diligence	41. I plan ahead and organize things, to avoid scrambling at the last minute 42. I often push myself very hard when trying to achieve a goal 43. When working on something, I don't pay much attention to small details 44. I make decisions based on the feeling of the moment rather than on careful thought

CONSCIENTIOUSNESS	Perfectionism	45. When working, I sometimes have difficulties due to being disorganized
		46. I do only the minimum amount of work needed to get by
	Prudence	47. I always try to be accurate in my work, even at the expense of time
		48. I make a lot of mistakes because I don't think before I act
		49. People often call me a perfectionist
		50. I prefer to do whatever comes to mind, rather than stick to a plan
OPENNESS TO EXPERIENCE	Aesthetic Appreciation	51. I would be quite bored by a visit to an art gallery
		52. I'm interested in learning about the history and politics of other countries
		53. I would enjoy creating a work of art, such as a novel, a song, or a painting
	Inquisitiveness	54. I think that paying attention to radical ideas is a waste of time
		55. If I had the opportunity, I would like to attend a classical music concert
	Creativity	56. I've never really enjoyed looking through an encyclopedia
		57. People have often told me that I have a good imagination
	Unconventionality	58. I like people who have unconventional views
		59. I don't think of myself as the artistic or creative type
		60. I find it boring to discuss philosophy

FIG. 6 *Author's elaboration of the HEXACO personality test (Items' SOURCE: hexaco.org)*

As it's easy to notice, some dimensions from the Hexaco model are similar to the ones of the FFM. In particular, *Extraversion, Conscientiousness* and *Openness to Experience* are basically identical to their homonyms from the FFM, while *Agreeableness*, despite the name coincides, presents some differences from the one in the FFM, in the sense that it contains rotated variants from its FFM counterparts, meaning that some traits that in the FFM would fell within the *Neuroticism* dimension, in the Hexaco case belong to the *Agreeableness* dimension, hence are not perfectly identical. The greater difference with the FFM, by the way, resides in the presence of the Honesty-Humility dimension, which represents a person's tendency for pro-social altruistic behaviors (Thalmayer et al., 2011)

In the next chapter we will analyze the survey conducted and the elaboration of the data in order to assess whether there is a correlation or not between an individual's personal traits and his or her (supposedly prosocial) buying behavior.

CHAPTER 3

3.1   THE SURVEY: METHODOLOGY AND OUTCOMES

In the past chapter, we have seen the two main tests which constitute the basis for our survey: the Big Five Test for personality, and the Hexaco personality test. By illustrating these tests, we have easily noticed some similarities among them, which in turn allowed us to compute a synthesis of the two tests, in order to adapt our final survey to the crossed nature of what we are investigating on: which personal characteristics might be correlated to a prosocial, eco-driven consumption behavior.

First of all, it's crucial to specify to who the items were addressed in our survey: in both the Big Five Test and the Hexaco Test it's easy to notice that all the items are self-addressed, hence are referred directly to the person whose filing the survey, and that's obviously because the primary purpose of both tests is to determine the attributes of personality of the respondent, nothing more. In our case, instead, the purpose of the survey goes beyond the simple determination of personality variables, but rather seeks to determine *which* personal characteristics may determine a sustainable consumption habit.

Therefore, we decided to use a picture story as a tool to implicitly ask to the respondents, through a collection of items addressed to a third unknown person, which characteristics do they assign to someone who's purchasing the green version of a given product, compared to the scores assigned to someone who's hypothetically purchasing the regular, non-green version of that product. These picture stories (visible in the Exhibit section) are simply the representation of everyday life purchasing decision together with the reasons why such purchasing decision occurred.

Moreover, it's important to keep in mind that different categories of products would bear different responses, as the motives to buy an ecological car are supposedly different from the ones that push a person to purchase an ecological detergent for instance. Hence, in

order to eliminate such bias we decided to use four different products belonging to four different broad categories of goods, which are:

- A lamp: *Phillips* regular light bulbs VS energy save *Phillips* Led Lightning
- A washing machine: *Samsung* Slim washing machine VS energy save *Samsung* washing machine with EcoWashing Technology
- A shopping bag: regular plastic bags VS reusable *juta (ecological material)* bags to reduce environmental impact
- A car: *Smart* ForTwo Classic (gasoline fueled) VS *Smart* ForTwo Electric zero emissions

Furthermore, in order to improve even more the reliability of the responses, the survey was gender-based, meaning that respondents received a survey where in the picture story the protagonist was a women if the respondent was a female, or a man if the respondent was a male. This hopefully allowed respondents to establish an even deeper relationship with the picture story and hence the survey.

The survey is structured in the following way: the five dimensions of the Big Five Test (Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience) remained untouched, since ,as we saw previously, these are substantially similar in both tests. In our survey, by the way, we found coherent with our research to add a sixth dimension, which is H (Honesty/Humility). The reason why this dimension was added back to the survey is because by definition from the official Hexaco Test website, individuals with high scores of H *"avoid manipulating others for personal gain, feel little temptation to break rules, are uninterested in lavish wealth and luxuries, and feel no special entitlement to elevated social status".* These characteristics constitute a fundamental basis for all those regularly consuming green products, and hence we thought this could have been a good indicator in order to determine the willingness or the inclination of an individual to pursue a sustainable consumption pattern.

More in details, a sample of 316 respondents was surveyed, of which 158 males and 158

females. The mean age of the respondents was 24.5, with an overall mode equal to 25. Moreover, the perceived present economic situation of the respondents was on average 5.3 on a 1 to 9 scale, so mainly good.

Let's now take a look at our survey below (questions refer to the protagonist of the picture story):

DIMENSION	ITEMS
HONESTY-HUMILITY (H)	- He/She wouldn't use flattery to get a raise or promotion at work, even if He/She thought it would succeed - If He/She knew that He/She could never get caught, He/She would be willing to steal a million dollars - Having a lot of money is not especially important to him/her - He/She thinks that He/She is entitled to more respect than the average person is - If He/She wants something from someone, He/She will laugh at that person's worst jokes - He/She would never accept a bribe, even if it were very large - He/She would get a lot of pleasure from owning expensive luxury goods - He/She wants people to know that He/She is an important person of high status

	• He/She wouldn't pretend to like someone just to get that person to do favors for him/her • He/She'd be tempted to use counterfeit money, if He/She were sure He/She could get away with it
EXTRAVERSION (E)	• He/She is the life of the party • He/She doesn't talk a lot • He/She feels comfortable around people • He/She keeps in the background • He/She starts conversations • He/She has little to say • He/She talks to a lot of different people at parties • He/She doesn't like to draw attention to himself/herself • He/She doesn't mind being the center of attention • He/She is quiet around strangers
AGREEABLENESS	• He/She feels little concern for others • He/She is interested in people • Insult people • Sympathizes with others' feelings • He/She isn't interested in other people's problems

(A)	- Has a soft heart - He/She isn't really interested in others - Takes time out for others - Feels others' emotions - Makes people feel at ease
CONSCIENTIOUSNESS (C)	- He/She is always prepared - Leaves his/her belongings around - Pays attention to details - Makes a mess of things - Gets chores done right away - He/She often forgets to put things back in their proper place - Likes order - Shirks his/her duties - Follows a schedule - He/She is exacting in his/her work
NEUROTICISM (N)	- Gets stressed out easily - He/She is relaxed most of the time - Worries about things - Seldom feels blue - He/She is easily disturbed - Gets upset easily - Changes his/her mood a lot - Has frequent mood swings - Gets irritated easily - Often feels blue
	He/She has a rich vocabulary

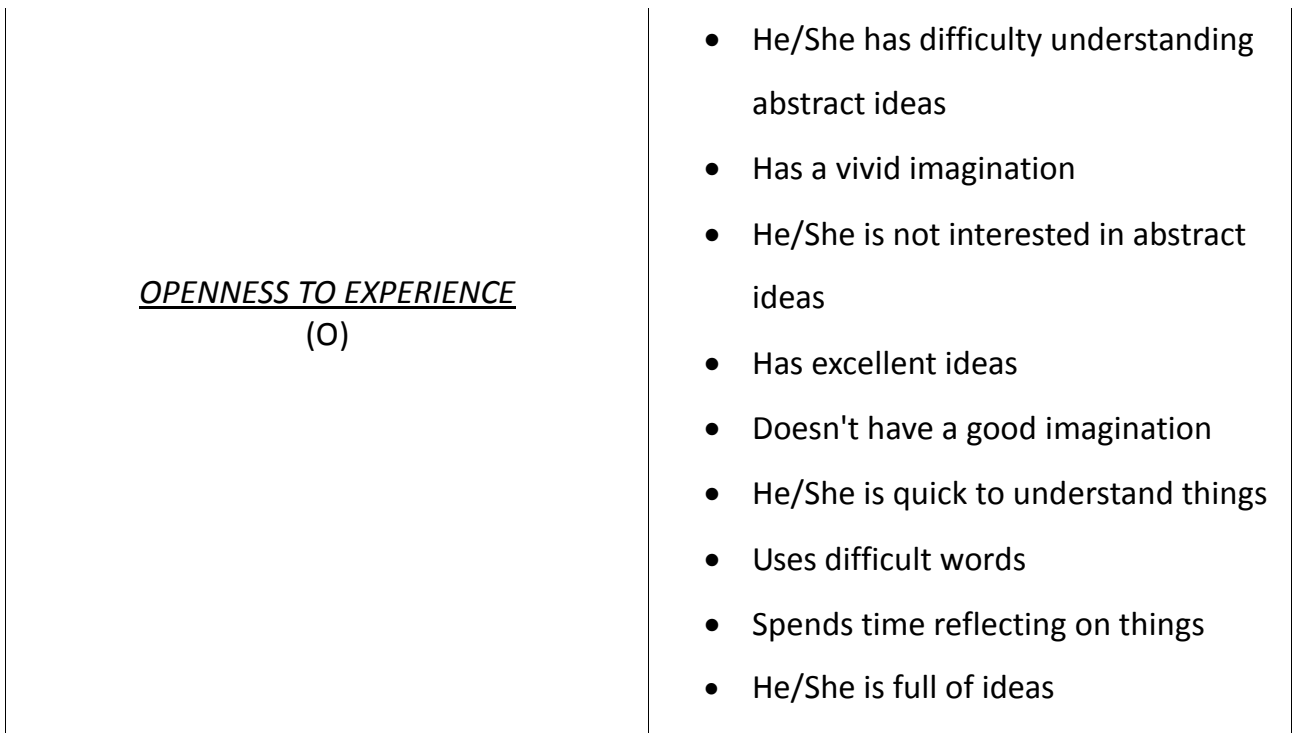|	He/She has difficulty understanding abstract ideas
OPENNESS TO EXPERIENCE (O)	• Has a vivid imagination
	• He/She is not interested in abstract ideas
	• Has excellent ideas
	• Doesn't have a good imagination
	• He/She is quick to understand things
	• Uses difficult words
	• Spends time reflecting on things
	• He/She is full of ideas

FIG. 7 *The Survey used in this Research*

Let's now take a look at the outcomes of our survey. Below, the tables summarizing the mean outcomes, modes, standard deviations and variances of the test results for green products:

OUTCOMES (GREEN)	MEAN	MEAN (MALES)	MEAN (FEMALES)	STANDARD DEVIATION	VARIANCE
Honesty/Humility (1-10) H	4,34	4,26	4,43	1,646	2,710
Neuroticism (11-20) N	4,13	4,21	4,05	1,501	2,253
Extraversion (21-30) E	4,20	4,30	4,09	1,527	2,332
Agreeableness (31-40) A	4,89	4,82	4,96	1,405	1,973
Conscentiousness (41-50) C	4,82	4,80	4,83	1,430	2,045
Openness to exp. (51-60) O	4,57	4,65	4,49	1,334	1,779

FIG.8 *Outcomes and Statistics for GREEN Products*

Following, the statistics relative to the outcomes from the survey version containing non-green products, plus a summary of the two tables:

OUTCOMES NON-GREEN	MEAN	MEAN (MALES)	MEAN (FEMALES)	STANDARD DEVIATION	VARIANCE
Honesty/Humility (1-10) H	3,69	3,59	3,78	1,640	2,689
Neuroticism (11-20) N	3,86	3,97	3,75	1,355	1,837
Extraversion (21-30) E	4,43	4,59	4,27	1,438	2,067
Agreeableness (31-40) A	3,79	3,71	3,87	1,483	2,199
Conscentiousness (41-50) C	4,43	4,48	4,38	1,454	2,116
Openness to exp. (51-60) O	4,21	4,28	4,15	1,335	1,782

FIG.9   *Outcomes and Statistics for NON-GREEN Products*

SUMMARY	AVG. GREEN	AVG. NON-GREEN	DIFFERENCE	% DIFFERENCE
Honesty/Humility (1-10) H	4,34	3,69	0,65	9,29%
Neuroticism (11-20) N	4,13	3,86	0,27	3,86%
Extraversion (21-30) E	4,20	4,43	(-) 0,23	(-) 3,29%
Agreeableness (31-40) A	4,89	3,79	1,1	15,71%
Conscentiousness (41-50) C	4,82	4,43	0,39	5,57%
Openness to exp. (51-60) O	4,57	4,21	0,36	5,14%

FIG. 10   *Summary for GREEN and NON-GREEN Outcomes*

The rationale behind these sets of data and their elaboration is the following: respondents were asked to evaluate the characteristics of the protagonist in the picture story, which was, half of the times, dealing with the purchasing decision involving the selection of a

green product, or, in the other half of the cases, with a non-green product. Respondents were asked to evaluate the survey's items on a 1 to 7 scale, were 1 represented "not at all", 4 stand for "indifferent" and 7 for "yes, a lot". The mean values showed above represent the average weight respondents attached to any of the six personality dimensions with respect to a certain purchasing decision. Theoretically, the greater the mean value, the greater will be the weight attached to that particular dimension.

After a first analysis of the mean values (together with their standard deviations) we will also try to analyze the covariances between the different dimensions in both the *green* and *non-green* surveys.

Let's first of all analyze the five dimensions originally belonging to the Big Five Model, and then the one taken from the Hexaco Model.

3.2 TECHNICAL ANALYSIS AND EVALUATIONS

- <u>NEUROTICISM (N)</u>

The first dimension is N, Neuroticism. As we saw previously in chapter 2, this dimension is defined by McCrae and John (1991) as representing individual differences in both the tendency to experience distress, and the cognitive and behavioral reactions following such tendency. As it's easy to see from FIG. 8, Neuroticism, compared to the other dimensions, is the one with the lower score, the closest to 4, which means that among the whole set of dimensions, (N) is the one that according to the respondents is the least indicative for a purchasing decision involving the choice of a green product. Further evidences come from the datas contained in FIG. 9: the fact that even in the selection of regular, non-green products this dimension's score is particularly close to 4, suggests that respondents did not strongly link Neuroticism as a dimension to the decision of purchasing any particular product, neither green nor regular. Hence (N) cannot be the determinant of any particular buying habit or behavior, even though it suggests that individuals higher in (N) are seen as

slightly more suited to buy green or ecological products than the ones scoring low in (N).

- EXTRAVERSION (E)

The following dimension is Extraversion, which embodies both positive and negative flows of emotions. Individuals high in (E) are defined as self-confident, secure, while those scoring low in (E) are defined as shy, quiet.

By looking at FIG. 8, we can easily see that the average score (4.20) belonging to this dimension is a little bit above 4, which suggests that positive scores of Extraversion might be linked to the purchasing of green products. However, what's tricky about the analysis of this dimension is the fact that in FIG. 9, the average score attached to the (E) dimension involving the purchasing of regular products is higher (4.43) than the one linked to the purchasing of green products. This means that in general, respondents attributed (slightly) positive scores of (E) to the buying decision regarding green products, but in the end individuals high in Extraversion are perceived as less sensitive to these kind of environmental or sustainable issues. However, since the percentage change between the two values corresponds barely to a 3.3%, the results concerning the Extraversion dimension might only be taken as a suggestion, rather than a strong evidence, given also the unclear role of lower scores' individuals with respect to the issue at stake .

- AGREEABLENESS (A)

Looking at the data, the analysis of the Agreeableness dimension seems in perfect harmony with its theoretical definition: to recall again the definition given by Digman (1990), the Agreeableness dimension is defined as encompassing "the more human aspect of humanity", with high scores referring to individuals characterized by traits such as the sense of forgiveness, gentleness and flexibility. Conversely, persons with low scores on this scale hold grudges against those who have harmed them, are rather critical of others' shortcomings, are stubborn in defending their point of view, and feel anger readily in

response to mistreatment. The mean score that the (A) dimension took on within non-green surveys, 3.79, suggests that respondents assigned lower scores of (A) to those consuming regular products, while the score recorded in the green surveys cluster, 4.89, tells us that according to our population sample higher scores' individuals are perceived as less reluctant to purchase and consume in a prosocial optic.

This dimension's score, in particular, is crucial to our study since the definition of higher scores' individuals by itself suggests that the latter should be particularly suited to be sensible toward sustainability and other issues related to the environment. Hence the survey is confirming, at first impression, the underlying hypothesis embodied in this research, at least for what concerns this dimension.

- <u>CONSCIENTIOUSNESS (C)</u>

The Conscientiousness dimension, as the previous one, refers to "objectively observable dimensions of individual differences", to recall the words of McCrae and John (1991), opposing *strong-willed* against *weak-willed* individuals, where traits found in high score individuals such as diligence, perfectionism and prudence are opposed to traits such as poor self-discipline, scarce attention to details and impulsive behaviors found in lower scores' individuals. In this case, similarly to the Extraversion dimension's outcomes, in both green and non-green clusters respondents assigned positive scores of Conscientiousness: surveys containing a sustainability-oriented picture story yield an average score of 4.82, while the ones whose picture story involved regular products scored a mean value of 4.43.

Now, as in the Extraversion case, the fact that the two values are both above 4, suggests that respondents didn't perceived this dimension as a main determinant, in cases of both low and high scores, of a particular consumption habit or inclination to such buying pattern. However, the fact that the Conscientiousness score within the *green* cluster is 11.7% greater than the "indifference value" 4 tells us that higher scores individuals in the (C) dimension, are seen as slightly incline to purchase green-oriented products over their regular versions, but since is unclear the role of low-score individuals with respect to this issue, the results relevant to this dimension cannot be taken as an evidence, and further

studies are required.

- OPENNESS TO EXPERIENCE (O)

The last one of the Five Factor Model's dimension is Openness To Experience, defined as the extent to which an individuals feel the need for variety and experiences, on both the physical and the abstract plane. Individuals with high scores of (O) are characterized with personality traits such as the aesthetic appreciation, creativity, unconventionality and inquisitiveness. This last sub-dimension in particular, can be seen as a determinant of being informed about the problem, rather than being explicative of a prosocial consumption habit. As we saw previously, especially in Chapter 1, a relevant portion relative to the act of choosing goods and services with a green-oriented flavor, is the collection of information about the issue of sustainability, which then translates into an actual buying behavior. This means that this dimension could be seen as a fundamental "pre-step" concerning the consumption of green products, rather than being a determinant of the consumption by itself.

By the way, the outcomes of the survey relative to Openness to Experience show an almost identical situation with respect to the previous dimension, Conscientiousness. The average value calculated for the green cluster is equal to 4.57, while the one relative to the consumption of regular products is 4.21. since the percentage increment, from regular to green is, similarly to the previous case, a mere 5.1%, we cannot state that (O) as a dimension can be a secure determinant of a prosocial buying behavior. However, recalling the reasoning we have done above, the fact that a stronger positive value of (O) is perceived as being linked to green-oriented consumption might be related to the capacity of an individual to be curious, get informed and seeking informations that only after this process can translate into an actual consumption habit. In conclusion we cannot indicate (O) as a determining dimension of a prosocial buying behavior, but high-score individuals are, for being more inquisitive and hence more willing to find reliable information about a given issue, definitely more suited to follow a sustainable buying behavior, or (but this is just an hypothesis) more eligible to become part of some of the consumers' movements

we've analyzed in Chapter 1, such as *ethical* or *green consumerism* movements.

- <u>HONESTY-HUMILITY (H)</u>

This dimension, differently from the first five, originally belongs to the formerly explained Hexaco Model for personality testings. Again, in order to investigate which personality traits are determinants of a sustainable consumption, we found necessary to add this dimension from the Hexaco Test, and this because individuals scoring high in this dimension are considered to be sincere, fair, modest and without the need to show signs of elevated social status. Conversely, persons with very low scores on this scale will flatter others to get what they want, are inclined to break rules for personal profit, are motivated by material gain, and feel a strong sense of self-importance, which of course do not correspond to the attributes characterizing individuals consuming regular over sustainable products, but the sub-domains referring to high scoring individuals makes them compatible with the consumer type consuming sustainable products traced in the previous chapters.

Indeed, the data seem to confirm our hypothesis: within the cluster of green surveys the mean value is 4.34, while the one referred to the non-green cluster is equal to 3.69. This confirms that respondents perceived individuals scoring high in the Honesty-Humility dimension to be more concerned for environmental-related issues while those scoring low are discerned as being less dependent from environmental constraints.

To sum up, for what regards the Five Factor Model's dimensions, the scores in Neuroticism and Agreeableness are directly proportional to the chances of choosing and consuming sustainable products, meaning that high scores in these dimensions are clearly associated with a greater consumption of environmental-friendly and green products.

For the other three dimensions, Extraversion, Conscientiousness and Openness to Experience, the relation with a sustainable consumption is not completely clear, in the sense that in both the green and non-green clusters, these dimensions' scores were all

above 4, which either implies that respondents were not able to identify which precise set of sub-dimensions corresponds to a particular buying behavior, or that the survey wasn't able to extract such perceptions involving the dimensions nominated above. However, we can state that, based on the answer collected, high scores in Openness to Experience and Conscientiousness are associated with a sustainable or green-oriented consumption, while high scores in Extraversion are more frequently associated with a regular, non-green consumption habit.

For what regards the last dimension, Honesty-Humility, the one added back from the Hexaco Model, it seems to confirm our intuition, showing a positive correlation between its scores and the chances of consuming green products.

In the next and last chapter we will see which are (or should be) the practical implications of our findings, for both marketers and policy makers.

CHAPTER 4

4.1 POLITICAL INSIGHT AND SOCIAL NORMALIZATION

Before drawing conclusions on our findings, is worth to recall a collection of researches focused on the political aspects of "going green", and on the process referred to as social normalization.

Rettie et al. (2011) use the term "social normalization" to identify a social process in which everyday actions, activities and also products, gradually become accepted as mainstream or normal. The reason why this concept is particularly important arises just from the study conducted by Rettie et al.: some of the respondents remember a period in the 60s when taking shopping baskets or bags from home to the shops had been normal, was then "de-normalized" with the introduction of free shopping bags made of plastic distributed by the shop after the purchasing, and now is starting to go back to the times in which this was an openly accepted habit, with the development of "reusable bags" that can be found at any super-market and that are more durable than regular, non-sustainable plastic bags. Below is reported the graph from Rettie, Burchell and Riley's study, showing how the activities took into consideration were perceived by regular consumers for what regard the "*degree of normality*" and the "*greenness*".
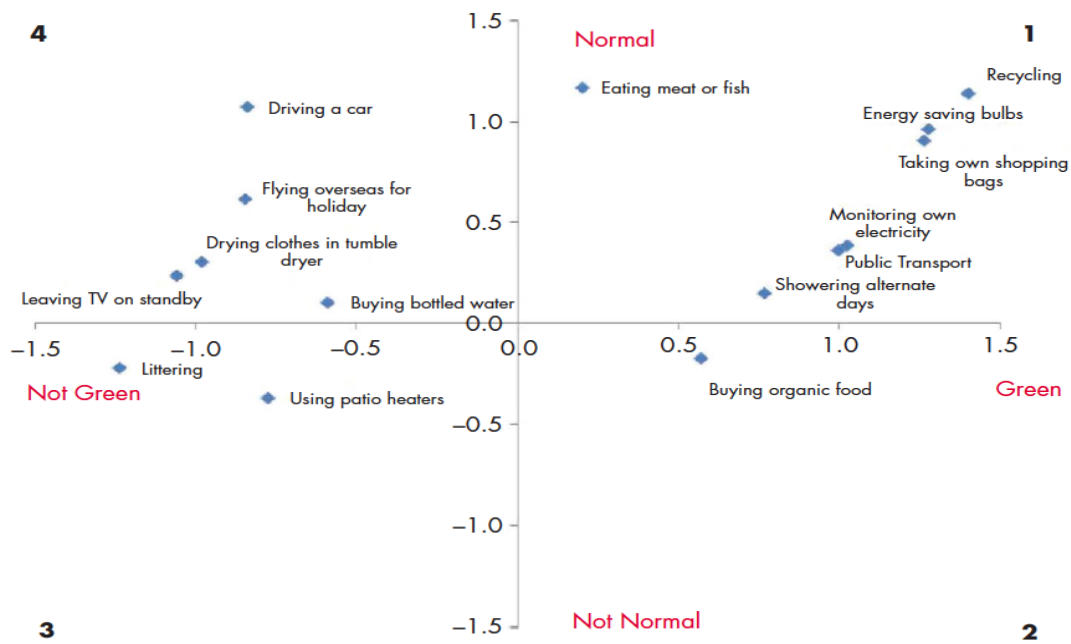
FIG. 11 *Graphical Representation of Activity Ratings* (*SOURCE*: *Rettie et al. "Normalizing Green Behaviors"*)

As we can notice, activities such as *recycling* and *buying energy savings bulbs* are now considered both extremely normal and green, while we know for certain that less than thirty years ago such activities were not even contemplated: recycling wasn't an habit since up to the 60s many goods were produced without modern mass-scale production techniques requiring the use of chemical and sometimes toxic inputs, which means that the system as a whole was not producing wastes that needed a special treatment. Energy saving bulbs, instead, weren't even in commerce since they hadn't been invented yet, because if on one hand the technology available wasn't advanced enough to come up with such an innovation, on the other we have to notice how the overall energy consumption relied on resources largely available at that time and hence there was no demand for energy-savings furnitures and products.

If we try to think to other habits related to the social normalization process, we could think at the civil right movement for instance: it's particularly easy to see how within less than half a century things that were considered almost a *taboo* and anomalous became widely accepted and mainstream. Hence, the reason for which this is important, is because what is widely accepted as "normal", together with all the set of rules and social norms that are part of our society, are to some extent the greater external influence affecting the green-driven behavior. If we think about it, the education received is at the basis of our study: the

way in which we were raised by our families within a precise environment and society, and the set of values that we have assimilated through time, results in the way we act in everyday life activities. This, by the way, might be true, in part, if we do not consider the fact that ideas, ideologies and emotions are subject to changes over time, and that exogenous stimuli, such as commercials and sensitization campaigns or even political ones, might produce a shift in what we have always considered normal or vice versa, hence resulting in the completion of a social normalization process.

For what regards the political implications embodied in the topic analyzed in this research, normally people tend either to follow a pre-determined lifestyle driven by a political ideology , or to classify an exogenous stimulus according to their underlying moral and political foundations. Speaking more broadly, while dealing with the issue of sustainability and other prosocial-driven behaviors we must take into account the implicit political aspects of the issue. Jost (2006) defines political ideology as the set of attitudes, which embodies cognitive, motivational and affective components, that portraits how a society should function and how it should be structured in order to achieve social justice and social order. In other words, we all have our own view regarding the system as a whole and its functioning: depending on the set of values that we prioritize as human beings, the left-right duopoly broadly encompasses such values as reflected into practical actions and policies, or at least this is how it's intended to be. Going back to the sustainability issue, most persons show the tendency to identify a sustainable behavior as something related in some way to a left-wing ideology and hence as something that is just a mere function of a predetermined political view of the world. But why are these aspects commonly related to such ideologies? One might think that the reason lies in the fact that in western countries, these kind of issues have commonly been pointed out by representatives of the left-wing party (see for instance the case of Al Gore in the United States), or by the fact that within the left-wing coalition often there are smaller parties focused especially, if not only, on the pursuance and the adoption of green-oriented policies (as for instance in the italian case of the "Verdi" party). Neglecting the fact that this is a fake portrait of reality, since you would need only a couple of word typed on any web browser to discover a huge number of "green

movements" which either do not rely on any political ideology or openly make reference to non-moderate right-wing political parties, let's now try to better identify which are the implications of any political value or ideology while combined with this particular topic.

One of the first study that has been conducted on the issue of environmental concerns, is the one offered by Mayton (1993) in which the author reasons on which are the determinants of a prosocial and sustainable lifestyle. Before analyzing Mayton's work, by the way, is crucial to understand its foundations for what regard the definition and the types of value. Schwartz (1992), identified fifty-six specific universal values belonging to ten different types of universal values:

- *Power:* authority; leadership; dominance

- *Achievement:* success; capability; ambition; influence; intelligence; self-respect

- *Hedonism:* pleasure; enjoying life

- *Stimulation:* daring activities; varied life; exciting life

- *Self-Direction:* creativity; freedom; independence; curiosity; choosing own goals

- *Universalism:* broadmindedness; wisdom; social justice; equality; a world at peace; a world of beauty; unity with nature; protecting the environment; inner harmony

- *Benevolence:* helpfulness; honesty; forgiveness; loyalty; responsibility; friendship

- *Tradition:* accepting one's portion in life; humility; devoutness; respect for tradition; moderation

- *Conformity:* self-discipline; obedience

- *Security:* cleanliness; family security; national security; stability of social order; reciprocation of favors; health; sense of belonging

According to Mayton (1993), Being prosocial or environment-concerned individuals relies mainly on universalism value type (justice, world peace, equality, protecting the environment), but also on value types related to the universal values of power and

benevolence. The reasoning behind this statement arises from the calculations performed by Mayton after having run his survey: a stepwise multiple regression equation was computed in predicting "environmental concerns" using the ten value types scores as predictors. *Universalism* is the first value type explaining the regression, and together with *benevolence* and *power* capture more than 20% of the variance (R^2 = 0.2 means 20% is the fraction of variance captured by the regression, hence how much the variables explain the prediction). The regression analysis identifies the benevolence and power value types as "*mediating variables with negative loadings in predicting environmental concerns*". To better understand Mayton's findings, it might be useful to refer to Stern, Dietz and Kalof (1993) three-level model related to environmental concerns:

- 1st level: biospheric orientation with concerns for the welfare of non-human species and the entire biosphere
- 2nd level: concerns for the welfare of other human beings
- 3rd level: egoism and/or self interest

If environmental concerns at the biospheric level exists, then *universalism* value types must be reasonably strong and important for an individual. *Benevolence* value types might move an individual to the second level with concerns for the welfare of other human beings, hence the individual would prioritize benevolence values close to the universalism values. The environmentalist, in the end, who is an egoist would prioritize *power* values. As I said before, this doesn't explain anything about perceptions, but it's extremely important as it constitutes the foundations of our study on consumers perception as it's one of the first study that scientifically establishes some sort of relationship between a person's most intimate beliefs and values, and the way in which these actually translates into a concrete action or buying behavior. Mayton's work, without explicitly mentioning political values, gives a first insight on which feelings drive a person's actions and behaviors. Another opinion on this path was given by Kilbourne (1995) a few years later who argued that "being green" has two distinct dimensions. The first, a *political* dimension, is one that "*reflects the relative position one might take regarding how change is to be effected and*

how much change is acceptable", and goes from a reformist position to a more radical position. The second is the *positional* dimension, and reveals how the individual positions himself/herself, together with the whole human community, with respect to the biotic community. This ranges from an anthropocentric stance, where the value of ecology is only appreciated as a function of human instrumental value (*benevolence* and/or *power*), to an ecocentric stance, where the ecology has its own inherent value (*universalism*). Still according to Kilbourne, such a framework results in at least five different types of green: environmentalism, conservationism, human welfare ecology, preservationism, and *ecologism*. Moreover, as an additional evidence against the hypothesis that the *green issue* is necessarily related to a progressive, left-wing oriented ideology, it's crucial to analyze the study conducted by Kidwell et al. (2013) which mainly relies on the different consumers perceptions of the *green issue* according to their moral foundations. Kidwell et al. define *moral foundations* by the "*manner in which foundational moral values vary between groups of people*", or, to give another definition, these are the set of opinions regarding founding moral principles across different groups of people, as in this case, liberals and conservatives. To give an idea, McAdams et al. (2008) conducted a study which consisted in interviewing self-labeled liberals and conservatives on past experiences, from which resulted that liberals were more likely to recall stories of lessons learned regarding openness and empathy that "*taught them to avoid harm to others and to pursue value fairness*", while conservatives, instead, were more likely to recall stories and hence lessons learned involving strict rules and a "*severe self-discipline that taught them to value purity, authority and in-group conformity*". Also Graham et al. (2009) matched these findings in their study, assessing that conservatives favor values such as in-group loyalty, authority and purity, that drive them toward a *binding* foundation for moral judgements where they tend to adhere to the social norms of their group and to uphold a strong sense of duty, while liberals are more oriented to the moral foundations of fairness and caring that drive them toward the principles of rights and welfare of the individual, identifying, moreover, social justice as a "focus on the equitable treatment of all individuals in order to maximize everyone's autonomy and welfare". Furthermore, Jost et al. (2003) identified, in the psychological field, several predictors of a person's political ideology: while conservatives

reported higher death anxiety, dogmatism, fear of threats and losses, need for order, structure and closure, liberals expressed an higher openness to both changes and experiences, integrative complexity and self-esteem. Back to perceptions, Kidwell et al. (2013) first hypothesized and then tested several hypothesis on how persuasive appeals, congruent with the underlying moral foundations of an individual, could significantly increase sustainable intentions and behaviors. The persuasiveness of a message, by the way, is enhanced when it fits with the observer's mental representational state, according to Schwarz and Clore *(1983)*, and when encountering information that is consistent with their beliefs, values, and opinions, individuals are likely to experience a feeling of fluency or ease of comprehension, generating a "feels right" experience (Reber, Schwarz, and Winkielman *2004*).

The first finding in Kidwell, Hardesty and Farmer's study was that congruent (to the moral foundation) appeals affect intentions to recycle depending on one's political ideology, meaning that conservatives have shown positive intentions to recycle when exposed to a binding moral appeal, while liberals have heightened intentions to recycle when exposed to an individualizing appeal. Moreover, sensitization campaigns congruent with a person's moral foundations were also found to affect *actual* recycling behaviors due to the fact that in the long-run, such messages have been able to increase environmental consciousness, which is a particularly important finding considering that so far such campaigns have always been a partial failure, due to their incapacity to properly deliver the message at stake.

In the end, they also discovered that congruent appeals are more effective and long-lasting than non-congruent ones and also control appeals (in which the act of recycling was simply and directly requested to the sample), and that, most important, congruent appeals are more effective than regular ones because of the *fluency*, which positively affects intentions to recycle, and has also a *spillover effect* on acquisition and usage intentions for what regarded green or simply eco-labeled products. By fluency the authors intend something similar to positive affect, in which individuals feel a generalized state of emotional arousal, with the addition of the satisfactory element. In other words, it can be defined as the ease of comprehension of a message contained in a given campaign. Spillover effect, instead,

indicates an implicit process in which a message influences behaviors related to other issues and aspects not explicitly contained or recalled in the message. The overall result of the research was that "fluency is the fundamental underlying mechanism that drives congruency effects on recycling and/or other issues at stake".

By these evidences is clear that there exist a certain relationship between the *green issue* and the political ideologies of an individual, but we have also seen how the hypothesis that such issues are related only to the portion of population which identifies itself in a particular political party or broader movement doesn't hold. Hence, the reason why the interest for this issue is commonly attributed to left-wing, liberal oriented parties is a simple misconception of reality, arising from the fact that such parties were the first ones to underline the problem while it wasn't already considered an emergency. It can be reasonably seen, therefore, a simple step in the social normalization process through which in the near future everyone, regardless of the moral values and political ideology, will be forced to give credit to an issue that is increasingly going to mine, as I explained in the first paragraph of the first chapter, the entire wellness of the human being on this planet, and to consider eco-oriented habits as normal. Moreover, we have seen how the message delivered by a given campaign is only marginally relevant, and that what really matters is how the message is presented to the different audiences, and so to its degree of fluency.

4.2 CONCLUSIONS

We have just seen how political ideologies affect the way in which the message is received, instead of how it then translates into an actual buying behavior. Such ideologies, indeed, do not constitute an obstacle to a regular sustainable consumption, the only problem is how the message is delivered.

Moreover, we have seen how the process of social normalization, combined with coherent

congruent messages, plays a fundamental role in the society as a whole in developing a *social consciousness* according to which actions are perceived as "normally accepted" or not.

For what regards our findings, we can conclude that individuals scoring high in Honesty-Humility, hence characterized by personal traits such as sincerity, fairness, modesty and without the need to show signs of elevated social status are perceived as consumers often consuming sustainable or eco-friendly products. In the same way are perceived individuals scoring high in Neuroticism (even though this dimension's evidences are the weakest among the three and consequently the less relevant), hence with the tendency to often experience distress, as well as those scoring high in the Agreeableness dimension, which are the ones showing personal characteristics such as a strong sense of forgiveness, gentleness and flexibility.

Practically this has several implications:

for what regards the marketing implications, we can affirm that persons scoring low in the three dimensions mentioned above, hence showing traits such as being revengeful, critical toward others and mentally rigid (A), or being relaxed and laid-back (N), or being willing to gain by cheating or stealing, to enjoy the displaying of wealth and privileges and arrogance (H), are the ones that need to be targeted by sensitization campaigns if the goal is to increase consciousness of the issue. Of course, since it's impossible to target a precise audience segmented according to their personality traits, in order to boost the phenomenon of consuming sustainably the idea might be to target a broader audience, pointing at the ones that are already consuming green, and hoping in some kind of spillover effect for the spread of such habit.

Politically, instead, the research as it is doesn't allow us to draw any particular conclusion addressed to policy-makers. However, by combining both types of research, by knowing which personality traits belongs to a particular set of moral values and ideologies, it would be possible to target a precise audience with sensitization messages developed according to the principles of *congruency* and, most important, *fluency*, for both liberal or

conservative-oriented individuals and, consequently, also targeted to different clusters containing different personality traits.

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