

**UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL  
ESCOLA DE ADMINISTRAÇÃO  
PROGRAMA DE PÓS-GRADUAÇÃO EM ADMINISTRAÇÃO**

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**ATTRIBUTES DETERMINING CONSUMER PREFERENCE FOR  
ETHICAL COSMETICS IN BRAZIL**

**Porto Alegre**

**2019**

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Dissertação de Mestrado apresentada ao  
Programa de Pós-graduação em  
Administração da Escola de Administração  
da Universidade Federal do Rio Grande do  
Sul, como requisito parcial à obtenção do  
grau de Mestre em Administração.

Orientadora: Profa. Dra. Marcia Dutra de  
Barcellos

**Porto Alegre**

**2019**

## CIP - Catalogação na Publicação

GRACIANO DE SOUZA, PAOLA  
ATTRIBUTES DETERMINING CONSUMER PREFERENCE FOR  
ETHICAL COSMETICS IN BRAZIL / PAOLA GRACIANO DE SOUZA.  
-- 2019.  
91 f.  
Orientador: MARCIA DUTRA DE BARCELLOS.

Dissertação (Mestrado) -- Universidade Federal do  
Rio Grande do Sul, Escola de Administração, Programa  
de Pós-Graduação em Administração, Porto Alegre,  
BR-RS, 2019.

1. COSMETICOS NATURAIS. 2. COSMÉTICOS ORGANICOS. 3.  
CONSUMO ÉTICO. 4. VALORES. 5. SUSTENTABILIDADE. I.  
DUTRA DE BARCELLOS, MARCIA, orient. II. Título.

Elaborada pelo Sistema de Geração Automática de Ficha Catalográfica da UFRGS com os dados fornecidos pelo(a) autor(a).

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## **ACKNOWLEDGEMENTS**

The process of becoming a Master made important changes in my life, but has consolidated values I already considered fundamental for success: patience, resilience, humility and cooperation. Therefore, I dedicate this work to my dear colleagues with whom I have learned a lot, always exchanging experiences, both receiving and offering support. To my dear friends Daiane Carvalho and Elisa Mombelli, it was an enormous privilege to share your friendship and kindness during this tough journey.

I also dedicate the results of these two long years of discoveries, expectations and challenges to my parents. Although they have not always understood what a scientist really does, they have been by my side all the time, relying on my choices and in the path I have chosen to find professional satisfaction.

I must also mention my neighbor (and pharmacist) Luana Balconi for her advice regarding the most technical issues about the theme I have chosen to explore and for her friendship, support and company in the good and bad moments that I have experienced in this endeavor.

I am also very grateful to my advisor Prof. Dr. Marcia for her contributions to the work and for providing an environment of immense exchange of knowledge through her “Ateliê”.

*“I am a part of all that I have met.”*

John Milton

# ATTRIBUTES DETERMINING CONSUMER PREFERENCE FOR ETHICAL COSMETICS IN BRAZIL

## ABSTRACT

One of the most relevant concerns of society at the moment is the Environment. Following this dynamic, Brazil shows enormous potential for sustainable industries, given its enormous biodiversity. Specifically, as far as the beauty industry is concerned, Brazil is very close to consumption patterns in places such as the United States and the United Kingdom. Exploring the gap on environmental initiatives for the beauty industry, this dissertation aims to provide information about the preferences and profiles of consumers of ethical cosmetics through an investigation of attributes and values performed by triangulation, which brings together (a) historical knowledge of preferred attribute of ethical cosmetics consumers in other countries (b) semi-structured interviews with 15 consumers and 15 Brazilian entrepreneurs to confirm previous data or to add new insights, (c) selection of a psychometric scale (VALS) to possibly establish personal values (d) list of most cited attributes and (e) an online survey to identify the most and least preferred attributes of the previous list and a set of values to characterize respondents. The research results depict a very homogeneous sample with well-defined preferences, with emphasis on the profiles *Experiencer* (young, impulsive, energetic and extravagant), *Thinker* (mature, reflexive, orderly, inquisitive and intellectual) and *Innovator* (Successful, sophisticated, active). As it has been acknowledged in previous studies, consumers are not willing to give up on performance in order to adopt a more ethical conduct as buyers, but we found evidence that some groups have considerable concerns with the conditions surrounding the product origin and its distribution.

**Keywords:** sustainability, cosmetics, attributes, ethics, consumer behavior, values

# ATRIBUTOS DETERMINANTES NA PREFERÊNCIA DO CONSUMIDOR POR COSMÉTICOS ÉTICOS NO BRASIL

## RESUMO

Uma das preocupações mais relevantes da sociedade no momento é o Meio Ambiente. Seguindo essa dinâmica, o Brasil mostra considerável potencial para indústrias sustentáveis, dada sua enorme biodiversidade. Especificamente, no que diz respeito à indústria da beleza, o Brasil está muito próximo dos padrões de consumo de lugares como os Estados Unidos e o Reino Unido. Explorando a lacuna em iniciativas ambientais para a indústria da beleza, esta dissertação visa fornecer informações sobre as preferências e perfis dos consumidores de cosméticos éticos através de uma investigação de atributos e valores realizados através de uma triangulação que reúne (a) conhecimento histórico de atributos preferidos de consumidores de cosméticos éticos em outros países (b) entrevistas semiestruturadas com 15 consumidores e 15 empresários brasileiros para confirmar dados prévios ou para adicionar novos insights, (c) seleção de uma escala psicométrica (VALS) para possivelmente estabelecer valores pessoais (d) dos atributos mais citados e (e) uma pesquisa online para identificar os atributos mais e menos preferidos da lista anterior e um conjunto de valores para caracterizar os respondentes. Os resultados da pesquisa retratam uma amostra muito homogênea com preferências bem definidas, com ênfase nos perfis *Experimentador* (jovem, impulsivo, enérgico e extravagante), *Pensador* (maduro, reflexivo, ordeiro, inquisitivo e intelectual) e *Inovador* (bem-sucedido, sofisticado, ativo). Como foi reconhecido em estudos anteriores, os consumidores não estão dispostos a desistir do desempenho para adotar uma conduta mais ética como compradores, mas encontrou-se evidências de que alguns grupos têm preocupações consideráveis com questões relativas à origem do produto e sua distribuição.

**Palavras-chave:** valores, cosméticos, atributos, ética, comportamento do consumidor



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## **LIST OF ACRONYMS**

BWS - Best-Worst Scale

CAPOD - Centre for Academic, Professional and Organizational Development

EPA - Environmental Protection Agency

GMOs - Genetically Modified Organisms

IBD - Inspeções e Certificações Agropecuárias e Alimentícias

MIS - Minimum Income Salaries

NGOs - Non-Governmental Organizations

NPRA - Non-Product Related Attributes

PCP - Personal Care Products

PETA - People for The Ethical Treatment of Animals

PRA - Product Related Attributes

SRI - Stanford Research Institute

USDA - United States Department of Agriculture

VALS - Values and Lifestyle Scale

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## 1 INTRODUCTION

Sustainability has become a main subject on both political and economic discussions of the 21st century due to the undeniable consequences of environmental degradation since the industrial revolution in the 18th century. Some authors, as Green et al. (2004), go even further on the origins of human action on Nature, dating it back to the first effects of human nomadism, most noticed in the change of course of rivers and cultivation next to water sources.

Although they have gained more prominence in the last decade, environmental concerns began in the 1970s with the first studies on the impact of industrialization on nature (Dubuisson-Quellier, 2015). Parallel to scientific research, the counterculture of the previous decade, largely fueled by sentiments contrary to American interventions in Asia, began to promote a "return to origins", valuing organic crops to the detriment of the supposed advantages of the industrialized, so strongly publicized in the previous two decades (Dayan & Kromidas, 2011). At that time, the first movements promoting fair trade, organic agriculture and different styles of consumption appeared, making consumers aware of the negative externalities related to their consumption habits (Dubuisson-Quellier, 2015).

For the beauty market, the first introduction of ethical goods happened during the Second World War, when product rationing and shortages of options became a reality. Homemade beauty items and remedies gained considerable popularity between young women as a cheaper and available alternative to maintain a grooming routine. At the same time, a number never seen before of women entered the work force in compensation for male absence, an advance quickly noticed by beauty brands, which developed strategies to gain momentum during such a time of female empowerment (Connelly, 2013).

Five years after the war, the first sociological criticism of traditional standards in beauty products gained shape through socialist newspaper *The Militant*, which claimed many cosmetics were expensive and unnecessary (Peiss, 2002). Such criticism gained importance in the industry and soon companies like *The Body Shop* started betting on inexpensive packaging for lowering costs to consumers (Jones, 1998). During the seventies, with feminism gaining momentum among American girls, traditional businesses in cosmetics industry were severely attacked for promoting unrealistic beauty standards and female objectifying and degradation. In protest, many feminist groups started promoting ancient homemade recipes for several beauty products, mainly those that became popular during the years of war (Peiss, 2002).

The concept of a more ethical beauty industry gained its current form in the eighties,

when the idea of less harmful and more environmentally-friendly products became a worldwide trend, achieving millions of consumers (Connelly, 2013) due to ethical predicates, such as organic composition, natural scents, social justice concerning the workforce, no animal testing, among others (Roddick, 1991). Despite the controversial discussions on the legitimacy of many products and brands concerning their ethical attributes, the numbers show a positive acceptance of the conscientious appeal for beauty products with a projected mark of US\$15.98 billion in 2020, according to Grand View Resource (2015).

Concerning all that background information and following Klein Group's (2018) definitions, we are considering as ethical cosmetics as three basic categories: natural, organic and vegan. Further details on each one's characteristics can be found in our literature review. For now, it is important to highlight that while all organic products are necessarily natural, not all natural products are organic (some being made under synthetic raw materials) and while vegan products intersect both natural and organic categories, there are a significant number of products in this category that do not meet natural and organic criteria (Klein Group, 2018).

Following reports by Euromonitor (2018), the green care industry is expected to show significant growth due to:

- a) The decreasing growth rates of the traditional disposable markets or even its decline in certain markets.
- b) Share of organic/natural cosmetics will become bigger and bigger as retailers expand.
- c) Because they tend to be more expensive, green cosmetics movements will have more impact in developed economies. While they will also show increasing growth rates in third world economies, it tends to be slower.

Bigger industry players such as Procter & Gamble are starting to notice this tendency. In 2017, P&G launched pure cotton towels in China under one of its many brands called *Whisper* in response to a demand for less toxic components in women's sanitary products, such as tampons. A Korean feminine group called Ecofem conducted a survey in 2016 to test levels of toxicity in women's menstrual products. Apart from generating a public discussion that led Korean government to take action, Ecofem's research created more interest in sustainable and safe feminine care companies operating in the country (Euromonitor, 2018).

The industry for PCP has a multiple category richness, going from makeup and skin treatments to every-day hygiene care such as tampons, diapers, toothpastes, toothbrushes and waxing. Regarding makeup and skin treatment, some important brands are leading the way towards change. Organic brand Yves Rocher is the sixth in market share in Germany while

WALA Heilmittel GmbH, which is distributed in Brazil, has conquered 2% of market share in the German beauty market. Dr Hauschka is another German certified natural brand worth mentioning. It has achieved 0.4 % share 2017. In the USA, only Urban Decay Cosmetics LLC showed special focus on cruelty free and vegan policies, still there are no indications that the products are natural or organic. Its actual market share is unknown though it had 2% of the market in 2012.

The disposable market is already seeing slower growth rates, and is even declining in certain markets. As consumers shift to organic products, consumption of traditional disposables will decline (Euromonitor, 2018). In the 2017 Consumer Lifestyles Survey performed by Euromonitor (2018), 19% of the interviewed answered they believed organic products are better for them than non-organic, while 26% said they believed organic products are better for the environment than non-organic. Several trends have contributed to the increased consumer interest in natural/organic products. As consumers become more aware of potentially harmful chemicals – both to their bodies and the environment, they search for non-toxic and more sustainable alternatives.

Though there are benefits and optimistic predictions, many barriers exist that limit product adoption. The benefits that drive consumers to purchase premium organic products typically revolve around the health and sustainability aspects. However, cost is a major barrier, as organic products come at a higher unit price on average, which adds up over time. Pricing differentials will continue to be a challenge (Euromonitor, 2018).

The higher price point is a significant limitation for further growth in the natural/organic sector, especially in developing markets where many consumers are not even able to afford the cheaper traditional disposable products. Albeit predictions for organic market share are positive in comparison to disposable market and organic retailers are expected to expand, organic PCP would still have higher impact on developed markets. Emerging and developing countries will still be one step behind due to higher pricing and the ongoing growth of conventional industry (Euromonitor, 2018).

While there's a positive tendency for this sector in the Brazilian market (Mendonça, 2018), its growth is still uncertain. So far, a projection for all Latin America shows that it holds less than 5% of the global market for ethical cosmetics (Ecovia Intelligence, 2018). According to recent data from Natural Tech, the biggest exhibition of natural products in Latin America, there is an understanding that the so-called millennials (people born from 1999 on) are especially interested in reading labels and packages in search for information about sustainable initiatives from the brands and information on the ingredients (Gama, 2018). This is a change



of habits worth investigating.

It was found in previous research papers that a significant number of cosmetic items present risks to the entire biosphere as evidenced by cases such as titanium dioxide used in sunscreen lotions (Weir et al., 2012), links between tampons and TSS (toxic shock syndrome) (Strizhakova & Coulter, 2015) and parabens, preservatives present in the composition of a large number of cosmetics with proven negative impacts on male fertility (Oishi, 2002). As a counterpart, at the same time there is evidence that polyphenols found in nature can provide similar results to synthetic antioxidants, acting in the preservation of cosmetics and personal hygiene items with risk minimization, an important alternative for substitution (Moure et al., 2001).

For the chemical damage caused by cosmetics, Daughton & Ternes (1999) were pioneers at bringing out the importance of studying and understanding the pollution cycle of personal hygiene products, a subject with relatively little academic production for the real impact generated by both disposal of chemical residues and the different types of materials used in the packages (Fonseca-Santos, 2015; Sahota, 2015; Snyder et al., 2003; Yang et al., 2011). It is argued that environmentalists should employ in this case an effort similar to that invested in elucidating the environmental transformation and destination of industrial pesticides and "toxicants" (Daughton & Ternes, 1999).

Another important point to be explored in this field is the use of animal testing to certificate the products' safety for human beings. The rise of concern towards animal abuse gave protagonism to organizations like People for The Ethical Treatment of Animals (PETA). Although we do not intend to discuss the merits of their claims against traditional industry, its impact on public opinion is undeniable (Badyal & Desai, 2014; Bousfield & Brown, 2010; Ranganatha & Kuppast (2012). Primarily for its influence on certain classes of consumers and mainly for having its own certification, the "bunny seal", already adopted for various brands to attest their commitment to animal welfare (PETA, 2019).

Although it already represents a strong and definite tendency for the cosmetics market, little research has been performed in order to comprehend who are the consumers behind such growth according to our reviews. Our research on Elsevier's Scopus, Web of Science and specifically Journal of Consumer Research only returned one article directly related to the search keywords "ethical cosmetics" (Maggioni et al, 2013). The terms "natural cosmetics" and "organic cosmetics" returned a total number of nine studies (Cervellon & Carey, 2011; Connely, 2013; Fonseca-Santos et al., 2015; Fourati-Jamoussi, 2015; Ghazali et al, 2017; Thompson & Kidwell, 1998; Schuitema & DeGroot, 2014; Yeon Kim & Chung., 2011).

Of those, six were focused in product attributes.

Albeit there are studies developed exploring sustainable alternatives in production at Brazilian beauty industry, they are mostly devoted to *Natura* Co. (Hernandez & Rabinovici, 2013; Nakahira & Medeiros, 2009) and focus primarily in managerial changes, not properly related to the product itself or consumer evaluation. Furthermore, *Natura* Co. has recently acquired Avon, which is still involved with animal testing and is well-succeeded in the Chinese market, leaving a discussion for how such guidelines will be applied after the fusion (Barbosa, 2019).

Because Brazil is privileged with an abundance of natural resources (Fonseca-Santos, 2015), there is a proliferous environment to promote and empower social engagement in more sustainable and ethical alternatives of production for beauty industry. For such task, however, it is necessary to provide more data on consumer values to have a clarification on what customers expect from an ethical product in terms of attributes. Therefore, our research problem involves understanding what consumer prefer in ethical cosmetics and what personal values lie behind those choices.

At the same time, by investigating a specific segment of ethical consumerism, it is possible to re-evaluate how sustainable initiatives are being perceived in contemporary Brazilian society. Since a considerable number of researches point to an “ideal” green consumer, who consistently bases his shopping practices on a coherent set of values (Fraj & Martinez, 2006), we believe there are evidences of the necessity of checking not only patterns of consumption but the demographic and personal values behind consumers’ choices. Also, very few researchers have explored the importance of product attributes in understanding consumer behavior and sustainable purchase decision, as stated by Sharma and Foropon (2019). This a gap we aim to help filling with the present study.

Due to a lack of studies providing consumer view on ethical cosmetics, we believe the Brazilian market offers a wide range of opportunities for research, some of which we intend to explore in the present work. Our study proposes an investigation of important product attributes for consumers in this market. We also aim to achieve a deeper understanding of the values hold by those consumers by applying a scale specialized in values, which are the main drives behind ethical decisions (Joyner & Payne, 2002; Rangel et al., 2008). Schuitema and Groot (2014, p.58) argue that “consumers’ decision-making process and behaviour in a social dilemma depends on their values (...) and as a result, values are important determinants of green consumerism”.

As an instrument to verify those values, we have chosen to employ the Values,

Attitudes and Lifestyles Scale (VALS) due to its previous successful application in the studies of (a) Fraj and Martinez (2006) in ecological consumer behavior; (b) Bradford et al. (2018)'s studies on women purchasing behavior (our target consumer) and (c) Pektas et al. (2018) research on consumption in alternative tourism locations, which is based in choices directly influenced by a specific lifestyle as addressed by the authors.

According to Fraj and Marinez (2006), VALS dimensions are useful in giving a clearer orientation to companies to explore the ecological consumer segment. We also opted to explore VALS because although it has been tested and used in different cultural contexts, it still lacks validation in Brazil, as stated by Stanford Research Institute as we were informed (see Appendix F). Under these guidelines, we intend to provide new insights of how consumers of such industry behave, thus producing significant knowledge on the developing of conscientious consumerism as well as useful managerial inputs for established and future companies dedicated to ethical cosmetics.

Following introduction, this study contains other five chapters. The first provides a literature review from relevant topics around consumer choice, product attributes, values and lifestyles scale and ethical consumerism. In chapter 3, we discuss the methods adopted to achieve our objectives. In chapter 4, our results are presented with analysis of their content. Finally, in chapter 5 we discuss the conclusion and theoretical advances of our study, as well as its limitations and suggestions for further studies on the topic.

## **1.2 Objectives**

In order to respond to the proposed research problem, this work aims to achieve a general objective and some specific objectives. Those are described below:

### **1.2.1 General Objective**

To investigate the preferences of ethical cosmetics attributes for Brazilian consumers as well as their values in order to elaborate a marketing strategy to best combine those characteristics.

### 1.2.2 Specific Objectives

The secondary objectives that have been outlined in order to support the general objective are the following:

- a) To acknowledge previous data on consumer behavior in the ethical cosmetics market;
- b) To identify the preferred attributes in the Brazilian context and the values shared by consumers;
- c) To establish the weight of each attribute
- d) To delineate a consumer profile for ethical cosmetics in regards to values and preferences found;

### 1.3 Justification

Since the 1960s, ethical consumerism has risen as an important influencer on market decisions, but an unanimous statement of its validity is still far from being achieved as different marketing researchers seem yet to disagree on the impact of customer's initiatives such as boycotts and public support of a certain set of practices (Carrigan, 2001) What seems to be a general agreement is that ethics cannot be ignored since, as History testimonies, many practices that were once limited were turned into regulations such as Phillip Morris acknowledging the existence of carcinogens in their cigarettes or, using the beauty industry as example, the ban on parabens (Oishi, 2002), which first started with groups of interested creating trust issued with the substance to influence public opinion. According to Euromonitor (2017, p. 40), this process is already happening in Europe as "global brands, both mass and premium, are extending their ranges onto green platforms, largely through the inclusion of naturally derived ingredients in their formulations".

Therefore, ethical tendencies must be watched carefully by traditional manufacturers in order to predict future outcomes in the industry in order to plan and act on market changes. As for consumers, it is still unclear what answers are being delivered since most individuals seem to be in favor of more ethical practices in the industry, but what they consider as ethical and how far they would go to fulfill their need for "ethical reward" remain a challenge for marketing research. Some evidence indicate that consumers are strongly active toward boycotts on companies that display a negative social image due to unethical practices but the interest in companies that highlight their commitment to positive behavior do not seems to hold a

proportional response. In other words, being unethical is severely punished by consumers but being ethical has little reward, interpreted simply as “doing one’s job” (Carrigan, 2001).

In a more socially critic approach, Carrington et al. (2016) see ethical consumerism as a way to “save capitalism from itself” (p.23) by the collective change of habits that prioritize needs over desires, demanding from the environment no more that it can deliver without crashing. However, collective concerns may not translate into real market changes. Consumers may judge themselves as conscientious about ethical attributes but that does not mean their purchases will reflect this interest. What lies in the gap between what they say and what they do is a subject yet to be explored.

It also relevant that the ethical cosmetics niche provides different attributes to attend various demands, but although pulverization is a definitive cultural tendency of our times (Eagleton, 2014), the managerial implications are much more sensitive, meaning the finding of a common ground of dominant attributes would decrease costs and optimize marketing efforts. Furthermore, to direct strategies into more aggregating attributes one depends on identifying each one of them and then measure how much each one’s weight influence the purchase.

Moreover, a literature review performed by Liobikiene and Bernatoniene (2017) has found that the majority of papers about sustainable products were published from 2013 to 2016. Albeit there is still a considerable gap in information about ethical beauty care items, this work aims to explore preferences and values of consumers in the ethical beauty industry in order to establish some patterns for customers’ purchase behavior in this specific environment. This dissertation represents an attempt to bring useful insights on such gap by addressing a specific category of ethical products, but one that involves several ethical issues such as (a) use of toxic ingredients, (b) disposal of poisonous residuals on the environmental and (c) the practice of animal testing and animal derived raw materials (a separation further explained by our findings in section 3.1).

Another important aspect of the present study is the exploration of VALS as an instrument to study a niche of ethical consumerism in Brazil. As our literature review will further discuss, there is an opportunity open to Brazilian researchers to present studies applying VALS into our context. This attempt is also supported by a similar effort employed by Fraj and Martinez (2006), who engaged VALS into a context of ecological consumerism in Spain in order to check its efficiency in this kind of consumer approach and to validate VALS dimensions in the Spanish social context.

The following chapter, Literature Review, will provide the theoretical background employed to achieve the objectives defined in our research, followed by the methods.

## 2 LITERATURE REVIEW

In order to pursue our objectives in this research, we selected relevant literature on the following subjects: consumer choice, product attributes, ethical consumerism and ethical cosmetics market.

### 2.1 Consumer Choice

The first studies on consumer behavior started in the end of the 19th century even though the peak of the most important contributions dates from the 1960's. Since then, this field of research has gained a significant acceleration, being one of the most important subjects among the areas of marketing (Kollat et al., 1970). Schwartz (1991) defines the consumer choice model as a “decision-making” problem, which includes a list of variables deeply described by Kollat et al. (1970) and reaffirmed by Solomon (2006) on the steps of conventional decision-making:

- (a) to recognize a problem;
- (b) to evaluate alternative solutions to the problem, partly by an internal search of information about routine decisions and partly by an external search for relevant information about complex new problems;
- (c) to buy the product or service;
- (d) to evaluate the decision, the purchase and its outcome.

According to Azjen (1991, p.191), “we learn to favor behaviors we believe have largely desirable consequences and we form unfavorable attitudes towards we associate with mostly undesirable consequences”. Therefore, Solomon (2006) concludes that a consumer purchase fundamentally represents a response to a problem.

For San Yap and Yazdanifard (2014) there are different stages to consumer buying behavior between young people (our current target) and older buyers. Their research indicates that younger consumers tend to seek out what products are up-to-the-minute, meaning innovative and modern, as well as seeking status, while the elderly often look for information with friends and acquaintances when they are interested in purchasing a product or service.

Another classic approach to consumer choice “has been to assume a rational decision maker with well-defined preferences that do not depend on particular descriptions of the options

or on the specific methods used to elicit those preferences” (Bettman et al., 1998, p.187). This process, in which the consumer is supposed to have the ability to maximize his or her received value, has been known as rational choice theory.

Kahneman and Tversky (1986) partially agree with this line of thinking, stating that:

(...) people are generally thought to be effective in pursuing their goals, particularly when they have incentives and opportunities to learn from experience. It seems reasonable, then, to describe choice as a maximization process. (Kahneman & Tversky 1986, p. 251)

Rationality in this context “is expressed as internal coherence and logical consistency within a system of beliefs and preferences” (Mellers et al., 1998, p.449). However, there seems to be enough evidence to assume those choices are not exactly rational. According to Mellers et al. (1998), definitions of errors within the rational approach are usually based on three faulty assumptions:

- Rationality is a single correct response: even when theoretical positions are recognized, problems may lack sufficient details for a single correct response. Depending on a subject’s profile in an experiment, an enormous range of answers can be addressed to each question applied.
- Rationality is internal coherence and logical consistency: good judgement is a controversial concept and people tend to not be clear about their interests and values. There are multiple failing indicators involved for it to be a reliable item.
- Rationality is the same for subjects and experimenters: each subject may have a complex background that is not apparent to the experimenter. Hence, each one may conceive different views of a same theme, which may lead to considerable biased outcomes.

While consumers do follow the rational decision-making steps when making some purchases, this is a very reductionist portrayal of consumer choices. The classical model consists on a too much elaborated sequence of thoughts and it is highly unlikely that consumers would follow them every time they buy a product or service. If they did, their energy and concentration would be fully devoted to such task, leaving them with very little time to enjoy their acquisitions *per se*. Our consumption behaviors simply do not always operate with logical purposes (Solomon, 2006).

Nowadays, the most common and well validated models of consumer choice are related to cognitive contexts due to the considerable extension of findings allowed by psychometrics in the last thirty years (Ariely, 2008; Bartels & Johnson, 2015; Kahneman, 2011). Those features are especially interesting when it comes to conscientious behavior. An interesting addition

concerning ethical consumerism was brought by Lee et al. (2016). Their experiments demonstrate that people consider an action, or even take an action (e.g., using a pesticide to eliminate aversive bugs) that might not be good for the environment because they secretly prioritize their self-interests in comparison to their concerns for nature, thus decreasing the likelihood of future related proenvironmental actions. This recent approach is confirmatory of previous understandings such as those of Fuchs et al. (2016) and Paavola (2001) and sustains that ethical behavior by consumers is not sufficient to foment significant changes in the industry for its conflicting outcomes and other complex variables that need to be addressed.

## **2.2 Product Attributes**

According to Keller (1993) attributes are descriptive features that help characterizing a product or service-what a consumer thinks the product or service is or has and what is involved with its purchase or consumption. Therefore, attributes are what the product or service offers or what the consumers tends to think it offers. For Puth et al. (1999, p. 38) “consumers use attributes as the basis for evaluating a product and attributes promise benefits consumers seek when purchasing a product” and “to make comparisons between competitive” brands.

As for marketers, attributes help understand the customers’ evaluation of a certain brand while compared to alternative options. The research on attributes can also provide surprising insights that challenge marketing myopia in organizations. It is not uncommon to prove a well-established idea wrong of what customers want after consulting clients themselves on the matter (Huang, 2019). It is also relevant to mention that false inferences by consumers are another important source of information. Berry et al. (2017) have pointed out previously that the word “natural”, for example, although not having proper guidelines to legitimate use, are commonly interpreted by consumers as “minimally processed, less likely to contain genetically modified organisms (GMOs) and likely to be organic” (Berry et al., p.715).

Another important distinction in marketing literature concerns primary and secondary product attributes. According to Brechan (2006, p. 442) “primary product attributes are essential in providing a solution to a specific problem the customer seeks to resolve and does often identify an object or an event as a specific product or service”, meaning that all attributes that are not essential to solve the customer’s problem can be considered secondary.

For Keller (1993) and Bauer et al. (2008), those features can be categorized in a variety



of ways according to how they relate to the product or service. Product-related attributes are defined as the ingredients necessary for the full functioning of the product or service for the final consumer (thus, primary attributes). Hence, they relate to a product's physical properties or a service's requirements. Non-product-related attributes are defined as external aspects related to the choice of a certain product or service (secondary) as depicted in Figure 1. The four main types of non-product-related attributes are:

- (1) price information
  - (2) packaging or product appearance information;
  - (3) user imagery (i.e., what type of person uses the product or service);
  - (4) usage imagery (i.e., where and in what types of situations the product or service is used)
- (Keller, 1993).

Nowlis and Simonsen (1997) add that:

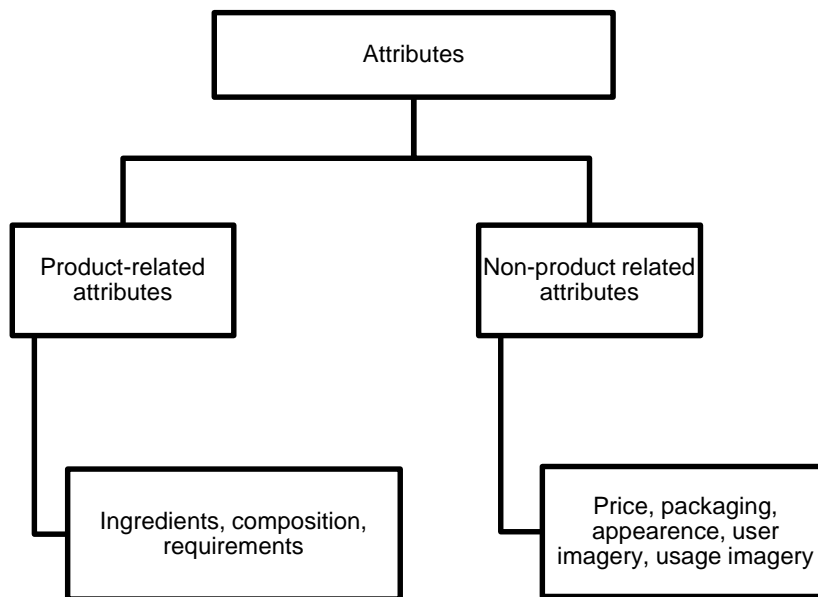
(...) attributes on which consumers can compare options relatively easily and precisely (e.g., option A costs \$50 more than option B, option A has feature X and option B does not), referred to hereafter as comparable attributes, tend to be relatively more important in comparison-based tasks (e.g., choice). Conversely, attributes that are more difficult to compare but are more meaningful and informative when evaluated on their own (e.g., brand name, country of origin), referred to hereafter as enriched attributes, tend to receive relatively greater weight when preferences are formed on the basis of the evaluation of individual options (e.g., purchase likelihood ratings) (Nowlis & Simonsen, 1997, p. 205)

For Alpert (1971, p.185), “with measures of the degree to which products fulfill certain attribute requirements (and of each attribute's influence in determining choice), based on direct questioning of respondents, one could predict overall attitudes toward products relatively easily”. Determinant attributes can be identified through direct or indirect questioning (including motivation research and covariate analysis) and observation / experimentation. In order to access those information, a dual questionnaire can be applied in which respondents may be asked to rate various product attributes in terms of “how important each is thought to be in concrete determining choice and how much difference is perceived among competing products in terms of each attribute” (Alpert, 1971, p. 185).

For a direct approach, researchers ask participants about their reasons for purchase a previously selected product or service and it is assumed that his/her answer will be consistent with the attributes that determined his/her choice. As a following step, selected attributes are classified as determinant if they are among the most frequent mentions or have **the highest average importance** in a set of options (Alpert, 1971).

To make it possible to analyze those features more efficiently, Wu et al. (1988) point to the operationalization of the stimulus variables, proposing three basic steps:

- (1) to select a class of products;
- 2) to find out what features are relevant to consumers for that class of product;
- 3) to gather information on the extent to which each brand offers relevant attributes and what type of benefits they provide.



**Figure 1 – Levels of abstraction for consumer choice**  
Source: Keller (1993)

In what concerns the ethical cosmetics market, a number of attributes have already been discovered by previous researchers, which became a reference for our study. Such attributes were analyzed through Keller's (1993) approach, being classified as Product Related Attributes (PRA) or Non-Product Related Attributes (NPRA). PRA refers to intrinsic characteristics of the product/service such as components, efficacy, appearance, consistency, texture, etc. NPRA are related to extrinsic factors that can influence consumer's buying choices but are not directly involved in the product's essential functions such as price, package, brand, commercial appeal, etc. (Keller, 1993).

As a structural reference, we opted to use the recent study performed by Sakolwitayanon et al. (2018) that performed an investigation of organic rice attributes preference Bangkok, Thailand. With a similar object (a product that involves several non-product related attributes), we tried to apply the successful research framework created and tested by the authors. Their strategy to explore the subject is very similar to that suggested by

Alpert (1971) and Wu et al. (1988). In their study, Sakolwitayanon et al. (2018) explored the key attributes of the product chosen as object by conducting three steps:

- a) Exploratory approach: 17 attributes were selected from literature review, followed by face-to-face interviews;
- b) With the set of attributes obtained in the previous phase, a best-worst survey (BWS) was designed and tested with 50 consumers in order to reduce the number of options for the final study;
- c) BWS method was applied to examine the level of importance of the 13 final attributes filtered by step (b).
- d) Variances in BWS were observed and submitted to clustering due to high heterogeneity in answers.

Thompson and Kidwell (1998) explored the choice for organic produce, finding, at the time, a sensibility by shoppers to price differences between organic items and the traditional ones. The most probable buyers belonged to households with teenagers under eighteen, with graduates and professionals being less likely to engage in such habits.

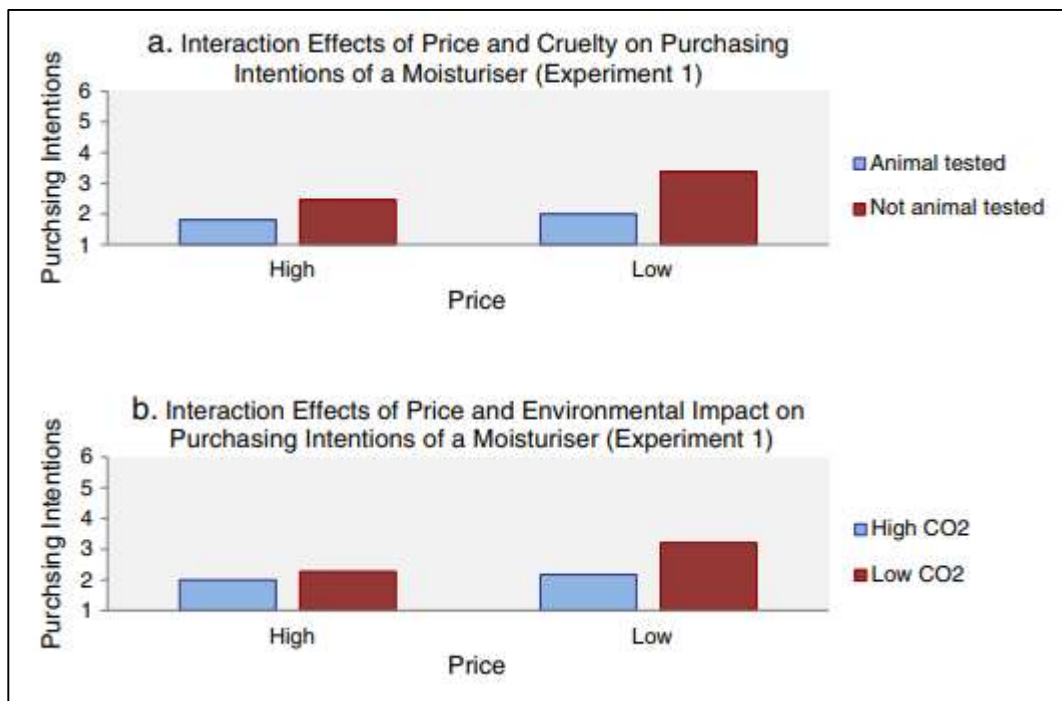
After performing an online survey with 207 individuals on ethical cosmetic products, Yeon, Kim & Chung (2011) found again evidence of the importance of making the products affordable, also highlighting environmental consciousness and product safety as main drivers for the purchase of ecological personal care products. The study performed by Csorba & Boglea (2011) was mainly focused in the potentially hazardous components found in common cosmetics products, such as *Phthalates*, lead, petroleum products, *Mercury* and *Formaldehyde*. Such scientific findings forced the market to adapt and the rise of awareness among consumers contributed to a change in business as usual in the cosmetics industry.

Retailers are responding to greater consumer interest by introducing natural cosmetics, some under their private labels. Drugstores, supermarkets and even discount stores are introducing private label products. Organic food retailers and herbalist shops are expanding shelf-space for natural and organic cosmetics. (...) Customers in Germany spent about EUR 672 million on natural cosmetics in 2008, a significant increase of 9.7% compared to the previous year (2007). The organic and “near-natural” segments already represent around 10% of the German market. The rising environmental consciousness and health awareness among consumers, as well as the desire for sustainability are fueling the growth. (Csorba & Boglea, 2011, p.175)

According to Schuitema and Groot (2014), the fulfillment of ethical attributes is dependent on how effectively self-serving attributes are being satisfied. The experiment conducted by the authors used a moisturizer as an example and price levels were tested against environmental concerns, showing a greater balance between green attributes when prices were

high. By applying the same experiment with lower prices, the ethical attributes generated a greater difference between non-ethical attributes and the ethical ones as exhibited in Figure 2.

The experiment then allowed to conclude that “overall biospheric values [respecting the earth, unity with nature, preventing pollution and protecting the environment] seem to have more impact on how people use product attributes for their purchases than egoistic attributes [being ambitious, wealth, authority, status and recognition]” (Schuitema & DeGroot, 2014, p.62). However, “the influence of green product attributes is less strong when consumers’ self-interest motives are not fulfilled that is, when prices are high and a brand is unfamiliar” (Schuitema & DeGroot, 2014, p.64).



**Figure 2 – Different levels of price affecting ethical choices**

Source: Schuitema & DeGroot (2014)

Gan et al. (2008, p.100) corroborate with those views, adding that: “traditional product attributes such as price, quality, and brand are still the most important attributes that consumers consider when making green purchasing decision”. A focus group conducted by Maggioni et al. (2013) with non-buyers of organic beauty items pointed out a lack of clear information available on the market about the characteristics and specificities of ethical products and of ethical cosmetics in particular. The fact that traditional media do not depict organic products with frequency or depth contributes to deviation and confusion about organic Personal Care Products (PCP).

When Ghazali et al. (2017) investigated consumers' intentions to re-purchase organic PCP, the study found that hedonic value has the strongest influence in purchasing attitude compared to health, safety and environmental values. It was even stronger than the variable "product knowledge", which concerns the product's usability and limitations. Therefore, it is possible to establish that self-fulfilling may have an important correlation with the expansion of the ethical cosmetics' market. For that reason, this variable was brought to our study looking for an understanding of its role in consumer decision according to our sample.

### **2.3 Values, Attitudes and Lifestyles Scale (VALS)**

According to Michaelis (2000), modern human values are directly connected to world views promoted by the Romantic movement that rose in Europe from the 16<sup>th</sup> century on. People started to shape their views towards new ideas such as "aesthetic appreciation, emotional individualism, creativity, self-expression, and the preservation of nature" (p.2), in contrast to positivist views previously brought by the Enlightenment (as the instrumentalist use of the environment for human purposes). The author sustains that such change in human values helped shaping modern western societies and contributed significantly to contemporary debates over sustainable development. For Jeng and Yeh (2016), values are critical because they work as predictors of future behaviors, meaning they have an important role to be played in societal change.

With a general agreement about the need of a more ethical consumerism, all stakeholders around the world started debating which roles are to be played by whom towards sustainability goals. As a part of the discussion, there is a warm debate about the roles of consumers, with some endorsing that consumer change of habits has questionable impact on the system of production (Fuchs et al., 2016; Paavola, 2001), while others show more optimism toward the importance of consumer activism (Dubuisson-Quellier, 2015).

However small, the changes in consumer preference in Europe and the United States (two of the biggest markets in the world), should not be ignored (Euromonitor, 2017). Such movements of consumption are certainly motivated for a new set of values or at least a reformulation of the traditional ones. In this scenario, the investigation of consumer values becomes crucial since they define the product attributes that an individual will seek in a product

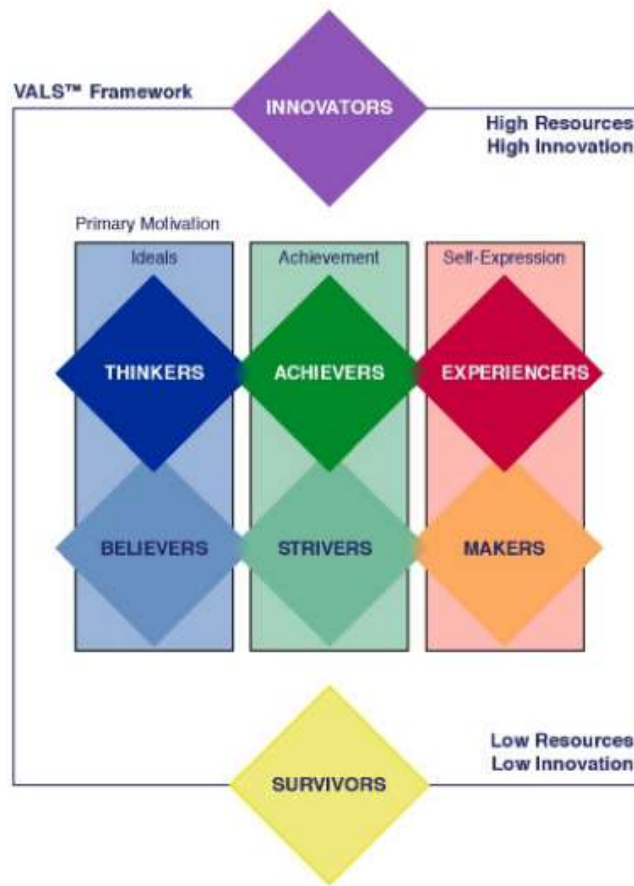
(Blackwell et al., 2001; Jeng & Yeh, 2016).

This work aims to understand the role played by personal beliefs in the development of new practices of consumption in the cosmetics market and in order to do so, a psychometric approach using a scale of values is a recommendable method (Doran, 2009; Fraj & Martinez, 2016; Kahle et al., 1986). Created by Mitchell (1983), the “Values and Lifestyle Scale” (VALS) was developed from Maslow’s need hierarchy and the concept of social character. It was developed by Stanford Research Institute (SRI) as seen in Figure 3, a research organization located in California by the end of the 1970s.

The main objective of VALS was to create a tool that would allow some predictability based on peoples’ attitudes and beliefs. According to Mowen and Minor (1998), VALS offers multiple managerial advantages, such as:

- a) **Positioning and differentiation:** VALS allows marketing managers to find exact targets, thus making it possible to position and differentiate way more accurately.
- b) **Research:** In order for psychographs to be well done, the investment must be made. It is important that the product positioning is appropriate to the segment on which it is acting.
- c) **Marketing mix:** the psychographic characteristics have implications in the marketing mix. The identified psychographic characteristics of the targeted audience should be used to define advertising strategies.
- d) **Segmentation:** this is the most important concept for management use. VALS is an empirical tool that assists in the identification of the target market, dividing it into more homogeneous subgroups with similar needs, will and desire.

Its applications go from marketing strategies to economical and sociological studies. For that purpose, a group of 35 questions (see Appendix B) was designed in order to identify how people’s lifestyles could be connected to their values through statistical and theoretical means as seen in Figure 3. The questions include attitudes as well as demographic aspects. VALS has been previously applied towards consumers of environment-friendly products (Fraj & Martinez, 2006) and has proven to be useful in retail consumer research (Lopes et al., 2008).



**Figure 3 – Structure of VALS**  
 Source: SRI Consulting Business Intelligence (2006)

According to Fraj and Martinez (2006), VALS allows a psychographic segmentation system which is able to predict consumer behavior more accurately than other scales and provides a higher level of analysis by producing eight possible profiles as described in Table 1. The application of VALS has gone from scholarly and scientific circles to many companies, such as AT&T, New York Times, Penthouse, Atlantic Richfield and Boeing Com (Kahle et al., 1986).

**Table 1 - Psychographic profile VALS and its characteristics**

Psychographic Group	Characteristics
Innovators	Successful, sophisticated, active people who take command are interested in growth, seek self-development and self-knowledge, their self-esteem is high. They seek challenge and their lives are characterized by diversity, their purchases reflect the taste for niche products and services and high level.

Thinkers	Mature people, satisfied, comfortable, reflective, value the order, the knowledge and responsibility. They are educated and develop activities that require professional titles, your purchases are based on the question of durability, functionality and value of the products, seeking information in the buying process.
Achievers	People oriented to a successful career, control their lives, value the stability rather than risk, are deeply dedicated to work and family, respect authority and the status quo, and prefer products that demonstrate their success to their peers.
Experiencers	Young, impulsive, vital, enlightened, like the new, the extravagant and the risky. They are avid consumers of clothing, fast food, music, movies and videos, enjoy sports and outdoor recreation.
Believers	Conservative people, conventional, with concrete convictions, based on codes traditionally established, such as family, church, community and nation. Seek live on a moral code, prefer established brands and known products.
Strivers	People who seek motivation, self-definition and approval from the world around them. Unsure of themselves and with few economic, social and psychological resources are concerned with other people's opinions, look for products that mimic those bought by people with higher incomes
Makers	Practical people who have constructive skills and value their self-sufficiency, experience the world working in it, are not impressed by material goods, are politically conservative, suspect new ideas, and buy their products based on value rather than luxury.
Survivors	People of very difficult situation, low level of education and professional qualification, are cautious consumers, but are loyal to their favorite brands. They are often resigned and passive, their immediate concerns are survival and security

Source: Stanford Research Institute (2008)

We performed a research on the web base Scopus to check previous applications as VALS in order to apply a possible validated version from Brazilian authors. Our research has not returned any publications in Brazil with the keyword “VALS”, therefore we admitted that the instrument was not fully explored in the country, a hypothesis supported by Gil and Campomar (2006), who added that VALS is a private instrument, therefore academic researchers have no access to information to investigate its validity and reliability.

Even so, we used Google Scholar to look for other academic production outside Scopus to be certain that VALS has not been previously tested in Brazil. For that purpose, we applied *escala VALLS* (VALS scale) as keywords and filtered articles by Portuguese language. The tool returned approximately 25 studies, from which 2 were performed in Portugal, 3 were repeated (same article, different publications), 5 were graduation essays, 1 had an unavailable link, 4 mentioned VALS but did not apply it and 1 graduation book. All other findings are



described below in table 2 by title, authors, year of publication, method applied and general outcomes.

**Table 2 – Ultimate approaches to VALS in Brazil according to Google Scholar**

Article Title	Authors	Year	Publication	Method	Outcomes
<i>Lifestyles of University Students in Brazil: A Study Pilot</i>	Carvalho	2004	PhD Thesis at Universidade de São Paulo	Exploratory Factorial Analysis	7 factors (Innovator. Oriented to Fashion. Oriented to Moral and Religion, Theoretical, Practical, Leader of a Group, Conservative and Bold
<i>Psychographic Segmentation of consumers of own-brand product consumers from Sao Paolo</i>	Lopes et al.	2011	Revista de Administração FACES Journal, v. 10, n. 3	Exploratory Factorial Analysis (EFA)	7 factors (Innovator, Believer, Thinker, Striver, Experiencer)
<i>Market Segmentation: Analysis of articles about psychographic segmentation</i>	Barbosa and Dias	2015	Administração de Empresas em Revista, v. 14, n. 15, p. 96-100	Qualitative Analysis	Six psychographic studies were identified. Only one applied VALS (Lopes et al., 2011)
<i>Psychographic segmentation through the vals-2 scale: one Analysis of indexed publications on the EBSCO platform between 1985 and 2016</i>	Pugas et al.	2018	Revista Inteligência Competitiva, v. 8, n. 1, p. 108-126	Bibliometric research	The results presented show very few publications over a relatively long period (over 30 years). This finding may indicate that the theme is still not saturated, and can be considered for several future research. An analysis focused in Brazil was suggested, but the study affirms VALS has been poorly explored in the country,
<i>Consumer life style of organic vegetables: a comparison Between vals-2 and AIO</i>	Queiroz et al.	2019	Caderno Profissional de Marketing-UNIMEP, v. 7, n. 1, p. 118-133	Exploratory Factorial Analysis	6 factors, namely “Oriented to Emotion”. “Oriented to Knowledge”, “Oriented to Innovation”, “Oriented to Fashion”, “Oriented to Traditions”, “Oriented to Search”.
<i>Consumer Narcissism and Marketing Strategies: A Theoretical Approach</i>	Debona et al.	2018	XVIII Mostra de Iniciação Científica, Pós-Graduação, Pesquisa e Extensão – UCS	Content Analysis	VALS was considered an useful instrument to evaluate narcissistic lifestyles

<i>Analysis of Consumer Behavior: Survey of the lifestyle of the elderly</i>	Moura et al.	2019	Revista Ciências Sociais em Perspectiva, v. 18, n. 34, p. 73-99	Descriptive Analysis	People were interviewed about how much they agreed with each VALS statement and final calculations pointed to the sample fitting in Thinkers (59.20%), Innovators (48.66%), Believers (46.9%), Strivers (46.26%), Experiencers (44.62%), Makers (41.95%), Achievers (27.01%), Survivors (14%). The research admitted multiple dimensions being related to each individual.
<i>Psychographic segmentation of organic food consumers</i>	Maciel et al.	2016	Revista Pretexto, v. 17, n. 3, p. 90-102	Exploratory Factorial Analysis	7 factors: "Fashion/Status"; "Self-Sufficient"; "Leader"; "Self-Affirmative"; "Improver" and "Traditional"
<i>Psychographic Segmentation and Negotiator Style in International Market Negotiators</i>	Neto and Ribeiro	2010	Revista de Administração da UNIMEP, v.8, n.2, Maio / Agosto – 2010	Qualitative (sample of 20 individuals who completed VALS questionnaire)	The study concluded that there is a correlation between Sparks's negotiating styles and his psychographic profile based on the VALS-2 segmentation proposal.

Source: Google Scholar (2019)

By analyzing our results, we believe it is possible to assume that VALS is not a validated instrument in Brazil, as defended by Gil and Campomar (2006) and SRI (see Appendix F) itself. Therefore, we opted to perform an exploratory factorial analysis using the dimensions previously explored in Brazilian dynamics by Carvalho (2004). The instrument, in which we based our 35 variables, contains the following dimensions:

- a) **Oriented to fashion:** defined by the items "I usually follow the last fashion and tendencies", "I am more fashionably dressed than most people", "I like to dress up-to-the-minute" and "I like people to consider me a fashionable person".
- b) **Oriented to moral and religion:** defined by the statements "As the Bible states, the world was created in six days", "The government should encourage the practice of prayer in public schools", "There is too much sex on TV these days" and "A woman's life is only complete if she is able to provide a happy home to her family". Also, low scores in the statement "I like extravagant people and things" were considered as an indication of attachment to this dimension.
- c) **Theoretical** – dimension defined by the statements "I am very interested in theories",

- “I like to learn about culture, art and History”, “I consider myself an intellectual”, “I like to learn about things even when they do not have any practical usefulness”, “I would like to have a better understanding of how the universe works”.
- d) **Practical** – dimensions defined by the statements “I like to make things that can be useful in my daily life”, “I prefer to do something by myself than buy it”, “I am very interest in how mechanical things work, such as motors”, “I like to make things out of wood, metal and other materials”, “I like to make things with my own hands” and “I like to look in hardware stores and automotive shops”.
  - e) **Leader of a group** – Dimension defined by the items “I like to be responsible for a group of people”, “I have more ability than most people” and “I like to lead others”.
  - f) **Innovator** – Dimension defined by the items “I like a lot of variety in my life”, “I am always looking for exciting things”, “I like to try new things” and “I like the challenge of doing something I never did before”.
  - g) **Conservative** – Dimension defined by the statements “I have to admit my interests are a little narrowed and limited”, “I have few interests” and “I like my life to stay the same week after week”.
  - h) **Bold** – Dimension defined by the statements “I have to admit I like to be the center of attention”, “I would like to spend a year or more abroad”, “I like to have and exciting life”, “I often wish to carry out stimulating activities”, “I am always looking for exciting things” and “I like to do unique or different things”.

## 2.4 Ethical Consumerism and Ethical Cosmetics

Consumerism itself was described by Kotler (1971, p.49) as “a social movement seeking to augment the rights and power of buyers in relation to sellers”. It was born from a series of costumers’ crusades in the first half of 20<sup>th</sup> century looking for more transparency and participation such as Pure Food and Drug Act (1906), the Meat Inspection Act (1906) and the creation of the Federal Trade Commission (1914) (Kotler & Zaltman, 1971).

The so-called “green” consumerism has been debated as a mainstream theme since Fisk (1973) published his *Theory of Responsible Consumption*. According to the author, responsible consumption refers to conscientious and efficient use of resources with respect to the global human population. Nonetheless, in an increasing globalized market, the depletions

of resources are spread through many nations leading to worldwide concerns (Fisk, 1973).

Undeniably, the rise of incomes in more advanced nations is a threat to the biological environment, being more significant than the expected increase in human population. The ecological impact of first world consumers is considerably higher than that of those in the third world. Consumer rights became a priority while their duties were unclear or inexistent. The emergency of a collective solution to the environmental chaos demands efforts from government, business leaders, and consumers (Fisk, 1973).

A research by the Hartman Group found that although more than half of American consumers are familiar with the term “sustainability”, most cannot state what it means. In a sample of 1.606 American consumers, only 5% could name companies that support sustainability values, whereas 12% stated they knew where to buy such products (Sahota, 2014).

Even though some approaches have shown consistency on the idea that young people with a higher degree of education tend to show more empathy to organic products (Diamantopoulos et al., 2003; Thompson & Kidwell, 1998; Yadav & Pathak, 2016), other findings pointed out that married mothers end up being the real buyers due to the economical limitations of the youngest (Rajagopal, 2007). Other consistent findings are the movement for animal welfare, in which women have been proven to have a central role (Devi Juwaheer et al., 2012; Kellert & Berry, 1980; Kruse, 1999; Miranda-De La Lama et al., 2017) and the barriers for men to embrace sustainable consumption due to stereotypes of green products being essentially feminine, which threatens classic masculinity (Brough et al., 2016; Bulut et al., 2017, Shang & Pelozo 2015).

Tadajewski et al. (2011) consider the ethical consumerism movement as one of the many tendencies associated with “postmodern anti-foundationalism”. Its main critique concerns the excessive lifestyles promoted by the increasing levels of consumption. The concept by itself seems directly opposed to the traditional way-of-things in marketing, altering the dynamics of global relations. Ethical consumerism also involves a conflict in which consumers confront their individual interests and collective (and more long-term) interests (Lee et al., 2016; Paavola, 2001; Schuitema & DeGroot, 2014).

In a social dilemma, each consumer faces a pay-off. Each individual consumer will have the highest pay-off when acting in line with one's self-interest, and this is higher than acting in line with the collective interests. However, if all consumers follow their self-interest, all consumers will be worse off; and, if all consumers follow the collective interests, everybody will be better off in the long term (Schuitema & De Groot, 2014, p.57).

Furthermore, although ethical attributes generally have some degree of influence in consumers' purchasing intention, it only grows consistently when a consumers' perception about the product is positive in an individual level (Connelly, 2013; Ghazali et al., 2017; Lee et al., 2016; Schuitema & De Groot, 2014;). Another important dimension concerns private and governmental labels and certificates. According to Sahota (2014, p.8), "cosmetic and ingredient companies are increasingly scrutinized by retailers and Non-Governmental Organizations (NGOs) looking to safeguard consumer interests". For that purpose, Zhang et al. (2014) enforce the importance of segmentation and profiling of green consumers in order "to enable not only businesses, but also environmental organizations and governmental agencies to develop positioning and marketing-mix strategies" (Zhang et al., 2014, p. 2).

As Brazil has no governmental rules for production and distribution of natural, organic and vegan products, we are therefore using definitions from Kline Group (2018) reports, some which derive from the United States Department of Agriculture (USDA). The department has resolutions for organic cosmetics only, not providing specifics about natural and vegan production, which may generate misleading claims and foment false inferences (Berry et al., 2017). According to USDA (2008), those guidelines are for now being provided by private labels. The classification by Kline Group (2018), for example, establishes that:

- a) Natural cosmetics: predominantly synthetic ingredients with a small percentage of plant material. Considered in general as "natural-inspired".
- b) Organic cosmetics: contains only natural and organic ingredients, therefore considered "truly natural".

National certifiers such as *Inspecções e Certificações Agropecuárias e Alimentícias* (IBD, 2018) have more specific guidelines. According to it, "organic" cosmetics must contain at least 95% of purely organic ingredients and claims such as "Made with ingredients or organic raw material" indicate the product must contain at least 70% of purely organic ingredients, while "natural" would be related to products with less than 70% of organic ingredients.

However, no governmental standards have been applied in order to establish commercial barriers, making it optional for manufacturers and consumers to accept those private certifiers' definitions. As for vegan cosmetics, they should not contain animal

byproducts or be associated with animal testing (Vegan.com, 2018), which seems a well spread tacit rule among manufacturers and consumers (Ulusoy, 2015), even if there is also a lack of legal inspection of such claims.

Since the mid-1990s, concerns about a cleaner toxic industry has begun to permeate various sectors of the economy and to foster public discussion. Publications of scientists such as James H. Clark (1999) and Paul Anastas and Nicolas Eghbali (1998) have guided new perspectives for Chemistry (the "green chemistry"), proposing guidelines that have become fundamental in hardening US environmental laws through the Environmental Protection Agency (EPA).

International standards for organic cosmetics production are available through ISO 16128, which provides guidelines on definitions and criteria for natural and organic cosmetic ingredients and products (Yapar, 2017). The document strongly recommends that green chemistry principles be observed in such processes.

It is commonly assumed that organic goods should be environmentally safe, produced using environmentally sound methods that do not involve synthetic inputs such as pesticides and chemical fertilizers, without genetically modified and unprocessed organisms using irradiation, industrial solvents or additives (Paul & Rana, 2012). The role of ethical beauty segments is fundamental since it encompasses all environmental angles as long-term sustainability, waste reduction, recycling, animal welfare and, more recently, water efficiency (Szalai, 2017). Meanwhile, some organic products even include biodegradable cardboard applicators. When such package concerns are not well driven, however, organic companies may face more competition from reusable alternatives (Euromonitor, 2018).

Despite of a general feeling that organic substances are less harmful for human health, it is important to warn that such materials can cause specific plant allergies or rashes. They also have limited effect due to weaker preservative properties, even though the substitution of synthetic materials is undeniably significant for biodegradation purposes, especially those related to petroleum-based substances (Numata, 2017).

As a consequence of such complexity, reports from Euromonitor (2018) demonstrate that such strict practices of production may lead to prices of organic products being even four times higher than the traditional ones. In this scenario, organic brands are challenged to prove that the trade-off is worth the cost, facing inevitable comparisons with the performance of conventional products.

It was identified that consumers of organic beauty products are pro-active, meaning they look for information on blogs and social media to be completely confident about the

attributes of a product. Thus, internet has gained a central role on spreading news about the sector and which brands can be trusted (Euromonitor, 2018).

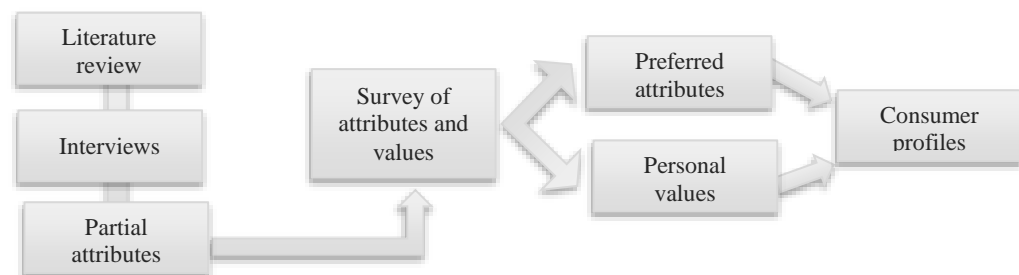
In the next section we will explain the methodology adopted to identify and confirm the most and least preferred attributes and psychological values of our sample. Further, we will discuss the outcomes and their relation to previous findings and secondary data.

### 3 METHODOLOGY

Concerning the methodological choices, our research is a mixed-methods study: it counts on a qualitative and a quantitative phase. According to Bryman (2006), the combination of results provided for the two steps of analysis can offer meaningful insights, therefore becoming a powerful strategy to strengthen the validation of the study. The preference for this kind of approach was addressed by Greene et al. (1989), who pointed out 5 main justifications for opting for this research strategy:

First, **triangulation**, that provides corroboration (or at least seek for it) in combining qualitative and quantitative data. Secondly, **complementarity** seeks to clarify the findings of one method by the other, looking for enhancement. A third justification concerns **development**, which relies on one method helping to broadly construe the other through sampling, implementation and measurement decisions. The following advantage is **initiation**, which combines the questions and results provided by both qualitative and quantitative steps in order to establish paradoxes, contradictions and other perspectives. Finally, **expansion** seeks to employ different methods to explore a wide range of enquiries (Greene et al., 1989).

The findings on our qualitative phase were applied to the following phase as indicated in Figure 4, which consisted on selecting the major attributes among those we found previously through literature review. As a part of our questionnaire (available on *Appendix B*), we also included VALS, which is further described in session 3.3.



**Figure 4 - Design of research**

Source: adapted from Sakolwitayanon et al. (2018)



### 3.1 Qualitative Research

As defined by Malhotra (2007, p. 139): “qualitative research is an unstructured exploratory research methodology based on small samples that provides insights and understanding of the problem setting”. Even though external sources of information can provide important insights and direction for a research, their contribution may not be sufficient to define a research problem. For such occasions, qualitative research can be used as an important to establish a better comprehension of the subject. Its use is recommended for smaller samples with the application of techniques as focus groups or detailed interviews (more personal and detailed).

This phase is particularly important for its high potential of offering new discoveries, ideas and perceptions (Malhotra, 2007). According to Sutrisna (2009, p.11): “qualitative methods have been considered capable of studying complex situations, particularly involving human beings and therefore yielding rich findings”. Furthermore, this phase provides the opportunity to:

- a) gather published content such as previous researches on the matter.
- b) collect opinions of specialists or professionals with relevant involvement with the industry we aim to study through semi-structured interview.
- c) collect information from consumers, both loyal and casual.
- d) bring the final list of attributes to a final review by previously consulted specialists as suggested by Wu et al. (1988).

#### 3.1.1 Data Collection

This first step for this phase was a selection of previous attributes discussed in the literature review. After compiling the data, we started performing semi-structured interviews. It was believed that the inputs from respondents could confirm previous findings and also provide more hypothesis, also bringing to light some important points that were not approached in the previous studies. Another helpful characteristic of semi-structured scripts is that the answers are not restricted to a conditioned set of alternatives, allowing the respondent to express

himself more openly (Manzini, 1990).

In order to achieve such results, however, a well elaborated script is extremely necessary, not only as an instrument of collection, but as a general guidance for researchers (Malhotra, 2007). Having this in mind, we elaborated a lean script (see *Appendix A*) in order to provide an open space for respondents to share their experience honestly. In other words, our intent was to provide a topic and then observe what ideas respondents could bring naturally, without limiting their train of thoughts. By following the essence of an exploratory approach, we assumed respondents had many new relevant points of views to share and then giving them liberty to express themselves was a better strategy.

For the confirmatory interviews we selected 30 individuals of interest: 15 manufacturers and 15 consumers of ethical cosmetics. From the first group, 3 individuals were from medium companies, while all others had small local or internet-based businesses. The bigger companies were interviewed during 2018 Natural Tech Expo in Sao Paulo. The other manufacturers were interviewed in urban expositions, telephone and videoconference sessions.

Consumers were interviewed in the same events where the small manufacturers were present with choice by convenience. No demographic filters were applied, but we could identify that the majority of respondents were female and less than 40 years old. The interviews were mainly based on a small script (see *Appendix A*), personalized for each class of respondent.

Participants were advised they could speak freely. No interventions were made in order to avoid inducing respondents to mention characteristics beyond those they could mention by themselves. As the interviews went by, the absence of price as an important part of consumer choice became evident and, at a certain point, the subject became part of the interviews in order to clarify the issues.

We selected our samples of respondents by a) search engines (e.g. Google), b) social media, such as Facebook pages and groups and Instagram hashtags (e.g. *#naturalcosmetics*). The following phase was to schedule meetings with reachable local brands and online interviews with manufacturers from other states. In order to optimize our efforts, we visited Natural Tech 2018 in Sao Paulo, an annual fair dedicated to natural goods in Brazil. At the occasion, we interviewed three of the pioneer brands in the ethical cosmetics market. We also took the opportunity to talk to some consumers in order to understand why they were opting for this category of products. This first phase of collection went from June to November (2018) and involved 11 manufacturers and 4 consumers.

Back to the city of Porto Alegre, we opted to finish our interviews at the monthly Vegan Exposition in January (2019). There, we interviewed other 4 manufacturers and 11

consumers, thus finishing our qualitative phase of selection of attributes. Individuals' identities and brand names were kept anonymous to preserve market strategies of the companies that accept to join our research.

### **3.2 Quantitative Research**

According to Fonseca (2002, p.20), "quantitative research recurs to mathematic language to describe the causes of a phenomenon, the relations between variables, etc.". This model of research is characterized by rigid patterns of theoretical background and hypothesis, although its findings' contributions are instantaneous, losing considerably its validity through time.

A survey is chosen as the procedure to collect the data, looking to "obtain data or information on the characteristics or opinions of a certain group of people, which is interpreted as a representation of the targeted population" (Fonseca, 2002, p. 33). Our quantitative research involved two phases. Apart from demographical inquiries, we concentrated on two main phases. First, identifying consumers' preferred attributes applying a Best-Worst Scale (BWS) matrix. Then, we displayed the VALS questionnaire in a Likert scale from 1 to 7 in order to spot the values shared by individuals in our sample.

To provide more details on each of those phases, we described then properly in the next two sections.

#### **3.2.1 Best-worst Scaling**

According to Cohen (2009, p.4) "it is not possible to draw reliable conclusions concerning the importance of issues or attributes" unless "there is a possibility for respondents to make trade-offs between attributes". The BWS approach, also known as maximum difference scaling, allows respondents to choose only the most and the least preferred item in each choice set. Then, they are required to make trade-offs between the options (Finn & Louviere, 1992).

According to Lee et al. (2007), BWS assumes respondents behave as if they examine

every pair of items or options in each set and then choose the most distinct and maximally different pair. The most important feature of this technique is that it helps solving the problem of many items having similar weights.

Another advantage concerns its efficacy in conducting cross-cultural studies in consumer behavior. This method also reduces respondents' style effects, as respondents cannot consistently use the middle points and points of one end of the scale (Auger et al., 2007).

### **3.2.1.1 Designing BWS Surveys**

The differences of total best and total worst frequencies are calculated for each item (see Figure 5). As long as the experimental design is balanced, simply adding of the number of times an item is chosen as worst and subtracting that from the total number it is chosen as best provides a scale that is about 95% accurate as using multinomial logit. Each attribute appears exactly the same number of times in all rows of choice sets (Lockshin & Cohen, 2011).

Each respondent completes a survey including all choice sets plus demographic and product category usage questions. Then, a best-worst score is computed for each one of the items for each person by subtracting the number of times each item was chosen worst from the number of times it was chosen best. The scores for each item varies between extremes of the number of times they appear in the choice set. Therefore, the average best-worst scores range from positive to negative values (e.g. +4 to -4 when the item appears 4 times), but the interpretation is one of a continuous scale from most to least important. (Lockshin & Cohen, 2011).

Quality of life state #3		
Best		Worst
✓	You can have a lot of the love and friendship that you want	
	You can think about the future with only a little concern	
	You are unable to do any of the things that make you feel valued	✓
	You can have a little of the enjoyment and pleasure that you want	
	You are able to be completely independent	

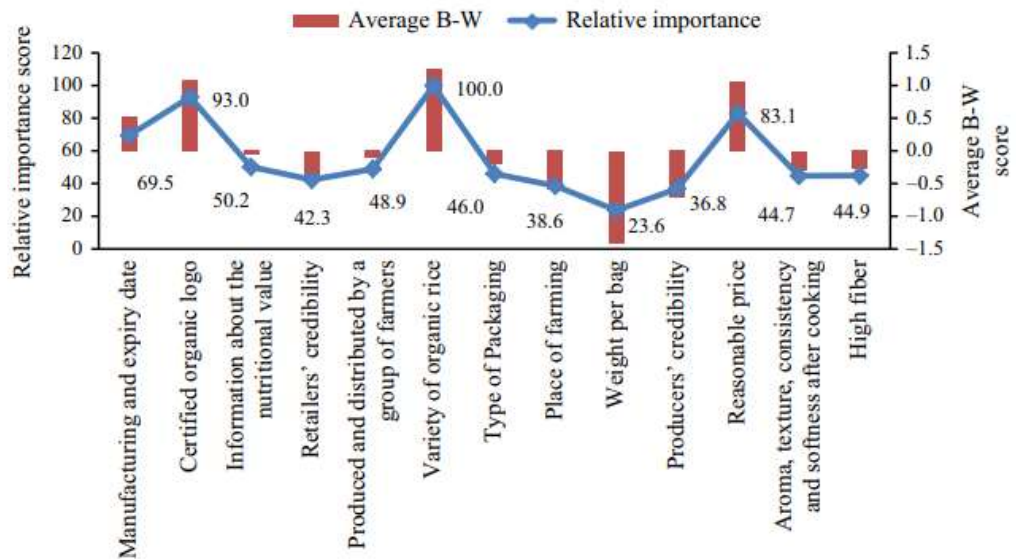
**Figure 5 - BWS research design**  
Source: Flynn et al. (2007)

### 3.2.1.2 BWS Analysis

According to Flynn et al. (2007, p.175), “the statistical model underlying best-worst scaling assumes that the relative choice probability of a given pair is proportional to the distance between the two attribute levels on the latent utility scale”. The average BWS score is calculated by dividing the totals of BW scores by the numbers of respondents and the frequency that each attribute appears in the design of the choice sets when random arrangements are adopted (Flynn et al., 2007).

According to Bock (2019), BWS belongs to a statistical tool known as MaxDiff. Count analysis of MaxDiff data works by counting up the number of times an alternative is chosen as best minus the number of times it is chosen as worst. This is adequate for non-random sets of choices, which was the case for our study. For that purpose, online surveys are not only admitted but desirable since respondents can be warned to respond properly in case of any mistake, which diminishes the number of invalid questionnaires (Auger et al., 2007).

Another important strategy of analysis involves relative importance of each item. According to Sakolwitayanon et al. (2018) following previous recommendations by Alpert (1971), after ordering the set of preferred attributes, the researcher can identify the order of next choices once the most desirable attribute is fulfilled. Thus, the first most desirable attribute is benchmarked as 100 and each other attribute has its importance measured relatively to the first, as exemplified in Figure 6:



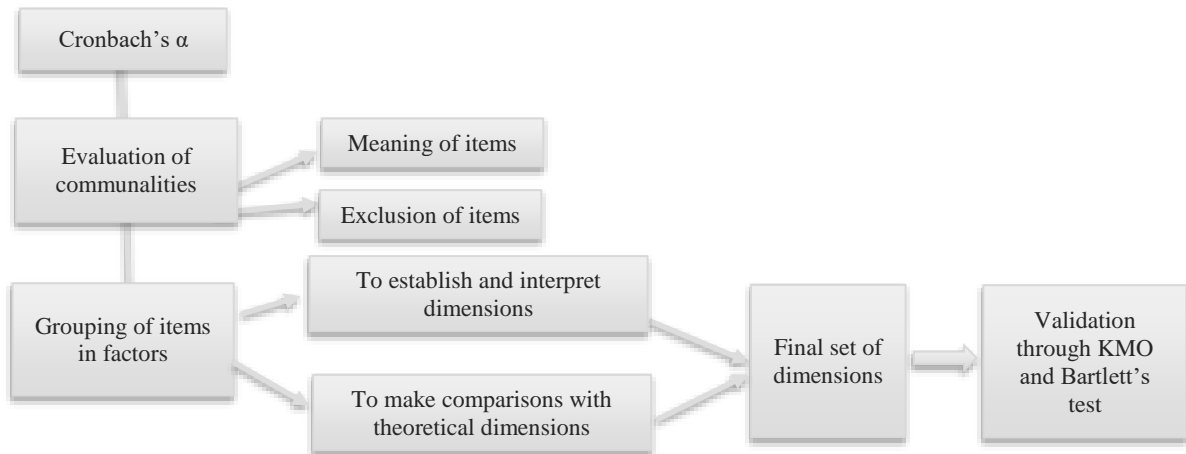
**Figure 6 – Relative importance of attributes for organic rice**

Source: Sakolwitayanon et al. (2018)

### 3.2.2 VALS Collection and Analytic Procedures

Although originally oriented by the psychological profile of the American population, VALS has been tested in Brazil to adequate its dimensions to our social environment. Those experiments originated the 8 dimensions of Carvalho (2004), which we defined as our pattern. All 35 VALS items were exhibited with scores from 1 to 7 in a Likert scale, with 1 suggesting “it is nothing like me” and 7 “it describes me perfectly”. Questionnaires were shared in social media, especially Facebook groups devoted to natural, organic and vegan cosmetics. Influencers in this sector were also contacted in order to publish the content to as many consumers as possible.

One of the methods to analyze Likert scales is factorial analysis. This method of evaluation “supposes that the observed variables (measures) are linear combinations from some underlying source-variables (factors). Namely, it supposes the existence of a system of underlying factors and a system of observed ones” (Kim & Mueller, 1978, p. 7-8). Besides that, there are two important distinctions in factorial analysis: there is a confirmatory and an exploratory strategy. (Tabachnick & Fidell, 2007). In our research, we perform an exploratory type of analysis since our instrument (VALS) is being tested to measure its efficiency at explaining our model. Our complete factorial analysis strategy is explained in Figure 7:



**Figure 7 - Factorial analysis strategy**

It is recommended by Hair et al. (2009) that samples be superior to 50 observations and 100 would be an adequate number of cases for more valid results. Also, the division between number of cases and quantity of observed variables should exceed 5 to 1. (Hair et al, 2009). All our analytic developments followed those guidelines and were performed using IBM SPSS© and R© from extracted data of the survey platform Qualtrics©.

### 3.2.3 Hierarchical Cluster Analysis

In order to obtain more details on the profile of our respondents, we opted to perform a cluster analysis. Cluster analysis is a technique of interdependence that seeks to group elements or variables in internally homogeneous groups, heterogeneous among each other and mutually excluding following a certain measure of similarity or distance (Fávero et al., 2009). The basic steps to perform cluster analysis are: (a) analysis of objects and variables to be grouped (including identification of outliers), (b) selection of a measure of similarity or distance between pairs of objects; (c) selection of an algorithm for clustering: hierarchical or non-hierarchical; (d) selection of the more appropriate number of clusters; (e) interpretations and validation of the clusters formed (Fávero et al., 2009)

Hierarchical clustering consists on combining cases into homogeneous clusters by merging them together one at a time in a series of sequential steps while non-hierarchical

techniques start with a set of cluster means and assign them to the closest cluster mean. This method also allows the researcher to test different numbers of clusters in order to choose an optimized option instead of establishing a number of clusters *a priori* (Yim & Ramdeen, 2015). Our choice for the hierarchical method derives from Sakolwitayanon et al. (2018), who tested different methods of clustering and found this one to be more effective.

## 4 RESULTS AND ANALYSIS

This section is divided in the three parts. We first evaluate the qualitative outcomes that served as a first step for the study, then we discuss the socio-demographic characteristics of respondents, followed by BWS results and, finally, VALS outcomes by cluster analysis.

### 4.1 Qualitative Phase

Based on the methodology of the study carried out by Sakolwitayanon et al. (2018), we started our research with a literature review. This item presents 13 attributes, which are listed in table 3, followed by the classification between PRA and NPRA for future comparisons with the results obtained from the interviews with the selected individuals.

**Table 3 - Literature review on important attributes for ethical cosmetics consumers**

Attributes	Description	Classif.	Author(s)
Eco-friendly components	Ingredients that are extracted from nature in processes that do not present harm to ecosystems.	Product Related Attributes (PRA)	Thompson & Kidwell (1998) Yeon Kim & Chung (2011)
Non-harmful ingredients	Ingredients that do not present attested or potential risks to human health (e.g. parabens and petrolatum).	PRA	Csorba & Boglea (2011) Ghazali et al. (2017) Schuitema & DeGroot (2014) Yeon Kim & Chung (2011)
Impacts on the environment (i.e.: biodegradable particles)	The product's residues do not present risk to the environment after discard or have a difficult and slow degradation.	PRA	Ghazali et al. (2017) Csorba & Boglea (2011) Yeon Kim & Chung (2011) Connelly (2013)
Sustainable Packaging	The product's package is recycled/recyclable or contain easily degradable material.	PRA	Csorba & Boglea (2011) Ghazali et al. (2017) Schuitema & DeGroot (2014) Yeon Kim & Chung (2011)



Price difference towards the traditional counterpart	How tolerable the price gap is between other options Also, the consumers' financial limitations may impose an obstacle.	PRA	Thompson & Kidwell (1998) Connelly (2013) Maggioni et al. (2013) Schuitema & De Groot (2014)
Certification (sign or mark in the label)	A governmental or private label that attest the validity of the information provided by the manufacturer.	PRA	Yeon Kim & Chung (2011)
Performance	How/if the product fulfills the expectation on its functionalities and differentiations.	PRA	Thompson & Kidwell (1998) Connelly (2013) Maggioni et al. (2013) Schuitema & De Groot (2014)
Image of the brand	If the company is well-known and has practices related to positive attitudes and/or supports social/environmental initiatives.	Non-Product Related Attributes (NPRA)	Thompson & Kidwell (1998) Connelly (2013) Schuitema & De Groot (2014)
Hedonic (i.e.: "I want to be part of the change")	People adopt the product to feel good about themselves for engaging in a positive trend of consumption.	NPRA	Connelly (2013) Ghazali et al. (2017)
Product knowledge	The exposition of the products' benefits and limitations is presented in a clear and trustworthy manner. It is about what the product offers and what can be expected or not (e.g. "In what does it work differently?", "how should I use it to obtain better results?")	NPRA	Thompson & Kidwell (1998) Connelly (2013) Maggioni et al. (2013) Ghazali et al. (2017)
Subjective Norms	A consumerism motivated by collective pressures of a certain social group the consumer belongs to.	NPRA	Thompson & Kidwell (1998) Connelly (2013)
Intentionally abstaining from traditional beauty industry	Personal beliefs and ideological conflicts towards the practices of traditional manufacturers.	NPRA	Connelly (2013) Ghazali et al. (2017)
Tests on Animals	Dermatological tests of products are not performed on animals.	NPRA	Ghazali et al. (2017) Schuitema & DeGroot (2014)

As verified in previous studies, there are an important range of non-product related attributes that are well evaluated by consumers in this market. In our review, it was found that non-product related attributes represent 46% of the attributes mentioned by consumers in terms of motivation to perform a purchase. Although the attribute "impacts on the environment" could be classified as a concern that exceeds the product's basic traits, we believe that the chemical constitution is an intrinsic part of the product and, therefore, gathering information about this aspect incurs in a hybrid thinking between environmental conscious and product knowledge. That way, we opted to keep this attribute as PRA.

The following step was to perform the confirmatory interviews. By the fourth interview, a final question was included to understand why the manufacturer or consumer had not mentioned price as an important attribute. As a clarification, we received some important

insights such as:

I don't think my products are much more expensive than the ones of Natura or Boticário [two of the biggest cosmetics retail companies in Brazil]. I went there and checked as I was moving on with my business and it's not that different in price. Some of the deodorants I sell are even cheaper than theirs. (C.R - Small business owner)

We show the customer how our product works and how different it is from what they are used to. We care for all parts of the production process. We care for the environment and animal welfare. When we tell customers about our certificates and how our products are limited because our raw material is organic and we just can't produce that fast, people comprehend why we have a more expensive product (R.S. – Franchise representative)

The people who buy from me...they have dealt with allergies their whole lives. They are used to pay a lot for imported cosmetics, so that is why I think they don't get so surprised with my products' prices. Also, I don't think anything I sell is so much more expensive than other big traditional brands (C.P – Online business).

Consumers were consistent with those views, as the quote below demonstrates:

I understand that it has to be a bit more expensive. I don't think this is a problem. I think the real problem is when you pay a high price and then the product doesn't work as it was supposed to. You feel disappointed for paying much and not getting the results. As much as I love animals, I can't support the brand if their product doesn't have quality (A. L – Vegan consumer)

After our inquiries, we went back to the attributes found on the literature review, keeping those that were mentioned by respondents (non-harmful ingredients, tests on animals, impacts on the environment, hedonistic attitude, product knowledge, subjective norms, performance, certificates and intentionally abstaining from traditional beauty industry) and eliminated those that were not (sustainable packaging, image of the brand, price difference towards traditional counterpart and convenience).

We also considered the inclusion of attributes that were not discussed previously in the literature, such as “no animal tests nor animal ingredients”, as we identified in our interviews that many individuals of vegan orientation also considered the origin of ingredients while making purchasing decisions. We then ended with a final set of 10 attributes (see Table 4) to be considered for our next step: an online survey using best-worst scale.

**Table 4 – Final set of attributes**

Reference	Step 1 – Literature review	Step 2 – Interviews
Yeon Kim & Chung (2011) Csorba & Boglea (2011)	Non harmful ingredients (health risks)	Non harmful ingredients
Csorba & Boglea (2011) Ghazali et al. (2017)	Tests on animals	Tests on animals
Interviews	-	No animals tests nor animal ingredients*

Csorba & Boglea (2011) Ghazali et al. (2017) Connelly (2013) Yeon Kim & Chung (2011)	Impacts on the environment (i.e. biodegradable particles)	Impacts on the environment
Csorba & Boglea (2011) Ghazali et al. (2017) Thompson & Kidwell (1998)	Sustainable packaging	-
Ghazali et al. (2017) Connelly (2013) Thompson & Kidwell (1998)	Hedonic attitude (e.g. “I want to be part of the change)	Hedonic attitude
Yeon Kim & Chung (2011) Ghazali et al. (2017) Connelly (2013) Thompson & Kidwell (1998)	Product knowledge (e.g. information on the product’s differentiation and alleged benefits)	Product knowledge
Yeon Kim & Chung (2011) Ghazali et al. (2017) Connelly (2013)	Subjective norms (social pressure to engage in a certain behavior)	Subjective norms
Thompson & Kidwell (1998)	Performance	Performance
Connelly (2013)	Image of the brand	-
Connelly (2013) Ghazali et al. (2017)	Price difference towards the traditional counterpart	-
Yeon Kim & Chung (2011)	Certification (i.e. sign or mark in the label)	Certification (i.e. sign or mark in the label)
Thompson & Kidwell (1998)	Convenience	-
Connelly (2013)	Intentionally abstaining from traditional beauty industry	Intentionally abstaining from traditional beauty industry
*a broader attribute on animal welfare was found to be important since participants demonstrated concern about ingredients of animal origin as well as tests on animals..		

After carefully analyzing the characteristics of BWS surveys, we considered the item “intentionally abstaining from traditional beauty industry” as a broad concept, which could ultimately be considered too vague by respondents, while other attributes were more specific about real-life scenarios of choices. Therefore, our final model contained the items described in the next section.

#### 4.1.2 BWS Final Set of Attributes

After submitting attributes from literature review to the evaluation of entrepreneurs and consumers, we ended up with 9 main BWS attributes presented as statements (Figure 8), in a Max

Diff format at online platform Qualtrics©. The phrases were, in order and accompanied by their variable name, “The product really works” (PER), “The product has not been tested on animals” (TOA), “The product has not been tested on animals and do not contain items of animal origin” (ORIG), “the product shows knowledge on use and its limitations with clarity and transparency” (PK), “The product and its residuals do not cause negative impacts to the environment”(IMP), “the product does not contain ingredients that could present risk to my health”(HEA), “the product contains seals and certificates in its package”(CER), “the product makes me feel like I am doing my part for the planet”(HED) and “the product is valued in my social group” (SOC).

Most important		Least important
<input type="radio"/>	The product really works.	<input type="radio"/>
<input type="radio"/>	The product has not been tested on animals.	<input type="radio"/>
<input type="radio"/>	The product has not been tested on animals nor contains items of animal origin.	<input type="radio"/>
<input type="radio"/>	The product shows knowledge on use and its limitations with clarity and transparency.	<input type="radio"/>
<input type="radio"/>	The product and its residuals do not cause negative impacts to the environment.	<input type="radio"/>
<input type="radio"/>	The product does not contain ingredients that could present risk to my health.	<input type="radio"/>
<input type="radio"/>	The product contains seals and certificates in its package.	<input type="radio"/>
<input type="radio"/>	The product makes me feel like I am doing my part for the planet.	<input type="radio"/>
<input type="radio"/>	The product is valued in my social group.	<input type="radio"/>

**Figure 8 – Attributes matrix on Qualtrics© using BWS**

## 4.2 Socio-demographic Characteristics of Respondents

The total number of respondents was 302. The majority of respondents were female, single and undergraduates or higher. As for the levels of income, 76 % of respondents earned between one and four Minimum Income Salaries (MIS), which goes from US\$263.39 to US\$1.053.00. Considering age, respondents were mostly between 18 and 34 (78,84%). The study focused on working respondents and 79.14% had no children. Full reports are described in Table 5.

**Table 5 – Demographic reports of the sample**

<b>Category.</b>	<b>Variable</b>	<b>N</b>	<b>%</b>
<b>Sex</b>	Female	276	91.39
	Male	26	8.61
<b>Education</b>	Complete High School	18	5.96
	Undergraduates	106	35.10
	Bachelors	70	23.18
	Post-graduation	108	35.76
<b>Marital status</b>	Single	203	67.22
	Married	78	25.83
	Other marital statuses	21	6.95
<b>Income</b>	Until 1 MIS	70	23.18
	From 2 to 4 MIS	162	53.65
	From 5 to 10 MIS	49	16.23
	More than 10 MIS	21	6.95
<b>Age</b>	From 18 to 24	97	32.12
	From 25 to 34	129	42.72
	From 35 to 44	59	19.54
	From 45 to 54	17	5.63
<b>Children</b>	No	239	79.14
	Yes	63	20.86

### 4.3 BWS Results

The average BW scores demonstrated that “The product really works” (PER) was considered the most important attribute, followed by “The product does not contain animal origin ingredients or has been tested on animals” (ORIG), “The product and its residuals do not present harm to the environment” (IMP), “The product does not contain ingredients that present risk to my health” (HEA) and “The product has not been tested on animals” (TOA). The fifth item was included in our exploratory phase as we noted a significant difference between disagreements with animal testing and personal habits of no consumption of animal origin items. Such choice was proven to be effective since scores show two distinguished mindsets towards the subject. The frequencies observed in each item as “most” and “least” important are exhibited in Table 6:

Table 6 – BWS Outputs

Item ranked by BWS Score	Most important	Least Important	BWS Score	Relative importance
(1) The product really works.	85	2	83	100%
(2) The product does not contain ingredients that could present risk to my health.	64	8	56	67,47%
(3) The product has not been tested on animals nor contains items of animal origin.	49	8	41	49,40%
(4) The product and its residuals do not cause negative impacts to the environment.	33	4	29	34,94%
(5) The product has not been tested on animals.	25	4	21	25,30%
(6) The product shows knowledge on use and its limitations with clarity and transparency.	19	7	12	14,46%
(7) The product makes me feel like I am doing my part for the planet.	17	10	7	8,43%
The product contains seals and certificates in its package.	6	17	-11*	-
The product is valued in my social group.	4	242	-238*	-

\*Negative scores indicating attributes were mostly rejected

Following the recommendations of Sakolwitayanon et al. (2018) in their similar research project, we opted to evaluate the relative importance of attributes as a more explanatory resource. This step allowed us to conclude the weight of “the second most important item” relative to the first and so on as depicted in Figure 9. The benchmark for 100% was “The product really works”, while the second most important item was “The product does not contain ingredients that present risk to my health” with 75,29% and “The product does not contain animal origin ingredients nor has been tested on animals” with 57,65% (all seen in Figure 9).

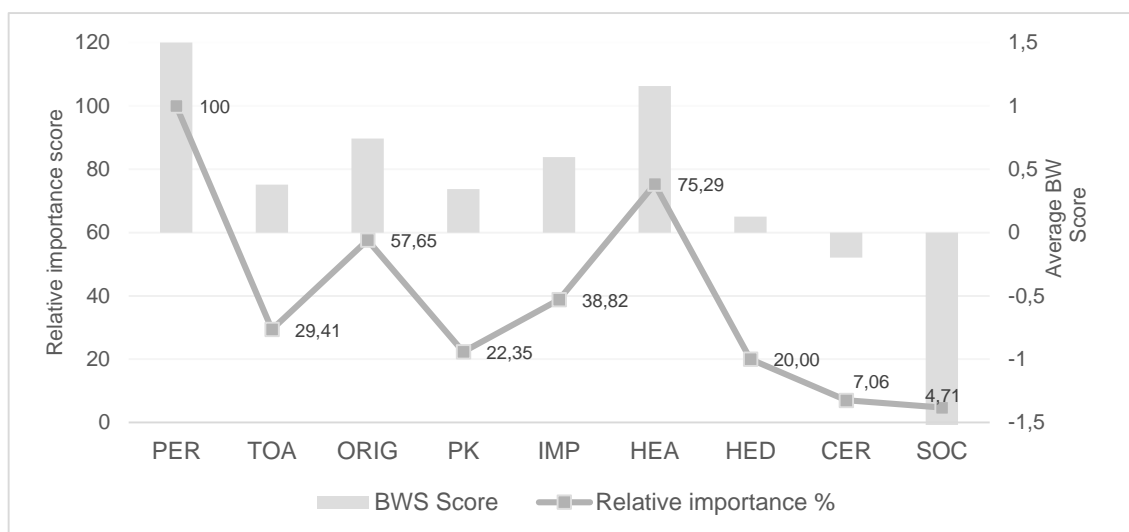


Figure 9 - Attributes importance for ethical cosmetics consumption

## 4.4 VALS Reliability and Outcomes

To analyze VALS results, we performed an Exploratory Factorial Analysis. The first step, however, was to identify the internal reliability of each component adopting Cronbach's Alpha as a reference.

### 4.4.1 Internal Reliability Test

The internal reliability of all eight dimensions of the questionnaire was checked through Cronbach's Alpha. The results of our first trial are described in Table 7. Six items presented acceptable Cronbach's Alpha indexes, one regular (THEORETICAL) and the conservative dimensions (highlighted) was not satisfactory. The correlations between items and dimensions can be consulted in Appendix C.

**Table 7 – Reliability of dimensions through Cronbach's Alpha at first trial**

<b>Dimension</b>	<b>Number of items according to Carvalho (2004)</b>	<b>Cronbach's Alpha</b>
THEORETICAL (THEO)	5	.629
BOLD (BOLD)	6	.732
INNOVATOR (INNO)	4	.733
PRACTICAL (PRAC)	6	.690
ORIENTED TO FASHION (OTF)	4	.886
ORIENTED TO MORAL AND RELIGION (OTMR)	4	.714
LEADER OF A GROUP (LEAD)	3	.732
CONSERVATIVE (CONS)	3	.538

Items below acceptable an Cronbach's Alpha are highlighted.

We verified that the dimension CONSERVATIVE presented a Cronbach's Alpha of 0.538 due to low correlations among items as shown in Table 8. The item total statistics confirmed there would be no improvement by excluding any of the three items, so we did not perform any changes to this dimension.

**Table 8 – “Conservative” factor reliability tests**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CON1	5,35	6,234	,423	,309
CON2	4,99	7,007	,342	,450
CON3	5,27	8,338	,292	,522

We also checked possible improvement scenarios for the dimension THEORETICAL, but no arrangement of variables would improve its index. We therefore maintained all five original items as in Table 9.

**Table 9 – “Theoretical” factor reliability tests**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
THEO1	20,20	20,251	,420	,556
THEO2	19,41	20,634	,481	,531
THEO3	21,21	22,192	,314	,607
THEO4	20,55	21,125	,295	,624
THEO5	19,82	20,110	,422	,555

The dimension “Leader of a Group”, could be improved by excluding the variable LEA2 (*I have more ability than most people*), thus achieving a Cronbach’s Alpha of 0.891. However, as the factor contained only 3 items, we opted to keep LEA2. It was verified that the dimensions BOLD and INNOVATOR could have an increase in their Cronbach’s Alpha by the exclusion of, respectively BOLD3 (*I must admit I like to show-off*), BOLD4 (*I would like to spend a year or more abroad*), INN1 (*I like a lot of variety in my life*) and INN4 (*I am constantly looking for excitement*). As their initial index was acceptable, we opted to keep all variables.

As for the dimension PRACTICAL, an improvement of 0.022 could be achievable by deleting item PRA6 (*I like to look in hardware stores and automotive shops*). as Table 10 demonstrates, thus increasing its Cronbach’s Alpha to 0.712, which is more desirable than the original 0.690.

**Table 10 – “Practical” factor reliability tests**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PRA2	13,01	29,827	,456	,670
PRA3	14,18	29,775	,438	,678



PRA4	14,11	26,534	,635	,592
PRA5	12,25	29,034	,497	,653
PRA6	15,05	33,755	,329	,715

After multiple trials and opting for the changes above, we ended with 34 of the original 35 VALS Items, only discarding PRA6. This was also a theoretical decision, since the majority of individuals in our sample were women and, therefore, tend to show less interest in automotive shops. Our final configuration is exhibited in Table 11:

**Table 11 – Final set of dimensions and their reliability indexes**

Dimension	Number of items according to Carvalho (2004)	Cronbach's Alpha
THEORETICAL (THEO)	5	.629
BOLD (BOLD)	6	.732
INNOVATOR (INNO)	4	.733
PRACTICAL (PRAC)	5	.712
ORIENTED TO FASHION (OTF)	4	.886
ORIENTED TO MORAL AND RELIGION (OTMR)	4	.714
LEADER OF A GROUP (LEAD)	3	.732
CONSERVATIVE (CONS)	3	.538

Items below acceptable Cronbach's Alpha index are highlighted.

#### 4.4.2 Factorial Analysis

A factorial analysis was performed on Statistical Package for Social Science (SPSS). The total cumulative variance found was 67.49% (see Appendix D) with 8 main components organized through Varimax rotation as exhibited in Table 12. All indexes were compared to standards defined by Hair et. al (2009) as to how many loadings should remain in order to contribute to each factor.

Thus, all communalities below 0.5 were excluded, namely THEO1 (*I'm very interested in theories*), CON3 (*I like my life to stay the same week after week*), THEO4 (*I like to learn about things even when they do not have any practical usefulness*), BOLD1 (*I like extravagant people and things*), THEO2 (*I like to learn about Art, Culture and History*) and BOLD 3 (*I have to admit I like to show-off*). After multiples tests, we decided to also exclude variables BOLD4 (*I would like to spend a year or more abroad*) and THEO3 (*I consider myself an intellectual*) for considering that the two had little contribution to the factor in which they were allocated (see Table 12).

We then performed another trial with the remaining items, which returned 8 factors. By the combination of items in the factors, we opted to name them, in order, as: “Avant-garde”, “Oriented to Fashion”, “Artisans”, “Oriented to Moral and Religion”, “Leader of a group”, “Theoretical”, “Ingenious” and “Conservative”.

**Table 12 – Rotate component Matrix**

			Component							
			1	2	3	4	5	6	7	8
Avant-garde	I like to have and exciting life.	BOLD5	,854	,103	-,087	-,045	,089	-,030	,011	,055
	I like to do unique or different things.	BOLD6	,809	-,034	,238	-,033	-,007	,141	,116	-,082
	I am always looking for exciting things.	BOLD2	,789	,135	,063	-,105	,032	,088	-,001	-,143
	I often wish to carry out stimulating activities	INNO4	,786	,054	,165	,011	,182	-,152	,184	,051
	I like the challenge of doing something I never did before	INNO3	,746	-,048	,120	,019	,121	,259	,078	-,161
	I like to try new things	INNO2	,719	-,070	,102	,039	,100	,270	-,059	-,182
	I like a lot of variety in my life	INNO1	,425	,124	-,125	-,107	-,179	,329	,074	-,331
Oriented to Fashion	I like to dress up-to-the-minute.	OTF2	,017	,891	-,087	,065	,094	-,005	,034	,039
	I usually follow the last fashion and tendencies.	OTF4	,066	,879	-,051	,051	,041	,045	,090	-,059
	I am more fashionably dressed than most people.	OTF1	,040	,825	,014	,110	,113	-,134	,131	,062
	I like people to consider me a fashionable person.	OTF3	,052	,778	-,011	,121	,065	,040	,069	,164
Artisans	I prefer to do something by myself than buy it.	PRAC2	,090	-,032	,852	,016	-,024	,050	-,009	,022
	I like handicrafts.	PRAC5	,173	-,100	,843	,043	-,081	,122	,026	-,057
	I like to make things with wood, metal and other materials.	PRAC4	,123	-,031	,611	,161	,031	,168	,428	,033
Oriented to Moral and Religion	There is too much sex on TV these days.	OTMR3	-,021	-,091	,001	,770	,017	,190	-,101	,164
	The government should encourage the practice of prayer in public schools.	OTMR2	-,074	,175	,060	,729	-,017	-,228	,096	-,018
	A woman’s life is only complete if she can provide a happy home to her family.	OTMR4	,038	,106	,046	,717	,077	-,222	,197	,148
	As the Bible states, the world was created in six days.	OTMR1	-,090	,324	,135	,591	,043	-,206	,007	,033
Leader of a group	I like to lead others.	LEAD3	,172	,122	-,083	-,009	,892	,022	,066	,044
	I like to be responsible for a group of people.	LEAD1	,123	,136	-,058	,030	,887	,087	,040	-,011
	I have more ability than most people	LEAD2	,079	,088	,446	,164	,490	,051	,063	-,142
Theoretical	I would like to have a better understanding of how the universe works	THEO5	,211	-,047	,017	-,132	-,001	,773	,127	,039
	I like to learn about culture, art and History.	THEO2	,183	,011	,250	-,184	-,018	,654	-,051	-,074
	I am very interested in theories	THEO1	,010	-,019	,106	-,041	,211	,579	,101	-,237
Ingenious	I like to look in hardware stores and automotive shops.	PRAC6	,028	,183	,015	,118	,075	-,012	,859	,061
	I am very interest in mechanical things, like motors work.	PRAC3	,177	,121	,133	-,003	,050	,161	,812	-,015

Conservative	I have to admit my interests are a little narrow and limited. I have few interests.	CONS2	-,136	,067	,005	,167	-,053	-,035	,025	,769
		CONS1	-,153	,128	-,065	,068	,013	-,146	,043	,746

Our analysis concluded that VALS worked as an instrument, presenting a Kaiser-Meyer-Olkin (KMO) measure of 0.815 and a significance index lower than 0.05 (see Figure 10). We found an optimized configuration by combining items of the factor BOLD and others from the factor INNOVATOR to form a new factor we chose to call *Avant-Garde* (that is, individuals strongly related to emotion, excitement and pioneering). The original factor PRACTICAL ended up divided in two new factors: *Artisans* (variables associated with soft handwork) and *Ingenuous* (variables related to hardware and mechanical things). Remaining factors were consistent with the configuration formed by Carvalho (2004).

As our sample was very homogeneous concerning demographic data, individuals had to be differentiated through their personal values (Hair et al., 2009). For that reason, we opted for clustering as a method to combine respondents by common characteristics. The results obtained with this technique are discussed next.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,815
Bartlett's Test of Sphericity	Approx. Chi-Square	3676,778
	Df	378
	Sig.	0,000

**Figure 10 - KMO and Bartlett's test**

#### 4.5 Hierarchical Cluster Analysis

Answers for BWS had variances below 1, therefore indicating a homogeneous group of respondents according to Sakolwitayanon et al. (2018). Therefore, in order to obtain an optimum number of cluster groups, we turned to the variance among respondents concerning the 28 items of VALS formed by factorial analysis. Clustering was performed using SPSS and we opted for Ward's Method as a grouping technique and then applied Quadratic Euclidian Distance between items (Field, 2009). The best clustering result, considering the number of items in each new added group, was a 4 clusters solution, which is exhibited in Table 13.

**Table 13 – Hierarchical cluster analysis with a 4 clusters solution**

Demog. Variable	Item	Cluster 1 (n=102) 34%	Cluster 2 (n=107) 35%	Cluster 3 (n=37) 12%	Cluster 4 (n=56) 19%
<b>Sex</b>	Female	86 84.03%*	103 96.03%	36 97.3%	51 91.1%
	Male	16 15.97%	4 3.97%	1 2.70%	5 8.9%
<b>Age</b>	18 to 24	39 38.23%	28 26.16%	15 40.54%	15 26.78%
	25 to 34	42 41.17%	50 46.72%	16 43.24%	21 37.5%
	35 to 44	16 15.68%	23 21.49%	6 16.21%	14 25%
	45 to 54	5 4.9%	6 5.6%	0 0%	6 10.71%
<b>Marital Status</b>	Single	76 74.5%	68 63.55%	27 72.97%	32 57.14%
	Married	19 18.6%	31 28.97%	9 24.32%	19 33.92%
	Other	7 6.86%	8 7.47%	1 2.7%	5 8.92%
<b>Education</b>	Complete High School	4 3.92%	4 3.73%	4 10.81%	6 10.71%
	Undergraduates	36 35.29%	42 39.25%	12 32.43%	16 28.57%
	Bachelors	18 17.64%	<b>33</b> 30.84%	5 13.51%	14 25%
	Post-graduation	<b>44</b> 43.13%	28 26.16%	16 43.24%	20 35.71%
<b>Income</b>	Until 1 MIS	23 22.54%	25 23.36%	9 24.32%	13 23.21%
	2 to 4 MIS	51 50%	57 53.27%	23 62.16%	31 55.35%
	5 to 10 MIS	16 15.68%	19 17.75%	4 10.81%	10 17.85%
	More than 10 MIS	12 11.76%	6 5.60%	1 2.70%	2 3.57%
<b>Kids</b>	Yes	14 13.72%	24 22.42%	7 18.91%	18 32.14%
	No	88 86.28%	83 77.58%	30 81.09%	38 67.86%

\*Percentage representation in the cluster.

Highlighted values are significantly different by chi-square (p-value <0.05)

Each cluster was then submitted to a classification by medians of answers on all VALS items as exhibited in Table 14. This approach is based on recommendations by the Centre for Academic, Professional and Organizational Development at University of St. Andrews (CAPOD, 2019, p.1): The most appropriate measure of ordinal data such as Likert Scales are nonparametric procedures since the adoption of mean and standard deviation have been known to cause misleading calculations and incorrect conclusions in such cases (Allen & Seaman, 2007).

**Table 14– Calculated medians for VALS’ Factors according to a 4 clusters solution**

Cluster	Avant-Garde*	Oriented to Fashion*	Artisan*	Oriented to Moral and Religion*	Leader of a group*	Theoretical*	Ingenious*	Conservative*
1	6	2	4	1	5	7	3	2
2	5	1	5	1	3	6	2	2
3	3	2	2	1	3	5	1	3
4	4	3	4	4	4	5	2	4

\* Differentiated by Kruskal-Wallis Test with p-value<0.05

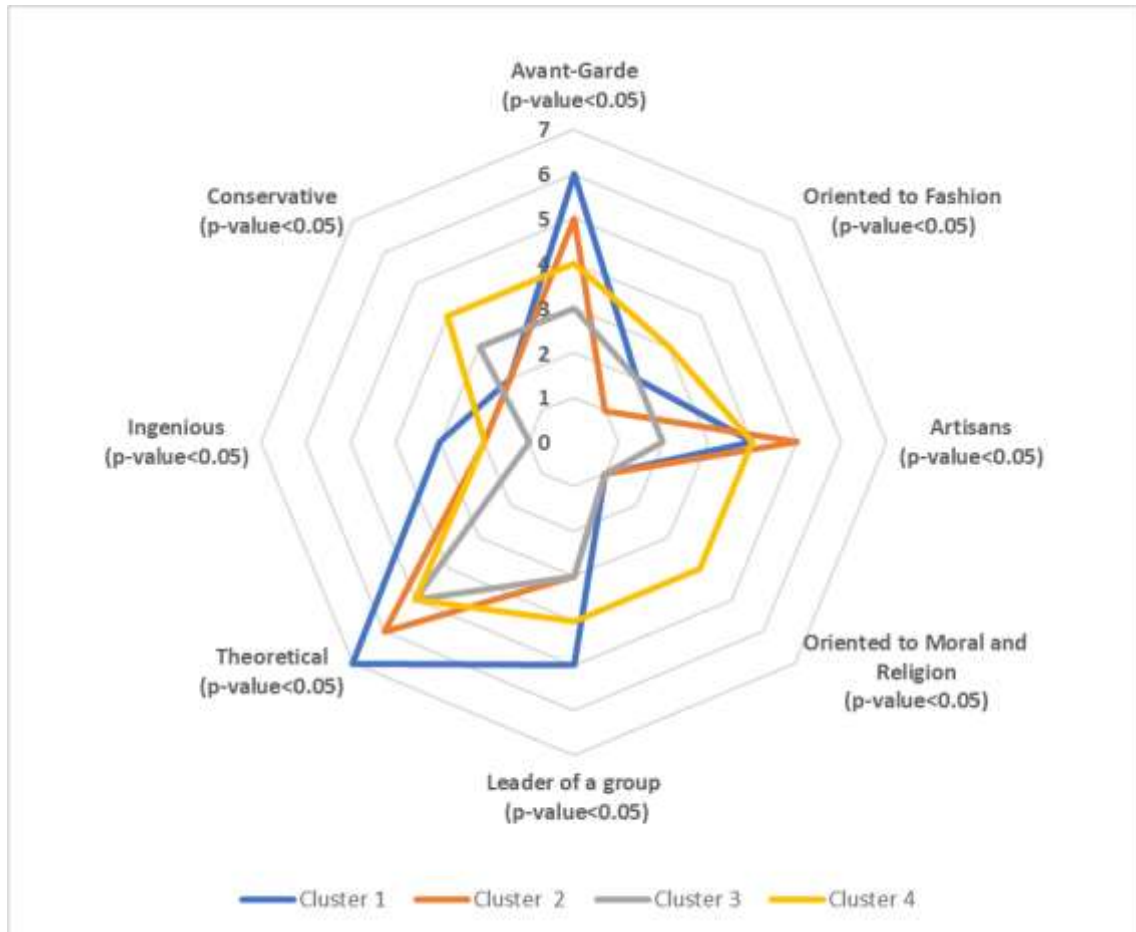
Bertram (2007) adds important insights to this discussion, explaining in more visual terms how such interpretations can lead to nonsensical inferences, while a considerable number of studies with Likert application point to medians as the right approach (Boone & Boone, 2012; Van Laerhoven et al, 2004; Jamieson, 2004). According to Jamieson (2004), addressing Likert outcomes as continuous data would mean we are considering the existence of a “fair-and-a-half” as an average point between “fair” and “good”, which is absolutely misleading.

Individual responses are normally treated as **ordinal data** because although the response levels do have relative position, we cannot presume that participants perceive the difference between adjacent levels to be equal (a requirement for interval data). In practice, many researchers do treat Likert scale response data as if it were interval data; however, from a statistical standpoint this can be dangerous. For example, there is no way to ensure that participants view the difference between “agree” and “strongly agree” the same as they might view the difference between “agree” and “neutral” (Bertram, 2007, p. 2)

Although the demographic characteristics were still homogeneous, a significant difference was verified in terms of Education in Cluster 1 and Cluster as highlighted in Table 13. To detect differences among clusters, we employed the Kruskal-Wallis Test.

The Kruskal-Wallis test is a nonparametric statistical test that assesses the differences among three or more independently sampled groups on a single, non-normally distributed continuous variable (e.g. ordinal or rank data) (McKight & Najab, 2010).

A graphical representation in Figure 11 illustrates how the four clusters of respondents are more well placed in the spectrum of VALS factors following the median of their scores. In all cases, groups were different from each other by Kruskal-Wallis Test (with  $p < 0.05$ ).



**Figure 11 – Clusters allocated among VALS Factors using Kruskal-Wallis Test**

- a) **Cluster 1:** these are the respondents who scored the highest medians in both dimensions Avant-Garde and Theoretical, but also enjoy to lead others. They are mainly young (18 to 24) and undergraduates/Bachelors. This cluster shows a general dislike for orientation to fashion, moral and conservative values. Concerning handicrafts, the majority of individuals in this group demonstrated indifference.
- b) **Cluster 2:** These individuals are more intimately related to the Theoretical values, although they are also Avant-Garde, with significant interest in handicrafts (reaching the highest medians in the dimension Artisans). This group contains the most significant amount of consumers who prioritize environmental impacts while looking for cosmetics.
- c) **Cluster 3:** These individuals are not innovative and do not get motivated by excitement.

Although they do care about Art, Culture and History and enjoy learning new skills in order to improve their lives, their interests are not very wide and their leadership skills are very low. This group contains individuals who significantly prioritize performance over all other attributes. It also contains a majority of post-graduates, most of them with relatively low incomes.

d) **Cluster 4:** This group of respondents showed the highest medians in items related to conservative views (namely I have few interests and I like my life to stay the same week after week). Although they are significantly related to the Theoretical dimension, their scores in the *Avant-Garde* items show a profile averse to risk and excitement.

Regarding the distribution of original VALS dimensions among the clusters, the *Avant-Garde* profile contains individuals with considerable interest in exploring experiences and novelties, with high scores on the original VALS *Experiencer* dimension. On the other hand, more mature individuals are linked to the *Thinker* dimension, thus representing inquisitive individuals who are aware of the ultimate information about the products they are willing to buy and have strong preferences when they go shopping for a new item. Those consumers are also clear about purchasing products that do not harm their ideological cohesion.

It can also be argued that 99% of our sample showed a consistent attitude against fashion and tendencies and being the center of attention. All medians were compared and evaluated by Kruskal-Wallis Test (see Appendix D) using SPSS (Allen & Seaman, 2007). For all VALS items, the null hypothesis was rejected under a level of significance of 0.05, meaning there are significant differences among all clusters concerning their values. As for the attributes, most of the correlations between clusters and most/least important attribute were not statistically significant, except for PER and IMP. The first was significantly more mentioned in cluster 2, while the latter was more significant in Cluster 3. The counting is depicted in Table 15 and percentages represent the weight of attributes in every cluster:

**Table 15 – Differences among clusters concerning attribute preference**

Most important attribute	Mentions by cluster				Total
	CL1	CL2	CL3	CL4	
“The product really works” (PER)	26	22	<b>16*</b>	21	85
	30.6%	25.9%	18.8%	24.7%	100%
“The product and its residuals do not cause negative impacts to the environment”(IMP)	9	<b>18*</b>	2	4	33
	27.3%	54.5%	6.1%	12.1%	100

\*Differentiated by chi-square (p-value<0.05)



## 5 CONCLUSION

We found it more suitable to divide our conclusion in two other sections in order to address different views that can be extracted of our findings. In section 5.1 we present the theoretical and practical implications of our work, while limitations and suggestions for further research are discussed in section 5.2.

### 5.1 Theoretical and practical implications

The general objective of this work was to investigate the preferred attributes of ethical cosmetics, also identifying the values of consumers. We first encountered 13 main values, from which 10 were highlighted through semi-structured interviews with 30 individuals of interest (15 manufacturers and 15 consumers). After analysis, 9 of those items were later evaluated by 302 respondents through online questionnaires in order to identify their order of importance. The most valued attributes according to our sample were:

1. “The product really works”,
2. “The product does not contain animal origin ingredients or has been tested on animals”,
3. “The product does not contain ingredients that present risk to my health”,
4. “The product and its residuals do not present harm to the environment” and
5. “The product has not been tested on animals”.

As for the least preferred attributes, they were, in (1) the product is valued in my social group”, (2) “The product contains seals and certificates” and (3) “The product makes me feel like I am doing my part for the planet.”. In comparison to previous studies mentioned in our literature review, our results were different in not finding “sustainable packaging”, “image of the brand” and “price difference towards the traditional counterpart” to be relevant among respondents as in previous studies. Hypothesis for such behavior were not explored by this study and can be addressed by future research.

Besides that, it is worth to report that most of the manufacturers were interviewed during small expositions, meaning a close face-to-face relationship may be valued by consumers. Another important output was that neither producers nor consumers had any

comments on price differences in comparison to traditional brands. This is a meaningful finding since price comparisons were significant in all studies we checked prior to our research. As some of the quotes on our qualitative phase indicates, it is possible that ethical cosmetics do not present prices that differ significantly from traditional items. This is a hypothesis worth of further investigation since our study has not checked if those claims are statically valid. As for certification, it is important to highlight that during our interviews, only manufacturers mentioned it. No consumer showed interest in that aspect, which was later confirmed by the online survey.

Our sample demonstrated expressive concern with non-product related attributes (Keller, 1993) or secondary attributes (Brechan, 2006) such as tests on animals and impacts on the environment, therefore warning manufacturers and traditional brands about the importance of their positioning in the market, their value-chains and how they interact with partners and suppliers. Although performance is still a major concern, our participants seemed to be worried about ethical aspects linked to the products and besides safety for themselves, there was a significant concern with animal welfare.

Another important debate that arises from our findings concerns the role of hedonic motivation on taking part of ethical movements of consumption. Important groups of consumers, such as vegans, could be categorized as a case of culture of consumption (Arnould & Thompson, 2005). Along with individuals with biological intolerances and religious motivations, those groups of consumers have very specific demands to be fulfilled by the market (Padel & Foster, 2005) and may show potential for further exploration by other epistemological approaches. The identification of “The product has not been tested on animals nor contains items of animal origin” as the second most important warns manufacturers of the importance of investing in vegan products. The substitution of animal raw material for plant-based options could open a wider market of consumers, even though costs of transaction may increase in the short-term.

From what we could gather from our sample’s behavior, manufacturers should be aware and prepared for very inquisitive customers, who are alert about labels. It does not mean, as our results found, that consumers would be concerned with certificates. In fact, they may even feel confused by them and lose interest. Short chains were also a verifiable characteristic in this market. Although there are bigger and more professionalized brands acting (probably targeting a wealthier customer), what we found in our field research was a very close relationship between producers and consumers during well-contextualized events.

We found evidence to support that ethical cosmetics are aligned with engaged consumers who are often related to other ethical causes. Hence, manufactures should be in touch with those causes, looking to be part of other initiatives that may be calling the attention of this audience. A useful advice would be to look for places where important ethical causes are being discussed and expose the purpose of one's business there, showing the commitment of the brand with causes beyond the primary attributes of the product. As we concluded by the final set of preferred attributes, most of the list is related to aspects that transcend the product itself. Therefore, it is safe to assume this category of business involves a whole comprehension of social scenario that goes way beyond its basic operations.

After an analysis of the values shared by ethical cosmetics consumers, we can argue that VALS constructs were perfectly fit for our purpose and were able to accurately provide insights for targeting the audience. Although our factorial analysis returned 8 factors, the hierarchical cluster analysis performed posteriorly helped us to understand how the VALS profile factors were distributed in our sample. Finally, while all groups of values were present among our respondents, three groups were preponderant: *Innovators (a)*, *Experiencers (b)* and *Thinkers (c)*. According to our literature review, those factors reflect, respectively:

- a) Successful, sophisticated, active people who take command are interested in growth, seek self-development and self-knowledge, their self-esteem is high. They seek challenge and their lives are characterized by diversity, their purchases reflect the taste for niche products and services and high level.
- b) Young, impulsive, vital, enlightened, like the new, the extravagant and the risky, are avid consumers of clothing, fast food, music, movies and videos and also enjoy sports and outdoor recreation.
- c) Mature people, satisfied, comfortable, reflective, value the order, the knowledge and responsibility, who are educated and develop activities that require professional titles, base their purchases on the question of durability, functionality and value of the products, seeking information in the buying process;

Another important correlation between VALS and our BWS findings was the low scores verified in values representing concern for others opinions, such as orientation to fashion and calling attention to oneself in pair with the overall rejection of the attribute "The product is valued in my social group". It seems, at least in a conscious approach, that social acceptance in a group is not important for the major part of our sample. Two attributes were significantly related ( $p < 0.05$ ) to two clusters while all others were equally distributed among clusters. Performance was especially important to cluster 3 members, a group of individuals who are not

quite innovative nor show any leadership skills, which may mean a low levels of influence in their social groups. The concern with the product's impacts on the environment was more remarkable in cluster 2, a group of individuals who is strongly associated with handwork and making things by themselves. The particular details of those correlations require further investigation, but it is possible that individuals more concerned with the discard of their products would feel more comfortable fabricating their own cosmetics at home. Therefore, they could be more secure about the ingredients employed in the process. One market outcome would be the selling of ethical ingredients to those who are enjoy preparing cosmetics at home.

Our work aims to be a positive contribution to the very recent industry of ethical cosmetics in Brasil and to overall insights about ethical consumption. There is a wide range of possibilities of research around the change of habits currently taking place in the country and it would be interesting to evaluate how similar studies on ethical consumers' profiles would perform in comparison to the outcomes provided by our approach. Once again, there iare undeniable evidences about the historical correlation between social change and the cosmetics industry. Far more than other segments, this is a category of products intimately affected by cultural and political transformations, as our study of attributes has indicated. It is also possible that an ethical consumer of cosmetics holds similar demands for other categories of products. The results presented in this dissertation may influence new business strategies, the reformulation of those already implemented and an attractive opportunity for innovative entrepreneurs. Other opportunities for future exploration of the outcomes brought by this research are discussed in next section.

## **5.2 Limitations and suggestions for future research**

The main limitations to perform this research was not comparing our sample of consumers of ethical cosmetics with another sample of non-buyers or traditional industry customers. This comparison could have brought the differences between the two markets, establishing common concerns and deviations. Having not performed such analysis, we are not allowed to state that the attributes found are exclusively linked to ethical cosmetics, although traditional brands do not appeal to non-product related attributes as much as ethical brands do (Euromonitor, 2017).

Another limitation is related to the exploratory phase being mainly performed in the

city of Porto Alegre. Although not all consumers interviewed were citizens, it is possible that some bias may be confirmed by future studies performed in other places. It is also worth pointing that attempts to share the questionnaire with wider medias had negative results due to hostilities presented against the research for its supposed “market orientation”. People who engage in ethical groups of consumption may interpret market studies as a way to “instrumentalize” their views, therefore defeating the purpose of their lifestyle, which, in their belief, is an anti-capitalist attitude.

Concerning the generalization of results, we strongly recommend further studies on price in Brazilian market for ethical cosmetics given the acknowledgments of this research. The same applies to the weight of certification. The diminished concerns with both variables is a very significant information, therefore it should be approached in more detail by future studies in order to validate our findings or provide different insights.

It is also noticeable that religious orientation items had consistent lower scores, which can be possibly explained by two variables: (a) religious diversity in Brazil (Pains, 2017) and (b) the fact that sustainable consumption has been linked before with the rejection of religious views (Kidwell & Hardesty, 2013; Watkins et al., 2015). We also verified that consumers get easily confused with many ethical attributes such as “all-natural” or “organic”, even if they do supposedly represent a better product (Abrams et al., 2010).

Also, as Padel and Foster (2005) explain, there is a grey area between the two poles of converted regular consumers and those who claim they would never buy such products. People who eventually consume ethical products may be interested in becoming more regular buyers, being prevented to do so by “a lack the knowledge, financial resources, conviction, or simply the inclination to buy more regularly” (Padel and Foster, 2005, p. 623).

Sharma & Foropon (2019) addresses this issue, by proposing three types of purchase behavior in new markets, which intersects our field of study: unconditional purchase (devoted customer), conditional purchase (price and other contingencies are favorable) and accidental purchase (for instance, the substitution of sold-off traditional items). Therefore, studies exploring mixed purchases could provide more insights on the matter.

The study overall found common ground with previous researches on ethical cosmetics, pointing again to the importance of subjective attributes in purchasing decision. As it has been acknowledged previously by our literature review, consumers are not willing to give up on performance in order to adopt a more ethical conduct as buyers, but we found evidence that they have considerable concerns with the conditions surrounding the product origin and its distribution.

Psychological impediments could have also interfered in our study. Aspects of behavior such as hedonism and submission to social norms may have induced respondents to mark socially acceptable scores instead of expressing the real reason why they adopted ethical consumption. Projection techniques and experiments (Goodwin & Goodwin, 2016) could allow a better understanding of those variables without addressing them directly as our work did, thus expanding the cognitive background of ethical choices.

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## **APPENDIX – A**

### **ROTEIRO PARA ENTREVISTA**

#### **A) DISCURSO INTRODUTÓRIO**

- [APRESENTAÇÃO] Olá. Meu nome é Paola. Sou mestranda da Escola de Administração e estou realizando uma pesquisa para conclusão de minha dissertação. O Sr./Sra. Teria alguns minutos para conversar sobre cosméticos éticos?
- [INTRODUÇÃO] Os cosméticos éticos são aqueles que fazem apelo a alguma conduta ética, como por exemplo, os naturais, os orgânicos e os veganos. Os naturais são feitos a partir de substâncias naturais que podem ser sintéticas ou orgânicas. Os orgânicas não possuem ingredientes sintéticos. Os produtos veganos não utilizam ingredientes de origem animal nem são testados em animais. Você consome algum desses produtos?

#### **B) PERGUNTAS ESPECÍFICAS POR CLASSE DE RESPONDENTE**

- [PARA EMPRESAS] Em sua opinião, quais são os atributos que os clientes mais valorizam no seu produto?
- [CONSUMIDOR] Quando você realiza a compra deste tipo de produtos, quais são os atributos indispensáveis para que você faça sua escolha?

#### **C) QUESTÃO SOBRE PREÇO**

- [PARA EMPRESAS] O consumidor questiona os preços dos seus produtos?
- [CONSUMIDOR] Você considera o preço importante na compra deste tipo de produto?

## APPENDIX – B

# Questionário

Olá!

Esta é uma pesquisa acadêmica realizada para o curso de mestrado em Administração da Universidade Federal do Rio Grande do Sul acerca de cosméticos éticos. Segundo a Agência Nacional de Vigilância Sanitária (ANVISA), são considerados cosméticos:

- perfumes, cremes faciais, cremes corporais, desodorantes, maquiagem, xampus, condicionadores, máscaras faciais e capilares, enxaguantes bucais, pasta de dente, sabonetes faciais e corporais em barra ou líquidos, adstringentes, demaquilantes, entre outros.

Para os propósitos da pesquisa, consideramos cosméticos éticos como todos aqueles cuja mensagem publicitária remeta a algum tipo de conscientização. Nesta categoria estão:

- **cosméticos naturais**: ingredientes provenientes de plantas, mas predominantemente sintéticos.
- **cosméticos orgânicos**: ingredientes provenientes de plantas, livres de agrotóxicos em seu cultivo e sem presença de sintéticos.
- **cosméticos veganos**: ingredientes sintéticos ou orgânicos, porém sem a presença de qualquer ingrediente de origem animal ou testes realizados em animais.

Se você consome ou já consumiu algum item desta categoria de produtos, gostaríamos de contar com sua ajuda para o preenchimento de um rápido questionário.

Antes de prosseguir, verifique o termo de consentimento abaixo.

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Q20

### TERMO DE CONSENTIMENTO

Você foi convidado para participar de um estudo sobre o consumo de cosméticos éticos. Sua participação é voluntária e anônima. Você possui o direito de deixar essa pesquisa caso assim desejar. A pesquisa não oferece qualquer risco e você não será julgado ou comprometido se aceitar participar. Os dados que você fornecer serão utilizados apenas pelos autores da pesquisa e para fins acadêmicos.

Você está de acordo com esses termos?

- Sim. Estou de acordo. (1)
- Não. Não estou de acordo. (2)

1. Indique abaixo seu gênero.

- Feminino (1)
  - Masculino (2)
  - Outro (3)
-

2. Indique seu estado civil:

- Solteiro (a) (1)
  - Casado (a) (2)
  - Outros (3)
- 

3. Indique seu grau de escolaridade.

- Ensino Fundamental Incompleto (1)
  - Ensino Fundamental Completo (2)
  - Ensino Médio Incompleto (3)
  - Ensino Médio Completo (4)
  - Ensino Superior Incompleto (5)
  - Ensino Superior Completo (6)
  - Pós-graduação (7)
- 

4. Indique sua faixa de renda:

- Até 1 salário mínimo. (1)
  - De 2 a 3 salários mínimos. (2)
  - De 3 a 4 salários mínimos. (3)
  - De 5 a 10 salários mínimos. (4)
  - Mais de 10 salários mínimos. (5)
- 

5. Idade

- De 18 a 24 anos. (1)
  - De 25 a 34 anos. (2)
  - De 35 a 44 anos. (3)
  - De 45 a 54 anos. (4)
  - 55 anos ou mais. (5)
- 

KID 6. Tem filhos?

- Sim (1)
- Não (2)

Para responder a próxima questão, preste atenção na imagem abaixo. Neste exemplo, o atributo **mais**

**importante** segundo o respondente é a **Marca** e o **menos importante** é o **Preço**

Assinale o (1) atributo mais importante e o (1) menos importante para a sua decisão de compra de itens de vestuário:

Mais importante:

Marca

Tecido

Conforto

Preço

Menos importante:





Com relação ao consumo de cosméticos éticos, assinale uma (1) afirmativa que é **MAIS** importante e uma (1) que é **MENOS** importante para sua decisão de compra:

<b>Mais importante</b>		<b>Menos importante</b>
<input type="radio"/>	O produto funcionar de fato. (1)	<input type="radio"/>
<input type="radio"/>	O produto não ter sido testado em animais. (2)	<input type="radio"/>
<input type="radio"/>	O produto não ter sido testado em animais e não conter itens de origem animal. (3)	<input type="radio"/>
<input type="radio"/>	O produto apresentar informações de uso e limitações com clareza e transparência. (4)	<input type="radio"/>
<input type="radio"/>	O produto e seus resíduos não causarem impactos negativos ao meio-ambiente. (5)	<input type="radio"/>

<input type="radio"/>	O produto não conter ingredientes que sejam nocivos à minha saúde. (6)	<input type="radio"/>
<input type="radio"/>	O produto conter selos e certificações na embalagem. (7)	<input type="radio"/>
<input type="radio"/>	O produto me faz sentir que estou fazendo minha parte pelo planeta. (8)	<input type="radio"/>
<input type="radio"/>	O produto ser valorizado em meu grupo social. (9)	<input type="radio"/>





## APPENDIX - C

## VALS Items and Dimensions

ITEM	PREF
1. Me interesse bastante por teorias.	THEO1
2. Gosto de coisas e pessoas ousadas.	BOLD1
3. Gosto de ter bastante variedade na minha vida.	INN1
4. Gosto de fazer coisas que possam ser úteis no cotidiano.	PRA1
5. Eu sigo as últimas tendências e modas.	OTF4
6. Assim como diz a Bíblia, o mundo foi criado em seis dias.	OTMR1
7. Gosto de estar na liderança de um grupo.	LEA1
8. Gosto de aprender sobre arte, cultura e história.	THEO2
9. Sempre busco novas emoções.	BOLD2
10. Tenho poucos interesses.	CON1
11. Prefiro fazer algo eu mesmo(a) do que comprar	PRA2
12. Me visto mais de acordo com a moda do que a maioria das pessoas.	OTF1
13. O governo federal deveria estimular a prática de orações nas escolas públicas.	OTMR2
14. Sou mais habilidoso(a) do que a maioria das pessoas.	LEA2
15. Eu me considero um(a) intelectual.	THEO3
16. Devo admitir que gosto de me exhibir.	BOLD3
17. Gosto de tentar coisas novas.	INN2
18. Tenho muito interesse em como coisas mecânicas, como motores, funcionam.	PRA3
19. Gosto de me vestir conforme as últimas tendências de moda.	OTF2
20. Há um excesso de sexo na televisão hoje em dia	OTMR3
21. Gosto de liderar os outros.	LEA3
22. Gostaria de passar um ano ou mais em um outro país.	BOLD4
23. Gosto de ter emoção constante na minha vida.	BOLD5
24. Devo admitir que meus interesses são um tanto fechados e limitados.	CON2
25. Gosto de fazer coisas com madeira, metal e outros materiais do tipo.	PRA4
26. Quero que me considerem uma pessoa fashion	OTF3
27. A vida de uma mulher só está completa se ela puder oferecer um lar feliz para sua família.	OTMR4
28. Gosto do desafio de fazer coisas que nunca fiz antes.	INN3
29. Gosto de aprender coisas mesmo que nunca se tornem úteis para mim.	THEO4
30. Gosto de realizar trabalhos manuais.	PRA5
31. Estou sempre à procura de sentir um frio na barriga.	INN4
32. Gosto de fazer coisas que sejam novas e diferentes.	BOLD6
33. Gosto de frequentar lojas de hardware ou produtos automotivos.	PRA6
34. Eu gostaria de entender melhor como o universo funciona	THEO5
35. Gosto que minha vida permaneça a mesma semana a semana.	CON3



## APPENDIX - D

## Communalities

	Initial	Extraction
INN1	1,000	,478
OTF4	1,000	,797
OTMR1	1,000	,526
LEA1	1,000	,835
BOLD2	1,000	,686
CON1	1,000	,629
PRA2	1,000	,738
OTF1	1,000	,746
OTMR2	1,000	,633
LEA2	1,000	,506
INN2	1,000	,653
PRA3	1,000	,751
OTF2	1,000	,817
OTMR3	1,000	,676
LEA3	1,000	,853
BOLD5	1,000	,761
CON2	1,000	,646
PRA4	1,000	,629
OTF3	1,000	,660
OTMR4	1,000	,645
INN3	1,000	,688
PRA5	1,000	,778
INN4	1,000	,741
BOLD6	1,000	,754
PRA6	1,000	,796
THEO5	1,000	,680
THEO1	1,000	,460
THEO2	1,000	,566

Extraction Method: Principal  
Component Analysis.

**APPENDIX – E**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,428	19,387	19,387	5,428	19,387	19,387	4,160	14,858	14,858
2	4,119	14,711	34,098	4,119	14,711	34,098	3,187	11,381	26,239
3	2,528	9,027	43,125	2,528	9,027	43,125	2,285	8,159	34,398
4	1,803	6,439	49,564	1,803	6,439	49,564	2,205	7,874	42,273
5	1,695	6,055	55,619	1,695	6,055	55,619	2,021	7,218	49,491
6	1,334	4,764	60,383	1,334	4,764	60,383	1,968	7,027	56,518
7	1,140	4,073	64,456	1,140	4,073	64,456	1,774	6,337	62,855
8	1,081	3,862	68,317	1,081	3,862	68,317	1,529	5,462	68,317
9	,821	2,934	71,251						
10	,799	2,853	74,104						
11	,680	2,429	76,533						
12	,671	2,396	78,929						
13	,583	2,082	81,011						
14	,563	2,011	83,023						
15	,530	1,891	84,914						
16	,479	1,711	86,625						
17	,453	1,618	88,243						
18	,451	1,609	89,853						
19	,437	1,560	91,412						
20	,374	1,334	92,747						
21	,338	1,208	93,955						
22	,309	1,104	95,059						
23	,298	1,064	96,123						
24	,265	,945	97,068						
25	,250	,893	97,961						
26	,226	,806	98,768						
27	,192	,684	99,452						
28	,154	,548	100,000						

Extraction Method: Principal Component Analysis.

## APPENDIX – F

11/07/2019

Gmail - Inquiry about VALS in Brazil



Paola Graciano &lt;[REDACTED]@gmail.com&gt;

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**Inquiry about VALS in Brazil**


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Bill Guns <wguns@sbi-i.com>  
 Para: [REDACTED]@gmail.com

10 de julho de 2019 14:15

Thank you for your question.

We have not developed a VALS system for Brazil. We have had preliminary discussions over the years with different groups, but we never were able to fund the development.

A few people claimed they could translate the US or the Spanish-language battery. This is not appropriate, nor do we support this approach.

Good luck with your defense!

A user filled out the [contact form](#) on the SBI website:

Name: PAOLA GRACIANO DE SOUZA  
 Company: Universidade Federal do Rio Grande do Sul  
 Email: [REDACTED]@gmail.com  
 Phone: [REDACTED]  
 Topic(s) of Interest: VALS

Details: As a marketing researcher, I'd like to check if there is a valid version of VALS for Brazil, one that is recognized by SRI. As far as I'm concerned, there is not, but since we've started an academic discussion over the topic in our department, I'd like to make sure there is no official framework for Brazil before defending my thesis. Thanks in advance. Regards, Paola Graciano  
 PHD Candidate at UFRGS - Brazil