ABSTRACT

Objective: This study aimed to confirm contamination phenomenon of an item by its owner, from an anthropological perspective. Furthermore, it was also investigated the influence of other elements on the individual’s propensity to buy used products, such as consumption awareness and finances.

Relevance: Despite the popularity of virtual platforms to buy used products and the positive consequences of this action for consumer welfare, the motivations that lead to this behavior appear unclear. Besides that, there are barriers related to the acquisition of these items that transcend rationality and logic.

Method: A quantitative approach was adopted and an electronic survey was applied to a convenience sample. The collected data were analyzed through descriptive statistical tests, correlations, exploratory factorial analysis, ANOVA and GLM (General Linear Model).

Theoretical/methodological contributions: This research contributes academically with the verification of the contamination phenomenon existence and the development of an instrument to measure this construct.

Results: The results confirm the existence of the contamination phenomenon, from an anthropological perspective. Also, confirm that the positive attitude of some individuals towards conscious consumption does not usually result in consistent behaviors. However, different from other researches, it was verified that the predisposition to buy used products is not significantly associated with personal finances.

Keywords: Contamination, Used Products, Consumer Behavior.

Cite it like this:
SUPERANDO A CONTAMINAÇÃO E COMPRANDO PRODUTOS USADOS

RESUMO

Objetivo: O objetivo deste trabalho foi confirmar a ocorrência do fenômeno da contaminação de um item pelo seu proprietário, em uma perspectiva antropológica. Também, buscou-se investigar a influência deste e de outros elementos, como a consciência no consumo e a renda, sobre a propensão do indivíduo à compra de produtos usados.

Relevância: Apesar da popularidade da compra de usados por meio de plataformas virtuais e das consequências positivas para o bem estar do consumidor, as motivações que levam a este comportamento parecem pouco definidas. Outrossim, há barreiras relacionadas à aquisição destes itens que transcendem a racionalidade e lógica quanto ao comportamento de compra.

Método: Foi realizada uma investigação quantitativa com survey eletrônico aplicado à amostra do tipo conveniência. Os dados coletados foram analisados por meio de testes estatísticos descritivos, correlacionais, análise fatorial exploratória, ANOVA de um fator e testes GLM (General Linear Model).

Contribuições teóricas/metodológicas: As principais contribuições acadêmicas da pesquisa concernem a constatação da existência do fenômeno da contaminação e ao desenvolvimento de um instrumento para mensurar este construto.

Resultados: Os resultados encontrados confirmam a existência do fenômeno da contaminação, em uma perspectiva antropológica, e a hipótese genérica de um consumidor maximizador de valor cuja atitude positiva para o consumo consciente não costuma resultar em comportamentos condizentes. No entanto, em desacordo com outras pesquisas, verificou-se que a predisposição à compra de produtos usados não está associada significativamente à renda.

Palavras-chave: Contaminação, Produtos Usados, Comportamento Do Consumidor.
INTRODUCTION

Consumers interact with products in complex ways and tend to give a new meaning to consumption according to their social-economical context (Ungerer, 2014). This subjective process can lead to changes on the consuming habits that aim to healthier choices for the individual, the society and the environment (McGregor & Goldsmith, 1998; Yan, Bae, & Xu, 2015). Following the trend, many researches focus on influence of these new behaviors on the buying decision of a more aware consumer (Haws, Winterich, & Naylor, 2014).

However, studies about alternative possibilities related to consumption are not new (Yan et al., 2015). Sherry (1990) investigated the “second-hand” items market, also known as “flea market”, focusing on the side circle of products, the exchanging process of the consumers’ used products. This phenomenon, besides appointed as a trend at the time, already showed rising proportions on the business on the American economy (Sherry, 1990).

Nowadays, the side circle stills happens, more intensively, due to the facilities provided by the internet (Belk, 2013b). Being maximizer of prices, many consumers wish to better take advantages of their belongings through the sell or exchange of these goods after a period of use (Biswas & Roy, 2015). The “used” market seemed to have evolved and entered the internet era (Weil & Vitale, 2001). Many websites offer safe and accessible platforms to primary consumers to reintegrate a used object on the business flow and retrieve part of the amount invested on its purchase (Leite, 2009; Liang & Liang, 2014). However, the search for used products is also explained due to a change on consumers behavior that shows a positive attitude for aware consumption (Elliott, 2013; Belk, 2010; Yan et al., 2015).

It is known, however, that there are some barriers related to the acquisition of used items which transcends rationality concerning purchasing behavior (Krishna, 2011; Yan et al., 2015). Researches show that, when trading products, people tend to impregnatate it with their energy, which may cause uneasiness to other people that will use the same item in the future (Arigo, Dals, & Morales, 2006; Krishna, 2011). Explained through a theoretical anthropologic lens, this phenomenon is about the perspective of contamination of the good used by the previous owner, which can influence on its value (Rozin & Nemeroff, 1990; Siegal, Fadda, & Overton, 2011; Biswas & Roy, 2015).

In this sense, the study aims to investigate the perception of the contamination phenomenon, in an anthropological perspective, and its influence on the tendency of purchasing of used products. It was also investigated other factors, like consumption awareness, income level and value awareness influence the general predisposition of a person to buy these items. The study is organized in sections that approaches the contamination phenomenon; the correlation between awareness and well-being, including environmental aspects; the observation that utilitarian factors are predominant on purchasing decision; methodological procedures; results; discussions and final remarks.

Contamination

By touching products, people might affect how others react to the item (Krishna, 2011). Anthropological researches that studied the beliefs of indigenous cultures have found the ‘Laws of Sympathetic Magic’, as pointed by Mauss and Hubert (2003/1902), and the ‘Law of Contagion’, proposed by Meigs (1984). The ‘Law of Contagion’ says that when a source-person touches a target-object, the source will continue to influence on the target even when stop touching it (Rozin & Nemeroff, 1990; Meigs, 1984; Yan et al., 2015). This phenomenon is similar to the ‘Laws of Sympathetic Magic’, in which the source, magically, transfers some of one’s properties to the target by touch (Rozin & Nemeroff, 1994; Yan et al., 2015).

Therefore, the physical contact of an individual with a product by use can contaminate the item and create a sense of repugnancy from it (Krishna, 2011; Guido, Pino, & Peluso, 2018). Particularly, personal objects, which have invisible traces of their history, are more susceptible; for example, one could mention the reluctance in sharing used clothes (Rozin & Nemeroff, 1994).

Previous researches have shown that volunteers had liked a product less and had less chances of purchasing it if another buyer had touched it before (Argo et al., 2006; Krishna, 2011; Guido et al., 2018). One of the studies was directed, specifically, to clothing items (Argo et al., 2006; Krishna, 2011). Assuming that the perception of contamination would gradually increase according to where the item was located, from the main exhibition booth to the changing rooms, in other words, with the increasing chance of a physical contact with a potential contaminant (Krishna, 2011; Yan et al., 2015).

As expected, the evaluations of the products and intentions of purchasing were better for items on the exhibition booth than to those found directly on the changing room (Krishna, 2011). The simple assumption of contamination affected subjects’ evaluations (Krishna, 2011; Guido et al., 2018). Moreover, researches show that even other healthy people can contaminate objects, but the perspective of contamination intensifies if the person is described as having a serious illness or even being distrustful (Rozin
Some properties of contagion are: physical contact, which is, definitely, necessary or almost always included; effects, which are relatively permanent; time of exposure to the vector, so that even a very brief contact, with any part of the source, produces an effect similar to the full contact (insensitivity to dose and route); predominance to perception of the negative contagion, which is more disseminated and powerful than the positive (dominant negativity); the attributes of the transmitted properties can be physical or mental, including intentions and ‘luck’; contamination can operate on a backwards direction, with effects flowing from the target to the source (Rozin & Nemeroff, 1990, pp. 208-209; Guido et al., 2018). It was also seen some cultural characteristics about contagion, however, particularly the one made by contact with an undesirable person is omnipresent, universal (Rozin & Nemeroff, 1994; Siegal et al., 2011; Um & Kim, 2016; Inozu et al., 2017).

Not far from this perspective, Belk (1998), by proposing the concept of ‘extended self’, which says that people consider their possessions like part of themselves, ratifies this proposal of the contamination of objects by their owner. According to the author, some of the reasons related to the collection or purchasing of a specific item can be related to the fact that it holds part of the ‘extended self’ of beloved people (Belk, 1988; 2013a). Some examples include: handcrafted items made by demand, which have energy from the creator directly entrusted on the piece; objection in buying counterfeit pieces, which do not have a source of contact with the essence of the brand; gifts given by loved ones or family relics; products associated with famous people by merchandising (Belk, 1988; Yan et al., 2015; Um & Kim, 2016).

Although the original formulation of the ‘extended self’ highlights the singularity of our relations with tangible items, such as collection items or gifts, a person’s possessions represent more than just an extension of one’s personality, of one’s ‘I’, they represent memory tags (Belk, 2013a). Possessions are related to memories that involve experiences, relations or former ‘I’s’ of a person (Belk, 1988). Belonging, therefore, besides anchoring memories, can also evoke associated feelings and emotions (Belk, 2013a).

These are some of the reasons that explains the feeling of pain reported by people that have lost a belonging due to some sinister reason such as theft, robbery or loss (Belk 1988, 2013a). Thereby, it is coherent to state that, if personal belongings are an extension of the owner, choosing to purchase an object filled with memories and energy from the previous owner can be an obstacle for used trades (Belk, 1988; Krishna, 2011; Guido et al., 2018). It should be underlined that, eventually, selling objects that are very beloved can also be hard for the owner for the same said reasons (Belk, 2013a).

Overcoming these obstacles can be associated to people’s growing concern with stockpiling goods and consuming awareness (Ungerer, 2014; Yan et al., 2015). Joining this fact to socioeconomic changes, such as familiar structure and increasing of living costs, it is noticeable that more consumers do less with the available resources (Reynolds, Ganesh, & Luckett, 2002). Even so, they are still eager for experiences, which makes the selling or exchanging of used items a viable alternative for new purchases.

Shortage of resources, especially financial, seems to be a strong stimulus to detachment, reducing the pain of losing the sold item and displeasure related to the contamination of the acquired item (Sherry, 1990; King, 1981; Krishna, 2011; Belk, 2013a; Carlson, 2018). Consumers also seem smarter, choosing to acquire products with higher cost-benefit level Papagiannis, Bourlakis, Alamanos, & Dennis, 2017) and that could bring back part of the investment on a used market afterwards. Also, there is an evidence of strong potential of flea markets to provide incomes: still in the 1990s, the about 3.500 ‘flea markets’ in the USA could make more than US$10 billion in gross income (Sherry, 1990).

Still, besides the growing ascension of consumers in acquiring used products, mainly young people, there are few studies aimed to trace a psychographic profile of these people and to identify the sorts of most wanted products (Yan et al., 2015). Therefore, this topic becomes relevant and contributes to better understand the reasons that causes this purchasing behavior.

The perception of contamination is a real phenomenon (Argo et al., 2006; Krishna, 2011; Siegal et al., 2011; Yan et al., 2015; Inozu et al., 2017; Guido et al., 2018). However, the intensity in which it influences the purchasing of a used product is still unknown: it may vary among people and according to the type of item (Rozin & Nemeroff, 1994; Krishna, 2011; Belk, 1988; Yan et al., 2015; Guido et al., 2018). The reasons that make a person overcome this phenomenon and buy a product contaminated by strangers are also unknown. Some possibilities analized in this study are associated to positive and negative perception of the previous owner, as highlighted on previously mentioned studies (Rozin & Nemeroff, 1994; Krishna, 2011; Argo et al., 2006; Siegal et al., 2011; Um & Kim, 2016; Yan et al., 2015). Other reasons might be related to consumer awareness and financial reasons, aspects to be discussed on the next sections.

Awareness and consumption: pursuing welfare

The 21st century has brought ruptures that resulted in reconsidering paradigms and practices...
applied in marketing and new scientific evidences about the disturbing effects of consumers’ behavior on worldwide ecology (Mick, Pettigrew, Pechmann, & Ozzane, 2011). Consumers, however, also started showing more concern with the impact of their activities on welfare and healthiness of the planet (McGregor & Goldsmith, 1998; Farrant, Olsen, & Wangel, 2010; Yan et al., 2015). Following this new attitude, many researchers of Consumers’ Behavior have been working on themes like compulsive consumption and materialism in order to help to improve people’s as well as consumers’ lives (Mick et al., 2011).

However, despite the solid focus in promoting an improve in quality of life and social welfare, this perspective, consumption awareness, faces substantial challenges and, simultaneously, paradoxical (Mick et al., 2011). The more than seven billion inhabitants of the planet cannot maximize individual welfare without considering others’ needs and the capacity of the planet to provide the necessary resources (Burroughs & Rindfleisch, 2011). Many variables will, inevitably, bump in trade-offs in all aspects (Ozzane & Fischer, 2011).

This analysis, consumption and its relation with welfare must be understood. To Csikszentmihalyi (2011), the act of consuming, defined by the break of natural or artificial structures to satisfy biological or cultural impulses, is one of the boldest extent among human activities. Indeed, human life is only possible, on the current way, due to consumption (Csikszentmihalyi, 2011). However, to what extent is the act of consuming not consuming the possibility of a good life, of a ‘welfare’?

“Welfare is a flourishing state that involves health, happiness and wealth” (Mick et al., 2011, p. 6). A concept more tied to materialism describes welfare as the “alignment of individual and social needs (in other words, physical, psychological, economic and social) and how they are related to consumption (Burroughs & Rindfleisch, 2011, p. 253). Therefore “consumers’ welfare is optimized when an individual recognizes and balances these many concerns on the purchasing decision” (Burroughs & Rindfleisch, 2011, p. 253).

Consumption awareness refers to a tendency of people in showing interest on aspects related to welfare, mainly to environment, by means of their purchasing decisions and behavior (Haws et al., 2014). However, even though it involves an individual pursuit for welfare and reducing the impact of human activities on the planet (Elliott, 2013), the core of conscient purchasing decision regards to the maximization of value by consumer (Biswa & Roy, 2015; Weissstein, Asgari, & Siew, 2014).

According to this perspective, the value in consumption regards the level of satisfaction of the individual after having compared gains and losses with the acquisition (Biswa & Roy, 2015). However, some very subjective dimensions, like social recognition for showing environmental concern (Elliott, 2013), complicates the definition of parameters to measure behaviors that could indeed be considered ecologically suitable (Luzio & Lemke, 2013).

Most of the proposals to trace the profile of aware consumers had inconclusive and contradictory results: there are variations among more objective aspects such as incomes, socio demographic profile, gender and others, making it hard to find a pattern (Luzio & Lemke, 2013). Idiosyncratic aspects are equally inconsistent: sometimes the perspective of welfare can also be related to an increase on the consumption efficiency (Elliott, 2013).

Therefore, it is about the power of consuming more and better with the same level of environmental damage previously caused, not about reducing the intensity of the impact (Elliott, 2013). Evidence shows that consumption awareness involves an attitude that does not always guides the person purchasing behavior (Elliott, 2013), as discussed on the next section.

Aware or convenient consumption?

On the consumption logic, it is recurrent the assumption of the individual as a resources optimizer: consumer will make a decision based on the evaluation of gains and losses incurred on the acquisition of a product (Biswa & Roy, 2015). When it comes to aware consumption the situation is not different: the purchasing decision will only be made if it adds value to the client (Weissstein et al., 2014). Although it is recognized that there is a positive attitude from many people for environment and welfare, this cannot reverberate on ‘aware consumption’ behaviors (Farrant et al., 2010; Luzio & Lemke, 2013).

It is expected from these consumers to have different attitudes, such as believing in the responsible use of resources, and to be favorable to moderate consumption (Haws et al., 2014). However, in practice, some consider aspects such as consumption efficiency, consuming more with the same expenditure of resources, a sustainable practice (Elliott, 2013). “Awareness”, in most of the cases, is shown as a collateral damage of the maximization of individual returns (Biswa & Roy, 2015). In other words, the core of purchasing decision for those who say to have positive attitude of consumption awareness is not the impact to collective welfare, but the optimization of their own satisfaction (Haws et al., 2014; Biswa & Roy, 2015; Luzio & Lemke, 2013; Farrant et al., 2010). Even so, some ways of alternative consumption can

have positive consequences for the environment and the community (Farrant et al., 2010).

That is the case of side circle of products, which involves the purchasing of used items and can be interpreted as an opportunity to promote greater social welfare (Schiffer, Downing, & Mccarthy, 1981). The negotiation of used items among consumers promote a partial return of the amount invested in an item and enables the acquisition of other items necessary to their satisfaction for a more reasonable price (Sherry, 1990; Yan et al., 2015). Besides selling, this process includes the direct exchange of products, efficiently and less onerous and a little bureaucratic, which then coexists with other traditional ways of commerce (Belk, Sherry, & Wallendorf, 1988). The motivations that leads someone to purchase or exchange used items, however, divide researchers (Belk, 2013b; Yan et al., 2015; Hamari, Sjöklint, & Ukkonen, 2016).

Despite the recent literature indicate behaviors that refer to ethic and aware consumption, economic reasons still emerge on the researches (Hamari et al., 2016). King (1981) pleads that the side circle usually involves low income buyers and sellers, so the economic factor is the trigger to the consumer involvement. In contemporary researches this tendency tends to persist: a utilitarian slant, related to partial recovery of the amount invested on the purchase, motivates the transactions among consumers (Belk, 2010).

Another factor refers to good business opportunities: on the golden age of flea markets, many treasure hunters were engage in the search of good items that could give profitable returns in case of a new selling (Belk et al., 1988). By analogy, contemporary consumers seek good business opportunities in alternative selling channels with their pairs, especially through the internet (Belk, 2013b). This idea of ‘profitable business’ can be associated with the consumer’s perception of price and price awareness.

Perception of price, on a utterly economic slant, refers to the amount of money involved on a purchase transaction; however, it should be considered in other dimensions (Lichtenstein, Ridgway, & Netemeyer, 1993). Price is a complex and heterogeneous stimulus when it comes to the intensity and way it affects people (Lichtenstein et al., 1993; Carlson, 2018). It also has different connotations about the product and influence on the perceived risk in a transaction: it can stimulate positive or negatively (Weisstein et al., 2014; Carlson, 2018).

Value awareness, on the other hand, involves even more idiosyncratic elements. The clearest aspect about the relation between product performance and its price: it is expected that the money to be invested on the purchase of items that add value (Biswa & Roy, 2015). Therefore, the perceived value in a transaction may vary substantially (Atkins & Kim, 2011). Social aspects are also considered, such as the status associated on the purchase of a certain item (Elliott, 2013). Moreover, value awareness can be even more influential than income effect on the final decision for the acquisition of a product (Weisstein et al., 2014): money has to be well spent. Conscious purchase, such as the purchase of used items, thus, are more vulnerable to the effects of perception of price and price awareness (Haws et al., 2014).

Recent studies indicate that this practice, purchase and sale of used items, is being used to foster an environment of sustainable business, since it can refer to an attempt to prolong the lifespan of an item (Hamari et al., 2016; Schiffer et al., 1981). Intentionally or not, the side circle: promotes social justice when it democratizes the access to good quality products, which prices in traditional purchasing channels are prohibited to most of the population (Galpin, Whittington, & Bell, 2015).

However, environmental benefits are mentioned as a consequence or collateral effect: the notion of sustainability is an important factor to the formation of a favorable positioning to the purchase of used items, but economical benefits are the major motivations (Hamari et al., 2016; Elliott, 2013; Farrant et al., 2010).

METHODOLOGICAL PROCEDURES

Data collection, instruments of measurement, reliability and validity

This study consist of a research of quantitative, formal, descriptive and transversal nature (Cooper & Schindler, 2016). The data was collected between October and December 2017 on an electronic survey divided in six sections (Hair et al., 2014; Malhotra, 2011): Section 1, purchase of used clothes; Section 2, aware consumption; Section 3, contamination; Section 4, value awareness; Section 5, price awareness; Section 6, social economical data.

Section 1 analysed the purchase of used products and measured the general predisposition to the purchase of such items, respectively, by nominal variable and scale type Likert of 7 points. Sections 2, 4 and 5 measured the main constructs through already validated scales, for reference: ‘GREEN Consumption values’ scale (Haws et al., 2014) for the construct ‘consumption awareness’; ‘Price Perceptions Scale - Dimension: Value Consciousness’ (Lichtenstein et al., 1993) for the construct ‘value consciousness’; ‘Price Perceptions Scale - Dimension: Value Consciousness’ (Lichtenstein et al., 1993) for the construct ‘price consciousness’. Due to the lack of a validated scale to measure the construct ‘contamination’, nine items based on the current literature were developed and submitted to validation of face, pre-tests, validation tests and reliability (Cooper & Schindler, 2016; Malhotra, 2011). Data collection was made by Likert
type 7 points scale for all constructs; lastly, social economical data such as income, age and gender were collected through reason and nominal variants (Cooper & Schindler, 2016).

In order to analyze the reliability and validation of the scales, the exploratory factor analysis and Cronbach’s Alpha coefficient (Malhotra, 2011) were used, the results were the following: consumption consciousness (α= 0.860 (var= 59.158% | KMO= 0.841, Bartlett= 842,106 with 15 g.l., p<0.000)); contamination (α= 0.752 (var= 58.034% | KMO= 0.730, Bartlett= 339,437 with 6 g.l., p<0.000)); value consciousness (α= 0.799 (var= 61.11% | KMO= 0.813, Bartlett= 680,674 with 21 g.l., p<0.000)); price awareness (α= 0.827 (var= 60.054% | KMO= 0.830, Bartlett= 625,401 with 10 g.l., p<0.000)). The general predisposition to used purchase, which is made of just one measured item by nominal variable, was not tested. The other results align with the studies that resulted on the original scales.

**Samples characteristics and techniques of data analysis**

The sample, convenience by accessibility, is formed by 332 valid respondents with a wide range of age, individual and family incomes. Ages vary between 18 to 63 years old, the average age is around 31 years, standard deviation of 9.854 years and 25 years is the mode of the frequency. The feature family income has a wide range among the respondents: it varies from R$ 0.00 to R$ 120,000.00 monthly, average of R$ 9.027,00 and standard deviation of 10.910,00. The feature individual income, average of R$ 3.173,00 monthly, showed the same tendency verified on the family income: wide range (R$ 0.00 to R$ 70.000,00), high standard deviation (about R$ 6.817,00). About gender, the amount of female respondents were bigger than male: 72.3% (240 respondents) e 27.7% (92 respondentes) of the sample, respectively.

The hypotheses were made over the study based on the literature about the theme and verified by using describing statistics tests, correlate and ANOVA of a factor (Malhotra, 2011). Specifically, ANOVA to stimulate the existence of a direct relation between the constructs; followed by correlation tests to measure and characterize the found relations. The presence of moderations on the relations was analysed by GLM (General Linear Model) tests (Hair, Black, Babin, Anderson, & Tatham, 2009). The statistical tests were made using the software SPSS Statistics, version 25.

**Hypothesis and theoretic model**

The hypotheses from the study were made from the bibliographical research and are shown on Figure 1.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
<th>Theoretical basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Consumption awareness directly influences the general propensity to the purchase of used products.</td>
<td>McGregor &amp; Goldsmith, 1998; Mick et al., 2011; Ungerer, 2014; Haws et al., 2014; Biswas &amp; Roy, 2015; Weisstein et al., 2014; Farrant et al., 2010; Yan et al., 2015.</td>
</tr>
<tr>
<td>H2a</td>
<td>Higher family income reduces the general propensity to purchase used products.</td>
<td>Hamari et al., 2016; Yan et al., 2015; King, 1981; Belk, 2010; Belk et al., 1988.</td>
</tr>
<tr>
<td>H2b</td>
<td>Higher individual income reduces the general propensity to purchase used products.</td>
<td>Hamari et al., 2016; Yan et al., 2015; King, 1981; Belk, 2010; Belk et al., 1988.</td>
</tr>
<tr>
<td>H3</td>
<td>Value consciousness increases the general propensity to purchase used items.</td>
<td>Biswas &amp; Roy, 2015; Weisstein et al., 2014; Atkins &amp; Kim, 2011; Elliott, 2013; Haws et al., 2014.</td>
</tr>
<tr>
<td>H4</td>
<td>The perception of contamination of the used items reduces the propensity to purchase them.</td>
<td>Guido et al., 2018; Yan et al., 2015; Krishna, 2011; Argo et al., 2006; Rozin e Nemeroff, 1994.</td>
</tr>
<tr>
<td>H5</td>
<td>Consumption awareness moderates the relation between value consciousness and the propensity to purchase used items.</td>
<td>McGregor &amp; Goldsmith, 1998; Mick et al., 2011; Haws et al., 2014; Ungerer, 2014; Biswas &amp; Roy, 2015; Weisstein et al., 2014; Atkins &amp; Kim, 2011; Elliott, 2013; Farrant et al., 2010; Yan et al., 2015.</td>
</tr>
<tr>
<td>H6</td>
<td>The positive perception of contaminant by the person moderates the relation between value consciousness and the propensity to purchase used hand items.</td>
<td>Belk, 1988, 2013a; Biswas &amp; Roy, 2015; Weisstein et al., 2014; Atkins &amp; Kim, 2011; Elliott, 2013; Haws et al., 2014; Siegal et al., 2011; Um &amp; Kim, 2016; Inozu et al., 2017.</td>
</tr>
</tbody>
</table>
Based on the results of the tests of the hypotheses described on the next section, it was made the theoretical model shown in Figure 2.

**Figure 2 – Theoretical Model**

In order to organize the comprehension of the discoveries, the results are divided according to the order of the hypotheses made.

**H1**: Consumption consciousness directly influences the general propensity the purchase of used products.

To test this hypothesis, the metric variant consumption awareness was converted in a dichotomous from the average, creating two groups: Group 1 - Low consumption awareness (up to 5 on the original scale); Group 2 - high consumption awareness (over 5 on the original scale). The significant ANOVA test, made between the general propensity to purchase used products and the consumption awareness, shows a relation between these variants, according to Table 1, supporting the hypothesis made (F=5.077; p<0.05).

Previous studies (Elliott, 2013; Luzio & Lemke, 2013) that mention this idea were also confirmed.

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>Z</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>6,378</td>
<td>1</td>
<td>6,378</td>
<td>5,077</td>
</tr>
<tr>
<td>On the Groups</td>
<td>414,514</td>
<td>330</td>
<td>1,256</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>420,892</td>
<td>331</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 1 – ANOVA between ‘consumption awareness’ e ‘propensity to purchase used items’**

Even though the difference between the average altitude was not very significant Table 2), since the average of the hypothesis was very high (about 6.48 with standard deviation of 1.128) the significance proves the relation foreseen on the hypothesis.

<table>
<thead>
<tr>
<th>N</th>
<th>Average</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>Reliability gap of 95% for the average</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Consumption Awareness</td>
<td>227</td>
<td>6.39</td>
<td>1.251</td>
<td>0.083</td>
<td>6.22</td>
<td>6.55</td>
</tr>
</tbody>
</table>
Table 2 – Difference of averages of ‘propensity to purchase used items’ according to ‘consumption awareness’

Source: Research data

Table 3, which contains the cross tab between consumption awareness and the purchase of a used item, shows that not always this positive attitude reverberates in environmental aware behaviors (Farrant et al., 2010; Haws et al., 2014; Yan et al., 2015): among the 105 respondents that showed high consumption awareness, only 43.8% have bought used items.

Table 3 – Crosstab ‘used item purchase’ and ‘consumption awareness’

Source: Research data

H2a: Higher family income reduces the general propensity to purchase used products.

H2b: Higher individual income reduces the general propensity to purchase used products.

Considering the generic hypothesis of income levels and their influences on the propensity of purchase used items showed on the theory (King, 1981; Belk et al., 1988; Belk, 2010), there are two possible analysis: by individual income and by family income. Therefore, they were analysed individually. By ANOVA test, it was verified that neither family income (F= 1.266; p>0.05) nor individual income (F= 0.023; p>0.05) has relation with propensity to purchase used items (Table 4 and Table 5). Hypotheses 2a and 2b were, therefore, rejected.

Table 4 – ANOVA between ‘family income’ and ‘propensity to purchase used items’

Source: Research data

The test of Spearman’s rank correlation, made between the dependent variable and individual (ρs= -0.023; p>0.05) and family (ρs= 0.022; p>0.05) incomes, also validates the rejection of hypotheses 2a.
and 2b, showing that there is no significant relation between general propensity to purchase used items and incomes. Such finding is extremely relevant for going against previous studies that associates the purchase of used items to lower purchase power consumers (King, 1981; Belk et al., 1988; Belk, 2010; Yan et al., 2015).

H3: Value consciousness increases the general propensity to purchase used items.

Similar to the previous hypotheses, this one was also tested by ANOVA to validate the higher propensity of consumption of used items by people with high value consciousness. Value consciousness means the tendency of the respondents to search and find lower prices of the same product, thus, to value the amount invested on the purchase.

The result (Table 6) shows a very significant relation between the two constructs, proving the direct relation between them ($F = 11.62, p < 0.05$). Spearman’s rank correlation tests (Table 7) indicates a weak positive yet significant relation ($\rho_s = 0.218, p < 0.05$). Both analyses validate the hypothesis and corroborate with the theoretical premise of consumer as a maximizer of value on purchases transactions (Biswas & Roy, 2015).

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>Z</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>14,316</td>
<td>1</td>
<td>14,316</td>
<td>11,620</td>
</tr>
<tr>
<td>On the Groups</td>
<td>406,575</td>
<td>330</td>
<td>1,232</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>420,892</td>
<td>331</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6 – ANOVA between ‘value consciousness’ and ‘propensity to purchase used products’

H4: The perception of contamination of the used items reduces the propensity to purchase them.

The ANOVA test (Table 8) between the perception of contamination and propensity to purchase used products significant ($F = 5.151, p < 0.05$) indicates that both constructs are related, validating the theory about the theme (Guido et al., 2018; Yan et al., 2015; Krishna, 2011; Argo et al., 2006; Rozin & Nemenroff, 1994).

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>Z</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>6,469</td>
<td>1</td>
<td>6,469</td>
<td>5.151</td>
</tr>
<tr>
<td>On the Groups</td>
<td>414,423</td>
<td>330</td>
<td>1,256</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>420,892</td>
<td>331</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8 – ANOVA between ‘perception of contamination’ and ‘propensity to purchase used products’

It was also verified a difference of averages of general propensity to purchase used products between the respondents that have higher and lower perceptions of contamination (Table 9) confirming again the theory (Argo et al., 2006; Yan et al., 2015). To people who are less susceptible to contamination, the average
propensity was 6.61; while for the more susceptible, the average variant lowered to 6.34. It is important to highlight that, even though the difference between the averages was not substantial, it is significant as seen by the ANOVA test.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Average</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>Reliability gap of 95% for the average</th>
<th>Lower limit</th>
<th>Upper limit</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Contamination Perception</td>
<td>174</td>
<td>6.61</td>
<td>.977</td>
<td>.074</td>
<td>6.47</td>
<td>6.76</td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>High Contamination Perception</td>
<td>158</td>
<td>6.34</td>
<td>1.260</td>
<td>.100</td>
<td>6.14</td>
<td>6.53</td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>332</td>
<td>6.48</td>
<td>1.128</td>
<td>.062</td>
<td>6.36</td>
<td>6.60</td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

**Table 9** – Average difference of ‘propensity to purchase used products’ related to ‘perception of contamination’

Source: Research data

**H5:** Consumption awareness moderates the relation between value consciousness and the propensity to purchase used items.

As seen on hypotheses H1 and H4, the constructs consumption awareness and value awareness are directly related with the propensity to purchase used items. Here was also noticed that value awareness also moderates the original relation of hypothesis 1. In order to analyse this possibility, a GLM (General Linear Model) was made (Table 10).

<table>
<thead>
<tr>
<th>Origin</th>
<th>Type III Sum of Squares</th>
<th>gl</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>Hypothesis</td>
<td>10928,034</td>
<td>1</td>
<td>10928,034</td>
<td>2226,504</td>
</tr>
<tr>
<td></td>
<td>Error</td>
<td>4,908</td>
<td>1</td>
<td>4,908</td>
<td></td>
</tr>
<tr>
<td>Dichotomous_C.C</td>
<td>Hypothesis</td>
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<td>1</td>
<td>7,542</td>
<td>1,369</td>
</tr>
<tr>
<td></td>
<td>Error</td>
<td>5,509</td>
<td>1</td>
<td>5,509</td>
<td></td>
</tr>
<tr>
<td>Dichotomous_C.V</td>
<td>Hypothesis</td>
<td>4,908</td>
<td>1</td>
<td>4,908</td>
<td>.891</td>
</tr>
<tr>
<td></td>
<td>Error</td>
<td>5,509</td>
<td>1</td>
<td>5,509</td>
<td></td>
</tr>
<tr>
<td>Dichotomous_C.C * DichotomousC.V</td>
<td>Hypothesis</td>
<td>5,509</td>
<td>1</td>
<td>5,509</td>
<td>4,557</td>
</tr>
<tr>
<td></td>
<td>Error</td>
<td>396,528</td>
<td>328</td>
<td>1,209</td>
<td></td>
</tr>
</tbody>
</table>

**Table 10** – Moderating effect of ‘value awareness’ on the relation ‘consumption awareness’ and ‘propensity to purchase used items’

Source: Research data

The results show that, indeed, value awareness moderates the relation between consumption awareness and propensity to purchase used items (F=4.557; p<0.05). It was also proved the superiority of the search to maximize the amount invested on a purchase, if compared to conscious consumption, and the consumer’s utilitarian slant, as shown on previous studies (Belk, 2010; Biswas & Roy, 2015; Hamari et al., 2016).

**H6:** The positive perception of contaminant by the person moderates the relation between value consciousness and the propensity to purchase used items.

Supporting the evidence found on the literature (Belk, 1988; 2013a), the GLM (General Linear Model) test shows that there is an influence of the contaminant to the propensity to purchase used items (F=19,199; p<0.05), as seen on Table 11, validating the hypothesis. The theoretical assumption is that some objects that belonged to dear or admired
people, such as celebrities, are more estimated by the owner, increasing the value on its acquisition (Belk, 1988; Biswas & Roy, 2015; Um & Kim, 2016; Inozu et al., 2017). Therefore, there is a new evidence of subjective factors that add value to the decisive process of purchase (Atkins & Kim, 2011; Elliott, 2013; Haws et al., 2014).

<table>
<thead>
<tr>
<th>Origin</th>
<th>Hypothesis</th>
<th>Type III Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interceptor</td>
<td></td>
<td>8063,557</td>
<td>1</td>
<td>1024,473</td>
<td>.020</td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td>7.871</td>
<td>1</td>
<td>7.871</td>
<td></td>
</tr>
<tr>
<td>Dichotomous_C.V</td>
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<td>30,433</td>
<td>1</td>
<td>1,819</td>
<td>.406</td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td>16,731</td>
<td>1</td>
<td>16,731</td>
<td></td>
</tr>
<tr>
<td>Positive_status_dichotomous</td>
<td></td>
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<td>1</td>
<td>.470</td>
<td>.617</td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td>16,731</td>
<td>1</td>
<td>16,731</td>
<td></td>
</tr>
<tr>
<td>Dichotomous_C.V * Positive_status_dichotomous</td>
<td></td>
<td>16,731</td>
<td>1</td>
<td>14,199</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td>386,491</td>
<td>328</td>
<td>1,178</td>
<td></td>
</tr>
</tbody>
</table>

Table 11 – Moderating effect of ‘contaminant’ on the relation ‘consumption awareness’ and ‘propensity to purchase used items’

Source: Research data

DISCUSSIONS

The analysis of the data supports the study goal to validate the influence of contamination on related to the purchase of used items (Krishna, 2011; Argo et al., 2006; Rozin & Nemenoff, 1994), and also with the assumption of the consumer as a maximizer of values (Biswas & Roy, 2015; Weisstein et al., 2014). Subjective and idiosyncratic elements, such as consumption awareness (Haws et al., 2014), value perception (Weisstein et al., 2014) and contamination perception (Argo et al., 2006; Krishna, 2011; Yan et al., 2015) have significant influence on the process of purchasing by the consumer as mentioned on the theory (Atkins & Kim, 2011; Elliott, 2013), especially on purchases labeled as conscious (Haws et al., 2014).

A strong contribution lays on the empirical confirmation of anthropological contamination phenomenon (Yan et al., 2015; Krishna, 2011; Argo et al., 2006; Rozin & Nemenoff, 1994). On a value maximizer consumer’s point of view (Biswas & Roy, 2015; Weisstein et al., 2014), this phenomenon can change the value noticed on the transaction that involves a used product (Biswas & Roy, 2015; Belk, 1988). In fact, supporting the literature (Belk, 1988), the positive perception of the previous owner of an object moderates the relation between value awareness and propensity to its purchase. Therefore, it was confirmed that items contaminated by dear people, such as family members or celebrities (Belk, 1988; 2013a; Um & Kim, 2016), increase the added value on a purchase (Biswas & Roy, 2015).

On the other hand, more objective attributes, such as demographic ones (sex, age and even income) are not significant on the propensity to purchase used items due to its wide range (Luzio & Lemke, 2013). Specifically about incomes, the analysis contradicts previous studies (King, 1981; Belk et al., 1988; Belk, 2010) that associate the purchase of used items to lower income consumers.

The analyses validate a consumer that maximizes returns (Biswas & Roy, 2015; Weisstein et al., 2014) whose value awareness is an element that moderates the propensity to purchase used items attached to consumption awareness. For the decision to purchase, the maximization of individual value reached on a transaction is more relevant than the consequences to the social welfare and the environment (Biswas & Roy, 2015; Weisstein et al., 2014).

Even though it was confirmed a general positive attitude with consumption awareness and its positive consequences to welfare (Burroughs & Rindfleisch, 2011; Ungerer, 2014; Mick et al., 2011), it will not necessarily reverberate on contradict behaviors (Farrant et al., 2010; Elliott, 2013; Luzio & Lemke, 2013; Haws et al., 2014). The ‘green’ or ‘conscious’ speech sounds like a way to achieve legitimacy and status given the damages of excessive consumption to social welfare (Elliott, 2013).

The stated conscious consumption is, therefore, primarily convenient. Even though it is viable to use the aspect ‘welfare’ to promote a sustainable business environment, it is a duty of the companies to explore deeply the utilitarian benefits of side circle: lower prices and good cost-benefit relation (Hamari et al., 2016; Schiffer et al., 1981; King, 1981; Belk, 2010; Belk et al., 1988; Sherry, 1990). Besides legitimizing the business for the consumers with positive attitude to consumption awareness, the approach contributes to change the perceptions of price.
and value (Elliott, 2013; Luzio & Lemke, 2013; Lichtenstein et al., 1993; Weisstein et al., 2014; Atkins & Kim, 2011).

Likewise, even though it was not the focus of this study, it is important to highlight that the popularity of online websites to purchase and sell of used items, many of which are luxury or collector items, make the understanding of contamination relevant to boost the retail of used items (Yan et al., 2015).

For many consumers, it is still common the negative stigma associated to the purchase of used products, mainly those who have eventually faced budget crisis (Yan et al., 2015; Watson, 2008). In fact, some have reported the feeling of shame when purchasing a used item by necessity (Guiot & Roux, 2010).

In parallel, it was also found evidences that, despite these obstacles, some consumers seek in used items idiosyncratic attributes not found in new products (Yan et al., 2015). That is the case related to the status associated to the possess of rare pieces of a brand, such as ‘vintage’ clothes or items of a limited collection that are not found on traditional retails (Belk, 1988; Yan et al., 2015; Um & Kim, 2016).

Therefore, on perspective of the consumer as an optimizer of value, the negative impact of anthropogenic contamination of used items is smaller compared to a lower cost–benefit purchase (Biswas & Roy, 2015; Haws et al., 2014; Weisstein et al., 2014; Luzio & Lemke, 2013; Krishna, 2011; Argo et al., 2006). In fact, it should be considered that the positive effects of contamination that could, also, stimulate the purchase of used products (Yan et al., 2015).

FINAL REMARKS

This study has contributed to the field of consumer behavior for promoting empiric evidences of the existence of contamination phenomenon, in an anthropological perspective, and its influence to the purchase of used items (Yan et al., 2015; Krishna, 2011; Argo et al., 2006; Rozin & Nemenoff, 1994). It also highlighted that the consumer’s utilitarian slant, focused on the best cost–benefit relation in one’s purchases (Belk, 2010; Weisstein et al., 2014; Biswas & Roy, 2015; Hamari et al., 2016), can contribute to overcome the negative stigma associated to the purchase of those items (Watson, 2008; Guiot & Roux, 2010; Yan et al., 2015).

However, contamination does not have only negative aspects: it can stimulate the acquisition of used products due to idiosyncratic attributes that do not exist in new products, such as the influence of admired people or even the status associated to the possess of a ‘vintage’ item (Belk, 1988; Yan et al., 2015; Um & Kim, 2016). Besides these aspects, it is important to highlight the viability of a mapping of the psychological profile of the people who choose this type of purchase, in order to be better explored by retailers (Guiot & Roux, 2010; Yan et al., 2015).

As the main limitations of this study, the most significant were: the convenience sampling; and the difficulty to measure perception as a phenomenon as subjective as anthropological contamination. About the samples, the wide range gauged on the demographic attributes, such as age and income, in a small quantitative of respondents, made impossible to identify a significant correlation with the other measure variants. As for the perception of contamination, besides being very idiosyncratic, does not have a valid scale to be measured.

In these terms, it is suggested that future researches focus on the positive aspects of contamination, which have been overcoming the negative stigma associated to the purchase of used items. Likewise, contamination, on the perspective shown on this study, can come not only from anthropological sources, but be associated to a brand of a company, idea that can inspire new ways to promote a product. Finally, besides the trace of a psychological profile of used items consumers, it is argued that the tracing and validation of a scale for the phenomenon has the potential to exposure other aspects of contamination not yet shown on the current studies.

REFERENCES


