



The Impact of Products' Perceived Value on Consumer Behavior and Feelings when Online or In-store

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Abstract

Do we act the same when we buy online or in-store? And how about when we are led into hedonism? Do we feel different than when under utilitarianism? Do we care about the perceived social norms when purchasing? These are some of the questions this thesis analyzes, as it becomes crucial to better understand consumers' behavior and emotions under different contexts.

Three experimental studies asked participants to imagine they were shopping online or in-store. It was found that purchasing online will lead to distinct behaviors than buying physically. However, it is indeed the perceived value of the product that has an actual effect on consumers' guilt feelings, even though this emotion does not interfere with one's self-esteem. Besides, when in-store, consumers were found to be more concerned about following perceived social standards on the first study, and in others, there was a higher concern about touching or smelling the products. Additionally, they also anticipate more satisfaction when consuming online, rather than when offline, which is presented as an opposite result to previous literature.

This research contributes to deepening conclusions on the influence of purchasing channels and the perceived value of goods, which is of profound interest as consumption gets more complex and as it gets harder to comprehend consumers' behavior.

Keywords: Guilt; Hedonic; Utilitarian; Online; In-store; Social norms; Anticipated satisfaction; Self-esteem.

Resumo

Será que agimos da mesma forma quando compramos online ou numa loja física? E quando somos levados pelo hedonismo? Será que nos sentimos diferentes do que quando conduzidos pelo utilitarismo? Será que nos preocupamos com as normas sociais percebidas ao fazer uma compra? Estas são algumas das questões que esta tese analisa, visto tornar-se crucial o entendimento transversal do comportamento e emoções dos consumidores em diferentes contextos.

Ao longo de três estudos experimentais, os participantes foram pedidos para imaginar que compravam online ou numa loja física. Verificou-se que a compra online leva a comportamentos distintos do que a compra física. No entanto, é de facto o valor percebido do produto que tem um efeito significativo sobre os sentimentos de culpa dos consumidores, mesmo que essa emoção não interfira efetivamente com a autoestima dos mesmos. Além disso, em alguns casos, os consumidores mostraram-se mais preocupados em seguir os supostos padrões sociais, e noutros revelaram maior preocupação em tocar ou cheirar os produtos. Adicionalmente, antecipam mais satisfação ao consumir online do que offline, o que se apresenta como um resultado oposto a literaturas anteriores.

Este estudo contribui para aprofundar as conclusões sobre a influência dos canais de compra e o valor percebido dos bens, sendo de profundo interesse graças à crescente complexidade do consumo, bem como à gradual dificuldade em acompanhar e entender o comportamento dos consumidores.

Palavras-chave: Culpa; Hedónico; Utilitário; Online; Em loja; Normas sociais; Satisfação antecipada; Autoestima.

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1. Introduction

It is forecasted that online retail sales worldwide will grow from 4280 billion US Dollars in 2020, to 6388 billion US Dollars in 2024 (Statista, 2021), which mirrors the growth of around 49,2%. However, the weight of the online consumption against the total consumption is different according to distinct cultures, as China and the United States arise as the biggest markets on this scope, whereas Portugal is smaller (Statista, 2021). These behavioral changes are usually linked to a higher generally perceived risk of online shopping than the traditional consumption (Forsythe and Shi, 2003; Pavlou, 2003), thus the online and physical channels provide different consumption experiences, even when purchasing the same product (Wolfenbarger and Gilly, 2001).

So far, different authors have studied in what way online purchasing can influence consumers' behavior and this thesis specifically aims to understand how consumers feel across different channels – online and offline – when buying both hedonic or utilitarian products. It is known that the author Camille Saintives (2020) has developed research on this theme and the results were interesting to the existing literature and to the marketing industry, which is why this study is mainly based on such results to deepen the investigation and to find new outcomes.

The increasing relevance is given to how emotions influence consumption behaviors also arise as a key topic to this scope. However, as it is such a complex topic, there are still limited findings on it. Nonetheless, there is a deep interest in this, as it highly interferes with how consumers behave and react, especially by emotions like guilt (Lancellotti and Thomas, 2018; Goldsmith et al., 2012), which has been acknowledged by Richins (1997) as a crucial emotion to one's consumption, and by self-related emotions that affect consumers' self-esteem. Once again, Camille Saintives (2020) explores this relationship between guilt and the purchasing channel and perceived value, serving as a theoretical basis on the subject.

Moreover, as the destruction or submission to social norms may be affected by one's purchasing environment (Rosenberg and Siegel, 2018) this research will assess whether consumers behave in a certain way so that they do not go against the perceived social norms, which is a topic more deeply studied by psychologists and marketers as it affects consciously or unconsciously behaviors (Melnik et al., 2021).

Lastly, as Camille Saintives (2020) and other authors like Vieira (2013), Westbrook (1997), and Yi and Baumgartner (2004) studied, there is a noticeable link between consumption emotions and post-consumption emotions. Consumers rely on the subjective reactions that arise from the consumption of a certain good to further predict the level of satisfaction they would have if they were actually to consume that product (Shiv and Huber, 2000, p. 202), thus consumers' anticipated satisfaction was also integrated into this study, as it can be affected by the previously mentioned factors.

Bearing this in mind, this thesis will be answering a concrete research question:

How do consumers' behavior change with the purchase channel and the perceived value of products?

To answer the research question will be disclosed relevant literature on the explored concepts, along with the reveal of the hypotheses of the study. Moreover, the methodology of the study will be defined, followed by a deep analysis of the results of all studies carried on. Finally, this thesis will present its discussions, implications, limitations, future research, and main conclusions.

2. Literature Review

2.1. Differences in consumption according to the purchasing channel and perceived value of products

The impactful progress in technology altered the way businesses operate and interact with their targets (Hoffman & Novak, 1996). The online context can lead consumers to a different decision-making process when searching and buying for products, thus the way a company can directly or indirectly affect that same process may also vary (Huang et al., 2009). Such a topic has been the subject of analysis in the past and recent years to understand the differences in behavior and to help firms adjust to these changes (Degeratu et al., 2000).

Consumers trust more and are more familiar with online shopping than a few years ago (Frank and Peschel, 2020). They find both hedonic and utilitarian reasons to conduct a purchase in an online environment and the Covid-19 pandemic was a crucial enabler in the increase of these activities (Mouratidis and Papagiannakis, 2021). This would be partial because e-shoppers find

this way of shopping more economical and convenient (Ventre and Kolbe, 2020; Chocarro et al., 2013). Nonetheless, Hong and Cha (2013) and Paluch and Wunderlich (2016) understood that online consumption has constraints especially when it comes to privacy, products' quality, and risk.

Alongside, there have been more studies over the years where researchers pointed out that consumers had been known to be more price-sensitive when buying in regular stores than when online, and that offline promotion have larger effects compared with online promotions (Galak et al., 2016), as well as that brand loyalty is stronger for online purchases and that private labels can acquire higher market shares online than offline (Trope et al., 2007).

As highlighted previously, consumers choose between utilitarian and hedonic features to buy. However, this difference is relative, as it cognitively depends on how consumers perceive a certain good according to its value, which may be mostly hedonic, as in pleasurable, exciting, fun, and sensorial, just like a brand-new Ferrari; or mostly utilitarian, as in functional, rational, purposeful and practical, which can mirror a fork, for example (Hirschman and Holbrook, 1982). Nonetheless, it can be presumed that a certain product can have both hedonic and utilitarian features, and each dimension can have different weights depending on who is evaluating them (Batra and Ahtola, 1990). This perceived value can have different impacts on consumers' behavior, as demonstrated by Camille Saintives (2020).

As Wolfenbarger and Gilly (2001) suggest, consumers have hedonic and utilitarian reasons to purchase both online and in-store. As technology has evolved, consumers went from having a huge difference in terms of experience, when buying physically or online, to a time where these experiences are becoming more seamless in both channels, through things like Augmented and Virtual Reality (Mishra et al., 2020).

However, the sensorial enablers that buying in-store brings to consumers are still very relevant to the overall customer experience (Liu et al., 2017), which means that even though the gap between an online and an offline experience is getting smaller, there are still differences that lead consumers to behavioral changes. Morales and Fitzsimons (2007) indicate that when one stresses undesirable features of a product, those same features transfer from the good to the person in contact with it, meaning that if consumers buy products that are morally perceived as

bad, they will probably feel worse about themselves as well, as if the product is mirroring their self-image.

2.2. How can guilt impact us? And how is it related to the purchasing channel and perceived value of products?

It is known that emotions can affect one's behavior and cognitive responses, that is why guilt has been under the scope of researchers for a deeper understanding (Aaker et al., 1986).

Guilt may be defined as one's feeling of violation of social and cultural norms and standards, with both harmful and helpful side-effects, that can affect how people decide, judge, and act (Carni et al., 2013). It is an emotion often linked to shame, embarrassment and pride as these can showcase how one accepts social and moral human behavior (Tangney, 1999), thus it can be said that guilt affects one's self-esteem and consequently how people perceived it themselves (Tangney, 1996).

This feeling of guilt may be felt, for instance, when one is significantly better than someone else, even though they might not be directly responsible for that difference, as Baumeister et al. (1994) emphasized, or when one consumer does not act accordingly to what is expected in a specific situation (Camille Saintives, 2020).

Consumer guilt is a sort of guilt that is particular to decisions related to consumption (Dedeoğlu and Kazançoğlu, 2010), which can happen under social isolation or within several social contexts (Baumeister et al. 1994). It can be differentiated according to the timeline of when the guilt occurs – anticipatory, reactive, and proceeding guilt. The first one arises as the consumer considers the transgression (Baumeister et al., 1994), the second one happens when one has committed the transgression and the last one is experienced at the act of purchasing (Lin and Xia 2009).

Adding on, Saldanha and Williams (2008) have suggested that consumers acknowledge negative feelings under hedonic consumption – the multisensory, fantasy, and emotive features of one's consumption experience (Hirschman and Holbrook, 1982) -, which leads them to feel guilty about it (Dedeoğlu and Kazançoğlu, 2010).

Thus, literature has been studying the linkage between guilt and hedonic consumption and Lascu (1991) showed that when consumers feel the highest guilt is also when they feel the uppermost pleasure, which is amplified by some examples to when consumers may feel that hedonism arises feelings of guilt, such as buying compulsively (O’Guinn and Faber., 1989), buying indulgent products (Chungwha et al., 2017), buying impulsively (Mukhopadhyay and Johar, 2009), overbuying (Kivetz and Simonson, 2002) or overspending (Burnett and Lunsford, 1994). Also, Prelec and Loewenstein (1998) have theorized that utilitarian features – functional or practical features that are more goal-driven (Dhar & Wertenbroch, 2000) - lead to lower feelings of guilt, contrarily to hedonic features, since hedonism is more difficult to explain, which highlights how people are more or less prone to feel guilty accordingly to the perceived value of the purchased product.

Also, O’Guinn and Faber (1989) suggest that consumers with compulsive behaviors tend to look more for escapes to eliminate negative feelings, and consequently seek stronger sensorial experiences, a type of hedonism. This behavior was mostly seen under people with lower levels of self-esteem and with higher levels of anxiety, which highlights the connection between the perceived value of products or consumption and how one perceives themselves. This connection between how one feels due to hedonic experiences may have an impact on how they will feel about themselves (Tangney, 1996).

On that note, it can be implied that hedonic consumption is strongly related to deeper feelings of guilt, which consequently can induce lower self-perceptions of oneself, thus it can affect one’s self-esteem. Moreover, if buying utilitarian products, this effect should not be expected, as consumers are not likely to feel guilty, thus their self-esteem is not likely to be affected. According to the previous literature mentioned, the first hypothesis of this study can be exposed:

H1: Purchasing hedonic products leads to lower levels of self-esteem than purchasing utilitarian ones, mediated by guilt.

Considering the previous, and that hedonic consumption is usually linked to feelings of guilt, it is relevant to understand how guilt will be affected according to the purchasing context, through the mediating effect of perceived value. Camille Saintives (2020) hypothesized the relationship between guilt and the purchasing channel and perceived value, concluding that when acquiring

a more hedonic product, consumers would feel guiltier when in-store, compared to when online.

It is thus expected that, since in-store experiences are found to have a stronger hedonic feature, and hedonic goods can easily imply feelings of guilt, this will lead consumers to feel higher levels of guilt, rather than when buying the same hedonic products online. However, this should not be expected when purchasing a utilitarian good, either in-store or online, as these products do not relate to feelings of guilt, according to previous theoretical work.

H2: In-store purchasing experiences might lead to greater feelings of guilt than online purchasing when buying a hedonic product.

2.3. How consumers are affected by social norms and how does that affect the relationship between the purchasing context and guilt?

Consumers behave according to internalized social norms and standards, either consciously or unconsciously (Melnyk et al., 2021). Social norms can be defined as the rules and principles by which a group of people guides themselves and that directly or indirectly restricts social behavior, even though it does not rely on any law or coercion (Cialdini and Trost, 1998), people use them as shortcuts to recognize if a certain behavior is mandatory, legitimate or forbidden (Crawford and Ostrom, 1995; Cialdini and Goldstein, 2004).

It is logical to say that different groups will have distinctive ways to approach and follow these norms, as they are a consequence of interpersonal relationships and observations of one's surroundings (Cialdini et al., 1990, p. 1015), meaning that it is natural for consumers to comply with others, to feel that they belong (Lin et al., 2013). Thus, these norms can affect multiple choices and behaviors, from the food we purchase (Pliner and Mann, 2004) to how we interact with brands and products (Homburg et al., 2010). However, this does not mean that one will inevitably follow these informal rules (Ostrom 2000; Cialdini and Trost, 1998).

As previous studies have shown, the violation of these norms can lead to psychological consequences (Brehm, 1966; Rosenberg and Siegel, 2018), mainly since people feel they are going against personal standards if violating them, which usually leads to feelings of guilt and

shame (Bierbrauer, 1992). These feelings may be stronger or weaker according to how people engage with their social environments, as someone that has tight connections will have a higher reactance to the violation of norms and someone who feels detached will not be as influenced by this social pressure (Bierbrauer, 1992)

The environment someone is in will also affect how one reacts to the violation or compliance of norms. Rosenberg and Siegel (2018) pointed out that under public contexts, the perceived violation of social standards may have a stronger impact, as one may believe to be violating the other consumers' ideals, which leads to a higher reactance level (Melnyk et al., 2021). This suggests that people will comply more with social norms under the public eye and will consequently feel guiltier if going against them (Lewis, 2013). The contrary is expected to happen in a private environment.

It is common for consumers to not comply with social norms to have a higher sense of freedom (Miller et al., 2006), which can happen under both utilitarian and hedonic behaviors, as they are both influenced by social norms (Melnyk et al., 2021). However, the way it affects each type of behavior is different, as consumers have a higher craving to perform hedonic behaviors since these make them feel more liberated (Miller et al., 2006). Nonetheless, these behaviors are more difficult to explain, which consequently, can lead to a higher reactance (Melnyk et al., 2019; Okada, 2005)

Bearing this in mind, the third hypothesis evaluates whether the concern about the compliance with social norms is stronger than the concern about the multisensory effect, as stated by Camille Saintives (2020), saying that consumers are strongly affected by multisensory needs under in-store contexts, and this study hypothesizes that the reason for a behavior change when physically at a store is mainly due to concerns about the violation of the perceived social norms.

H3: There is a stronger concern about the violation of the perceived social norms under in-store environments than there is concern towards the multisensory effect.

2.4. How anticipated satisfaction is affected by consumers' guilt and by the channel they purchase in?

Researchers have been studying how emotions affect consumers' consumption process. More specifically, Yi and Baumgartner (2004) showed that negative emotions harm one's post-purchase behavior, and Chungwha et al. (2017) implied that guilt will negatively affect the likelihood for consumers to repurchase certain products.

Moreover, it is common for consumers to rely on their feelings at the purchasing moment to predict how they will feel about the same good, meaning that if one is extremely happy when purchasing something, it is likely that they will have higher levels of anticipated satisfaction when compared to a consumer who is buying the same thing, but they are feeling bad about themselves for some reason (Wyer and Carlston, 1979).

It has been concluded that higher feelings of guilt lead consumers to expect lower levels of satisfaction towards a product (Camille Saintives, 2020). Alongside, Levy and Weitz (1998) acknowledged the influence of shopping environments on customer satisfaction and past research has agreed that customer satisfaction is different whether one is buying online or physically at a store and that customers tend to be more demanding towards online purchasing, thus they become more satisfaction-sensitive when online (Hult et al., 2018).

This led us to formulate the fourth hypothesis of this study:

H4: Hedonic purchasing in in-store contexts will lead to lower anticipated satisfaction, mediated by guilt.

According to what has been highlighted by previous researchers, it is foreseeable that consumers under an in-store context feel higher levels of guilt when buying hedonic products, which will consequently make them expect lower levels of satisfaction, as they feel worse about themselves and that will reflect on the product. Such effect will not be so strongly expected under utilitarian and/or online purchasing.

3. Methodology and Data Collection

To enrich the secondary data gathered throughout the literature review, primary data was collected, aiming to have feasible conclusions from this study. Thus, four experimental studies were executed, firstly to understand the Portuguese online shopping behavior in supermarkets, and then in pursuance of understanding how consumers react to guilt in different contexts and by perceiving different values, three other online surveys were conducted as quantitative research. Firestone (1987) acknowledges that using proven techniques in quantitative analysis leads to results that mirror generalized judgments and assessments from populations, as well as it allows to recognize bias if existing (Malina et al., 2011). A deeper explanation of the research method may be found under Appendices (see Appendix 1).

3.1. Pre-Study

3.1.1. Procedure, Sample and Measures

The pre-study was developed to better understand how the Portuguese culture acts regarding their groceries' purchases online. This study followed a simple within-subjects design, meaning that all participants answered every question, and it collected data for one week and a half.

The survey contained an introductory section, explaining the comprehensiveness in which it was incorporated, highlighting the anonymity of the answers and that they would only be used for research purposes, under a Master's Thesis in Management with Specialization in Strategic Marketing, by Universidade Católica Portuguesa, intending to understand the behavior towards online grocery shopping of Portuguese people.

Furthermore, there was a screening question to guarantee that all respondents were Portuguese, as it was proposed to evaluate the Portuguese culture, to assess whether it could have any implication on the final results of the first survey or not (see Appendix 2).

Moving on, participants would say if they had already purchased online. If participants answered "yes" on the previously mentioned question, they would go on with the survey and they would judge how often they usually shop their groceries online, and they would also share the main inconveniences for them when online shopping groceries, being able to select more than one option (see Appendix 2). On the opposite, if answered "no", participants would share

the main reasons for them to never buy online, also being able to select multiple reasons (see Appendix 2).

In the end, they were asked to share demographical information, on their gender, year of birth, occupation, and individual gross monthly income (see Appendix 2).

3.2. First Study

3.2.1. Procedure and Sample

The experiment was done following the article “Guilt online vs. offline: What are its consequences on consumer behavior?” by Camille Saintives (2020), through an almost exact replication, in which new dependent variables were added into the study, as it is expected to be found new conclusions to add on it.

On that account, the study was done under a between-within or mixed subjects’ design, meaning four conditions were employed, in a 2 (Channel: Online versus In-store) x 2 (Perceived Value: Hedonic versus Utilitarian), where the variable “Channel” followed a between-subjects design and the variable “Perceived Value” followed a within-subjects one, with randomized order of appearance to each participant. Thus, one participant would only answer within one context, online or in-store, and would answer to both perceived values, hedonic and utilitarian. However, the survey would demonstrate first the hedonic context and then the utilitarian one, or the utilitarian context first and lastly the hedonic one. This design was done to eliminate the influence that the order of appearance may convey in participants’ responses and to conveniently understand how the dependent variables would react to different scenarios. Furthermore, they were presented with a giveaway.

Throughout the month of November, the online survey was shared and respondents were provided a consent introduction stating that the data collected would be treated anonymously and only used for research purposes, under a Master’s Thesis in Management with Specialization in Strategic Marketing, by Universidade Católica Portuguesa, aiming to study how consumers feel guilty in different contexts and how that will further influence other variables.

Moving along, participants would be randomly assigned to one of the two conditions (online or offline) and were shown the hedonic or the utilitarian stimulus, in a randomized order. The online context stated “Imagine that you are at home and decide to visit the website of your usual local supermarket that now offers home delivery. You eventually select a mug and you place an order for it. Please take a few minutes to imagine shopping online on the website and putting the mug in your virtual shopping trolley. If needed, use the illustrative picture below to help you imagine this situation.” (see Appendix 3) and the in-store one detailed “Imagine that you decide to go shopping at your usual local supermarket. Among other items, you select a mug that is brought to your attention. You take the mug in your hand and take time to observe it. Having the mug in your hand, you eventually put it in your shopping trolley. Please take a few minutes to imagine this situation. If needed, use the illustrative picture below to help you imagine this situation.” (see Appendix 3).

If the hedonic context appeared first, participants would be manipulated by “In this scenario, you don’t need this mug, since you already have a considerable collection of mugs in your kitchen. But you find that mug so nice that you buy it. Taking into consideration the scenario previously explained, and assuming that you bought the mug, please answer the following questions.”. Whereas if the utilitarian scenario was conducted first, the participant would see “In this scenario, this mug that brought your attention will be useful, especially because you just broke the only mug you had a few days ago, so you end up buying it. Taking into consideration the scenario previously explained, and assuming that you bought the mug, please answer the following questions.”. The context manipulation followed the same article from Camille Saintives (2020), to maintain the replication and to guarantee that we could further make adequate conclusions, taking into consideration the same controls.

Under each manipulation (hedonic and utilitarian), participants answered the same 7 questions, assessing the dependent variables and including a manipulation check on the context they imagined buying the product. After these 14 questions, it was evaluated their concern regarding possible topics that may induce higher levels of guilts and it was further analyzed control variables, to minimize their effect on the study, as well as one dependent variable. Finally, demographics were conducted, in addition to the final acknowledgments and giveaway link to participate.

In pursuance of understanding how consumers react to guilt in different contexts and by perceiving different values, an online survey was conducted, as stated before.

This quantitative methodology was based on three types of stimuli: a mug, the shopping context (online or in-store), and the perceived value of the product under analysis (hedonic or utilitarian). The use of a mug was intended to replicate Camille Saintives' study, so that participants could be under the same contexts. However, the appearance of the mug was changed, as it is believed that the one used in the previous study could lead participants to somewhat focus on its appearance, rather than focusing on the manipulation intended. Thus, in both online and in-store contexts, it was used a white, plain mug was to eliminate any interference of this kind (see Appendix 5).

Adding on, even though in Camille's study the variable price was disclaimed, in this study no such reference was done, as the price is known to influence variables such as anticipated satisfaction (Herrmann et al., 2007), and that effect was not desired.

Participants were targeted with one purchasing channel scenario – online or in-store - and with both perceived value scenarios – hedonic and utilitarian. Taking that into consideration, only one illustrative picture of the product was shown per participant.

On this first study, this image was according to the purchasing channel scenario they were in, i.e., if the scenario manipulated was online, in the first survey, the mug demonstrated the purchase of a mug at a website, whether if it was in-store, the image exhibited one person holding a mug at a supermarket. In the second and third surveys, the products would be induced through image and text respectively according to the perceived-value manipulation they were in.

3.2.2. Measures

Both independent and dependent variables were defined, as well as control variables, manipulation checks, and demographic variables. It is important to outline that regardless of the context presented in the survey, the questions were accurately the same, whether participants were in the online or in-store manipulation, as well as either in the hedonic or

utilitarian scenario. Also, that the relationship between the independent and dependent variables should be the basis to answer the hypothesis.

As noticed along with the methodology, the first study was developed along with two independent variables, each with two levels, the channel (online versus in-store) and the perceived value (hedonic versus utilitarian). These variables were manipulated by appealing to the participants' imagination through text and/or images, as stated in the previous point.

The survey started by measuring the first dependent variable, anticipated satisfaction, by assessing whether participants would feel satisfied if they purchased the mug, through a 7-point scale measure (1 – Completely dissatisfied to 7 – Completely satisfied), adapted by Lancellotti and Thomas (2018), which is the same measure used by Camille Saintives (2020). This question should be the main anchor to answer hypothesis 4.

Next, to evaluate guilt and to properly answer hypothesis 2, three questions were asked according to Dahl et al. (2003). These authors understood that guilt has three main contexts – when related to other people, when involving social standards, and when related to the self. Bearing that in mind, participants were asked to measure how guilty, remorseful, and bad they felt, within a 7-point likert scale (1- Not at all guilty/remorseful/bad to 7 – Completely guilty/remorseful/bad), to evaluate every level of guilt, as stated by the authors. This was the same measurement used by Camille Saintives (2020).

To evaluate self-esteem, participants answered to Rosenberg Self-Esteem Scale Analysis (Rosenberg, 1965), with 10 questions, each through a 4-level scale (Strongly disagree, Disagree, Agree and Strongly agree), which is expected to be the main source to answer hypothesis 1.

Respondents were also asked about their concerns on six topics, through a 7-point scale (1 – Not concerned at all to 7 – Extremely concerned), aiming to collect suitable data to answer the third hypothesis. Four of the topics relied on analyzing the mediator “social norms” (concerned about the people around me; concerned about what other people might think; concerned about following social norms or standards; concerned about how that purchase will make me feel about myself) and the rest of them were targeted to measure the mediator “multisensory” (concern about seeing, touching or smelling the product I want to purchase; concerned about

having a sensorial experience with the products before purchasing them). This question aimed to further assess if they arise as possible mediators.

In a study, it is necessary to manipulate our independent variables and to see how they affect our dependent variables. However, there are innumerable variables that cannot be controlled and that somehow may affect participants' answers – these are called control variables.

Respondents assessed how guilty they feel, how much satisfaction they believe they would get from the product, or even how they feel about themselves in terms of self-esteem. Nonetheless, some participants may have an overall higher tendency to feel guilty, as well as to feel confident in their decisions or it is rather difficult for them to imagine unreal scenarios, thus, three control variables were developed to minimize the discrepancies that naturally occur within participants.

Firstly, participants shared how easy fit or them was to imagine the scenarios that were presented, within a 7-point scale (1 – Extremely difficult to 7 – Extremely easy). Secondly, it was assessed through a 7-point scale (1 – Not confident at all to 7 – Extremely confident) how confident respondents were under 3 scenarios: in their overall shopping decision, in their shopping decisions when buying online, and in their shopping decisions when buying at a physical store.

Adding on, the Guilt and Shame Proneness Scale (GASP) was used to measure one's tendency to guilt and shame (Torstveit et al., 2016) that relies on 16 questions and a 7-point scale with labels in each point (see Appendix 3 or 4). However, due to its length, only the questions related to guilt assessment were asked, shortening the scale to 8 questions. Bearing the previous in mind, it is expected that by measuring these variables, the output may be more properly analyzed and that better conclusions may be outlined.

3.2.3. Manipulation Checks

Throughout the first survey, three questions were asked to judge if the manipulation of the independent variables had the correct effect on participants, i.e., whether participants understood the context manipulation or not. In the second and third studies, there were four manipulation checks.

In the first survey, the first manipulation aimed to evaluate the context participants were thinking about when answering the questions regarding anticipated satisfaction and guilt, thus it was asked “What type of context were you imagining buying the mug?”. Participants that were given the online context should have answered “Buying online” and participants that were given the in-store scenario should have answered “Buying at a physical store”. This question has an elimination element linked to it, since if wrong, it meant that participants did not correctly interpret or understand the manipulation, thus their answers should not be valid to this study. This channel manipulation was adjusted to second and third studies; thus, respondents would have to answer to “How did you purchase the chocolate/cereals bar/mug?”, being able to choose between “Through an online delivery service” or “In a physical store”.

Moreover, in each of the scenarios – online versus offline and hedonic versus utilitarian - participants would have to assess how useful they believed the mug would be for them and how much pleasure they believed the mug would bring them and, through a 7-point scale (1- Not useful at all to 7 – Completely useful; and 1 – No pleasure at all to 7 – Complete pleasure). These manipulation checks were created to measure the effectiveness of the perceived value manipulation, as it would be expected that under the utilitarian context the variable “usefulness” had a stronger effect when compared to the hedonic one, as well as it would be anticipated that “pleasure” would have higher scorings when under the hedonic scenario of one’s survey. In case this would be verified, it meant that the manipulation had the aspired result on participants’ imagination and consequential answers.

3.3. Second and Third Study

3.3.1. Procedure and Sample

To have more results and to surpass some limitations that were found on the first survey – like the products that were used, the way the manipulations were conducted, the variables used that sometimes were not so conclusive as needed -, two other online studies were developed with the same design as the first one, as well as with the same randomization process, being a conceptual replication of Camille Saintives’ study, throughout two weeks in December (see Appendix 4).

These two studies had different manipulations than the first one, as this may be one of the reasons for the results presented further in the thesis. Thus, the manipulation purely relied on the products shown on each survey, when it came to the perceived-value manipulation, whereas to manipulate the channel, participants would be led into the online scenario by, for example, “Imagine that you are at home and you are hungry, so you decide to order a snack from a delivery service, like uber eats or glovo. You are undecided between a bar of chocolate or a cereals bar. After a moment, you finally decide to choose the chocolate.” and into the in-store one by, for example, “Imagine that you are at your usual supermarket and you are hungry, so you decide you want to buy a snack. You are undecided between a bar of chocolate or a cereals bar. After a moment, you finally decide to choose the chocolate.”

The second study had almost the exact same stimuli as the first one, with the exception of the mugs used. Whereas on the third study, the mugs were changed into chocolate and a cereals bar.

On the second survey, the mug was again changed into a white plain mug and a Christmas mug (see Appendix 6), so that the perceived value manipulation could be done by through an image of the product, instead of through text, as this is considered a possible limitation of the first survey.

On the third one, a bar of chocolate and a cereals bar were used so that participants could be indirectly manipulated through text into the hedonic and utilitarian context respectively, without concretely appealing to hedonic or utilitarian emotions. Moreover, to eliminate one possible limitation on the first study, the third study used completely different products to understand how the results would differ from the previously collected in the previous surveys, as the products may strongly change participants’ judgment.

The products mentioned would be induced through image and text respectively on the second and third survey according to the perceived-value manipulation they were in, aiming to manipulate the contexts.

3.3.2. Measures

Just like in the first survey, these studies used the same independent and dependent variables, except for the Rosenberg Self-Esteem Scale, as this is a personality trait analysis, being very constant.

Throughout the results on the first survey, it was understood that the next surveys would need to measure immediate changes in terms of self-esteem, so two other variables were added into the second survey (“Happiness” and “Feeling about oneself”) and three into the third survey (“Happiness”, “Feeling about oneself” and “Nourishment”), as the last one included perishable goods (chocolate and cereals bar). Moreover, “Willingness to Purchase” was also added into both second and third studies, aiming to conjugate with the “Anticipated Satisfaction” and to understand how driven participants would be to acquire the products they were shown, which indirectly relates to one’s satisfaction.

These new variables were assessed through a 7-level scale (1- Not at all happy/good/nourished/willing to 7 – Completely happy/good/nourished/willing).

Moreover, the same control variables were used as in the first survey.

3.3.3. Manipulation Checks

In the second and third surveys, additionally to the same manipulation checks used in the first surveys, respondents would have to select which product they were purchasing in that scenario, having to choose between “Plain Mug” or “Christmas Mug” in the second survey, and between “Chocolate” or “Cereals Bar” on the third one.

3.3.4. Variables Coded

To create a seamless analysis throughout the study, the following variables were recoded in the first study and the next two studies: Channel, Perceived Value, Self-esteem, Manipulation Check (Channel), Manipulation Check (Perceived Value), and Nationality.

“Self-esteem” from the first study was recoded according to Rosenberg’s scale analysis (Rosenberg, 1965). These variables were recoded as presented in Table 1.

Table 1 – Variables Recoded

Variables	Values
Channel	0 = “In-store”; 1 = “Online”
Perceived Value	0 = “Utilitarian”; 1 = “Hedonic”
Self-esteem (First Study)	0 = “Strongly disagree”; 1 = “Disagree”; 2 = “Agree”; 3 = “Strongly agree” (for questions 1, 2, 4, 6 and 7) 0 = “Strongly agree”; 1 = “Agree”; 2 = “Disagree”; 3 = “Strongly disagree” (for questions 3, 5, 8, 9 and 10)
Manipulation Check (Channel)	0 = “Wrong”; 1 = “Right”
Manipulation Check (Product – Second and Third Study)	0 = “Wrong”; 1 = “Right”
Nationality	1 = “Portuguese”; 2 = “European”; 3 = “non-European”

4. Analysis and Results

4.1. Pre-study

As previously explained, a pre-study survey was shared among Portuguese people to better understand how was their behavior towards online shopping. This study was very simple, and its analysis follows the same pattern.

Firstly, the sample was constituted of 163 respondents, being around 56% women and 44% men. From these, approximately 49,3% were born between 1997 and 2012, 21,9% born between 1981 and 1996, 12,8% born between 1965 and 1980, 9,2% between 1946 and 1964 and 6,8% between 1928 and 1945.

This sample was strongly composed of students (around 36%) of employed respondents (around 35%), and the majority of the participants announced to have an individual gross monthly household income of between 2001€ and 3000€ (around 24,5%) or between 1001€ and 2000€ (around 20,8%).

This study included a screening question, to guarantee that the sample was strictly Portuguese. Thus, participants answering that they were not Portuguese, would not proceed in the questionnaire. After this detail is secured, it was determined that 105 out of the 163 respondents (around 64,4%) never purchased supermarket goods in an online context (see Table 2).

Table 2 – Participants who already did their groceries online (Pre-study)

Have you ever done your groceries online?	
Yes	35,58%
No	64,42%

Those who never bought under these circumstances shared the reasons for not doing so, which is highlighted in the table below (see Table 3). The reason most chosen among respondents was the need to feel and see the products (26,34%), which is tightly related to the multisensory effect outlined by Camille Saintives (2020).

Table 3 – Reasons for not buying online (Pre-study)

What are the main reasons for you to never buy online? Please select all that apply	
Lack of information	12,90%
Aversion to online shopping	8,06%
I like to compare the promotions at the store and it's more difficult to do it online	16,13%
I like to see and touch the products at the store and it's more difficult to do it online	26,34%
I don't want to pay the delivery fee	16,67%
I think the products delivered can have less quality	10,22%
I don't trust the service is safe enough	6,45%
I don't have a home delivery service available near my hom3	3,23%

However, it should be highlighted that there were participants that demonstrated an aversion to online shopping (8,06%) or a lack of trust in these services (6,45%), which may arise as a possible limitation to the online manipulation intended in the first survey, as participants may not be able to correctly imagine the online scenario due to lack of previous experience in such, or they may be biased by their hostility towards this way of purchasing, possibly skewing the anticipated results.

For those who indeed had already bought online, it became clear that the majority only buys rarely in such a way (around 70,7%). These respondents shared that the main inconvenience related to online grocery shopping (see Appendix 2) is, once again, the lack of sense and touch (24,44%), followed by the extra money spent on the delivery fee (19,53%), as well as the lack of trust that the order will arrive their home safe and correct (14,84%). Thus, the same concern grows towards the implications these outcomes may have on the first study's results.

4.2. First Study

4.2.1. Prior Analysis

As demonstrated in the Methodology, this survey followed a mixed subjects design. However, Camille Saintives developed an entirely between-subjects design's study, thus, to analyze the results, in the same way, only the first part of each response was considered in the analysis – i.e., only the questions regarding the first perceived value manipulation (Hedonic versus Utilitarian) of each respondent were analyzed -, mirroring a complete between-subjects design.

Also, after recording the necessary variables, the participants that got the manipulation check on the variable "Channel" wrong were eliminated, as their responses were not aligned to the context they were supposed to be manipulated by. Bearing that in mind, there were 259 valid responses left, meaning that 86 responses were eliminated. Thus, the analysis will be carried on with the 235 valid responses (see Table 4)

Table 4– Manipulation Check on Channel Frequencies

Manipulation Check on Channel - Frequencies	
Wrong	24,9%
Right	75,1%

Throughout this study, there were questions with more than one item aiming to measure the necessary variables. On that note, it is necessary to evaluate how reliable they are, to guarantee truthful results, taking into consideration the number of items being analyzed, as for 3 or more the Cronbach’s alpha analysis must be developed, whereas, for 2 or fewer items, it should be used Pearson’s Correlation analysis (Ahlgren et al., 2003). The analysis showed that all items used were reliable (see Appendix 7), as demonstrated from Table 5 to Table 10.

Table 5 – Reliability Analysis on “Guilt”

Reliability Statistics	
Cronbach’s Alpha	Number of items
0,902 > 0,700	3

Table 6 – Reliability Analysis on “Social Norms”

Reliability Statistics	
Cronbach’s Alpha	Number of items
0,730 > 0,700	4

Table 7 – Reliability Analysis on “Shopping Decisions’ Confidence”

Reliability Statistics	
Cronbach’s Alpha	Number of items
0,754 > 0,700	3

Table 8 – Reliability Analysis on “Multisensory”

Correlations	
Pearson Correlation	Sig. (2-tailed) or p-value
0,206	0,000 < 0,01

Table 9 – Reliability Analysis on “Guilt tendency: Guilt-Negative-Behavior-Evaluation”

Reliability Statistics	
Cronbach’s Alpha	Number of items
0,765 > 0,700	4

Table 10 – Reliability Analysis on “Guilt tendency: Guilt-Repair”

Reliability Statistics	
Cronbach’s Alpha	Number of items
0,730 > 0,700	4

4.2.2. Sampling Characterization

As common, respondents were asked to share some demographical answers to conclude key insights about the sample, more precisely, about their gender, age, income, nationality, and occupation (see Appendix 3).

The 259 participants’ sample showed to be mainly constituted by female respondents (71,4%). Regarding age, 44% of these were born between 1997 and 2012 (belonging to Generation Z), followed by Millennials (participants born between 1981 and 1996) with 23,9% and by Generation X (respondents born between 1965 and 1980) with 20,1%. Only 11,2% were Baby Boomers (born between 1946 and 1964) and 0,4% of the sample were either born after 2012 or between 1928 and 1945.

When it comes to income, most of the participants announced to have a gross monthly individual income between 1001€ and 2000€ (35,1%), which is according to the average income values in Portugal (Pordata, 2019). As for the other respondents, 21,6% of them had an

income between a range of 651€ and 1000€ and 19,7% below 650€. Only 14,2% said to receive 2001€ or more.

These results were expected as 92,7% of the sample corresponds to Portuguese people, which highlights the rather low level of income that may influence the results, as utilitarianism may prevail over hedonism due to the lack of financial space to spend on non-utilitarian products.

Finally, regarding occupation, participants were mainly employed, either by employed by others or self-employed (56,4% in total) and students (21,6%), followed by student-workers (16,6%) and only 5,4% were unemployed or retired.

Other than demographics, the survey included questions to control some characteristics that might influence how participants' answers, by the use of control variables, as introduced in the Methodology.

Regarding the participant's confidence, it is clear there is a tendency for them to feel confident in their overall shopping decisions (Mean=5,19). However, there is a stronger tendency for them to feel more confident when buying at a physical store, rather than online – Mean of 5,49 versus 4,49 respectively -, going accordingly to the pre-study survey, where it was understood that the Portuguese culture is still somewhat suspicious when buying online, which may have a higher interference with how they behave under the online context rather than under the in-store one.

As for guilt tendency, respondents showed to be somewhat prone to guilt, in both subscales. However, there is a higher tendency for participants to feel guiltier to repair actions (91,8% choosing above the middle of the scale), rather than under negative behavior evaluations (88,4% scoring above the middle of the scale). This showcases an overall guilt tendency of the sample.

As mentioned earlier, respondents were given 2 types of scenarios, thus it is important to understand how easy fit or them is to imagine hypothetical situations. Hence, almost 50% of the sample find it extremely easy to imagine different scenarios, and only 8,5% position themselves on the difficult side or in the middle of the scale, which may highlight the majority of participants were able to easily imagine themselves in the contexts they were given.

4.2.3. Manipulation Check Results

To evaluate how the manipulation check used on perceived value worked, an independent sample t-test was used.

Table 11 – Independent Sample T-test analysis on the Perceived Value Manipulation

Group Statistics			
	Perceived Value	Mean	Std. Deviation
Utilitarian Manipulation Check	Utilitarian	5,98	1,489
	Hedonic	3,92	1,752
Hedonic Manipulation Check	Utilitarian	4,86	1,560
	Hedonic	3,93	1,671

T-test for Equality of Means		
	T	P-value (p)
Equal variances assumed (Utilitarian)	10,235	0,000
Equal variances assumed (Hedonic)	4,627	0,000

Both for the hedonic and utilitarian context, the t-test showed that the two samples are different on their means ($t(2) = 10,235$ and $p = 0,000$; $t(2) = 4,627$ and $p = 0,000$ respectively).

The group statistics acknowledge the same results, as it shows that under the utilitarian context, participants find the product more utilitarian than hedonic ($M_{Utilitarian_ManipulationCheck} = 5,98$ and $M_{Hedonic_ManipulationCheck} = 3,92$), with a larger difference than participants under the hedonic contexts assessing the products' usefulness and pleasure ($M_{Utilitarian_ManipulationCheck} = 3,92$ and $M_{Hedonic_ManipulationCheck} = 3,93$).

This shows that participants see a stronger level of usefulness in the utilitarian scenario and a weaker level of pleasure in the hedonic one. Moreover, it should be highlighted that respondents

under the utilitarian scenario find the mug more pleasurable than the ones under the hedonic one, which may be since utilitarianism may induce participants to find more pleasure in the product, than a product seen as more hedonic than utilitarian.

4.2.4. Main Results

4.2.4.1. Effect of the perceived value on self-esteem, when mediated by guilt

It should be noted that for the analysis of this dependent variable, the items 1, 2, 4, 6, and 7 were summed up, as well as items 3, 5, 8, and 9 (see Appendix 3), since according to Rosenberg (1965), the scale range goes from 0 to 30, and when the score is between 15 and 25 is within a normal range, whereas if it is below 15 it mirrors low self-esteem.

To develop proper conclusions on H1, a univariate analysis of variance was performed and it showed a consistent mean value of self-esteem above 25 on both perceived-value levels, meaning that our sample demonstrated a rather high level of self-esteem (Rosenberg, 1965). However, there is a slight difference, as under the utilitarian context, on average, respondents revealed a lower level of self-esteem. Alongside, “Perceived Value” demonstrated to be non-significant on “Self-esteem” – $F(1;258) = 0,097$ and $p\text{-value} = 0,755 > 0,05$. The effect of “Channel” wasn’t significant ($F(1;258) = 0,010$ and $p\text{-value} = 0,919 > 0,005$)

Table 12 – Descriptive Statistics on “Self-esteem”

	Descriptives Statistics	
Channel	Perceived Value	Mean
In-store	Utilitarian	26,18
	Hedonic	26,35
	Total	26,26
Online	Utilitarian	26,33
	Hedonic	26,27
	Total	26,30
Total	Utilitarian	26,22
	Hedonic	26,32
	Total	26,27

It became clear from the previous analysis that there is no significant effect of the independent variable on “Self-esteem”. Nonetheless, the analysis continued.

To understand if “Guilt” arises as mediator a of the relationship between “Self-Esteem” and “Perceived Value”, a bootstrapping method was run by using Process by Andrew F. Hayes (2018), with Model 4. The report on how the independent variables impact “Guilt” will be analyzed under the second hypothesis.

This mediation analysis showed that there is a positive indirect effect of the perceived value on self-esteem, mediated by guilt, as the range between the bootstrap interval does not contain zero, which means that “Guilt” is indeed a mediator of the independent variable on the dependent one (see Table 13), meaning that as guilt arises, there is higher self-esteem, hence under the hedonic context there is a slightly higher level of self-esteem.

Table 13– Mediation analysis of “Perceived Value” on “Self-Esteem”, mediated by “Guilt”

Total Effect Model (Outcome variable: Self-Esteem)			
	Coefficient	t (257)	p-value
Perceived Value	0,0983	0,3122	0,7552

Model (Outcome variable: Guilt)			
	Coefficient	t (257)	p-value
Perceived Value	1,6027	11,2839	0,000

Direct effect of X on Y			
	Coefficient	t	p-value
	-,5033	-1,3240	0,1867

Indirect effect of X on Y			
	Effect	BootLLCI	BootULCI
Guilt	0,6015	0,1654	1,0885

With this being proven, it reveals that our first hypothesis cannot be sustained and it is rejected. Even though there is a mediation of “Guilt” on “Self-esteem”, there is no significant effect from the “Perceived Value” on it. Additionally, and opposingly to what would be initially expected, our sample demonstrates a higher level of self-esteem when purchasing hedonic products, rather than utilitarian ones. Thus, purchasing hedonic products does not lead to lower levels of self-esteem, even though its effect is mediated by guilt.

4.2.4.2. Effect of the purchasing channel and perceived value on guilt

To test H2, another univariate analysis of variance was developed (see Table 14).

Table 14 – Univariate analysis of Variance on “Guilt”

Channel	Descriptives Statistics	
	Perceived Value	Mean
In-store	Utilitarian	1,66
	Hedonic	3,21
	Total	2,42
Online	Utilitarian	1,61
	Hedonic	3,32
	Total	2,52
Total	Utilitarian	1,64
	Hedonic	3,25
	Total	2,45

Test of Between-Subjects Effects		
Source	F	P-value
Channel	0,035	0,851
Perceived Value	109,206	0,000
Channel*Perceived Value	0,226	0,635

As seen by the descriptives, and as predicted, guilt is higher under the hedonic context ($M_{\text{Hedonic}} = 3,25$ and $M_{\text{Utilitarian}} = 1,64$). Even though Camille Saintives (2020) hypothesized that buying hedonic products at a physical store would lead to higher levels of guilt, in this study guilt is shown to have an average lower level when consumers are exposed to the in-store context ($M_{\text{Online}} = 2,52$ and $M_{\text{Instore}} = 2,42$), and in addition, it shows that guilt is not being moderated by the channel.

It should be noted that under the utilitarian context, participants felt guiltier when in-store ($M = 2,89$), rather than online ($M = 2,58$). Adding on, and focusing on one of the purposes of this study, when purchasing hedonic products respondents feel guiltier when purchasing online ($M = 2,28$), not in-store ($M = 2,05$).

Looking at the effects in the table, it is clear that “Perceived Value” has a very high F value, and a significant p-value ($<0,05$). As for “Channel” and the crossing of both independent variables, there is no significant effect, as their p-value is higher than 0,05.

Bearing this in mind, the relationship mentioned in the second hypothesis under analysis cannot be verified, thus it is rejected, as it was established that online purchasing experiences lead to greater feelings of guilt when buying the hedonic good.

Even though it was followed Camille Saintives (2020) measure, it was noticed that “Self-esteem” was not properly deliberated, as its results are pretty stable, since it measures a personality trait, instead of measuring changes in the way one feels about themselves, being the reason why the next two studies included not only this variable, but they also evaluated participants’ happiness and how good they felt about themselves.

4.2.4.3. Concern about the violation of the perceived social norms

Mediating variables are those that are caused by the independent variables and that affect the dependent ones, which makes the correlation between them stronger (Goldberg, 2005).

According to previous literature, social norms may affect how guilt is felt within different purchasing channels and perceived values, that is why this variable arises as one of the

mediators in this study. It is expected that the urge to follow social norms and standards may increase levels of guilt, as explained in the literature review chapter.

Adding on, and as mentioned by Camille Saintives (2020), the multisensory effect that is higher in in-store contexts and lower in online ones may also have a mediating effect on the dependent variables, especially guilt. However, it is expected that the strongest effect comes from “social norms” and not from “multisensory”, thus the study aimed to analyze both possible mediators, to conclude which one has a significantly higher effect.

To conclude the third hypothesis, it was important to assess whether social concerns depend on the channel context, and if so, how. Thus, a univariate analysis of variance was conducted (see Table 15).

Table 15 – Univariate analysis of Variance on “Social Concerns”

Channel	Descriptives Statistics	
	Perceived Value	Mean
In-store	Utilitarian	2,9946
	Hedonic	2,7107
	Total	2,8558
Online	Utilitarian	1,8611
	Hedonic	2,3902
	Total	2,1429
Total	Utilitarian	2,6783
	Hedonic	2,6096
	Total	2,6438

Test of Between-Subjects Effects		
Source	F	P-value
Channel	28,507	0,000
Perceived Value	0,811	0,440
Channel*Perceived Value	9,565	0,091

As expected, this analysis outlined the significance of the channel on social concerns, with $F(1;258) = 20,991$ and a p-value of 0,000 (below 0,05). As for the perceived value, the study does not show a significant effect (p-value = 0,440 > 0,05). Under the online context, there is a higher concern when purchasing hedonic products than utilitarian ones, even though there is an overall lower concern than when in-store.

Respondents demonstrated a higher concern to follow the perceived social norms when under the in-store context ($M_{InStore} = 2,8558$ and $M_{Online} = 2,1429$). As evidenced in the literature review, this may be since going against these perceived norms creates a higher perceived judgment from others in public environments, rather than on private ones.

To conclude on the direction of this relationship, a t-test was run (see Table 16) and it showed that under the online context there is a difference in “Social Concerns” between being a hedonic or a utilitarian product ($t(180) = 1,577$ and p-value = 0,116 > 0,05) meaning that the t-test’s null hypothesis - saying that the means of the sample are equal - is rejected). This is shown to be lower in the hedonic context ($M = 2,69$) than in the utilitarian one ($M = 2,77$).

Table 16 – Independent Sample T-test on “Social Concerns” under the online context

Group Statistics			
	Perceived Value	Mean	Std. Deviation
Social Concerns	Utilitarian	2,99	1,282
	Hedonic	2,71	1,138

T-test for Equality of Means		
	T	P-value (p)
Equal variances assumed (Social Concerns)	1,577	0,116

In addition, as this study is a replication of previous literature, it was also analyzed how the multisensory effect depends on the channel (see Table 17) since Camille Saintives stated a relationship between them. However, it is important to mention that the author this not test this relationship.

Table 17 – Univariate analysis of Variance on “Multisensory”

Channel	Descriptives Statistics	
	Perceived Value	Mean
In-store	Utilitarian	4,6467
	Hedonic	4,6404
	Total	4,6436
Online	Utilitarian	4,0556
	Hedonic	4,4024
	Total	4,2403
Total	Utilitarian	4,4805
	Hedonic	4,5654
	Total	4,5355

Test of Between-Subjects Effects		
Source	F	P-value
Channel	9,257	0,080
Perceived Value	1,562	0,471
Channel*Perceived Value	1,679	0,561

There are indeed higher values in terms of means ($M_{\text{SocialConcerns}} = 2,6438$ and $M_{\text{Multisensory}} = 4,5233$). However, there is no significant effect of any independent variable, translating into a not so strong effect of multisensory when compared to social concerns, as its $F(1;258) = 9,257$ and its p-value is 0,080 (versus $F(1;258) = 20,991$ and $p\text{-value}_{\text{SocialConcerns}} = 0,440$). Moreover, this shows the opposite to what Camille Saintives (2020) stated, as the multisensory effect is non-significant in this study.

Just like “Social Concerns”, there is a higher concern about the multisensory need on the in-store context, when compared to the online one ($M_{\text{InStore}} = 4,6436$ and $M_{\text{Online}} = 4,2403$), and this concern seems to be higher than the social one, as previously demonstrated.

According to this, the third hypothesis is not rejected and, in addition, it is highlighted there is a stronger effect of social concerns, rather than multisensory, which may arise as a greater argument for the levels of guilt felt by the participants when in-store.

4.2.4.4. Effect of the independent variables on anticipated satisfaction, with the mediation of guilt

Onto the analysis of the fourth hypothesis, and to analyze the behavior of anticipated satisfaction depending on the channel and the perceived value context, a univariate analysis of variance was led (see Table 18).

Table 18 – Univariate analysis of Variance on “Anticipated Satisfaction”

Channel	Descriptives Statistics	
	Perceived Value	Mean
In-store	Utilitarian	5,80
	Hedonic	4,64
	Total	5,23
Online	Utilitarian	6,00
	Hedonic	3,83
	Total	4,84
Total	Utilitarian	5,85
	Hedonic	4,38
	Total	5,12

Test of Between-Subjects Effects		
Source	F	P-value
Channel	2,171	0,142
Perceived Value	65,200	0,000
Channel*Perceived Value	6,078	0,014

According to the tests of between-subjects effects, it is known that only “Perceived Value” out of the two independent variables in the study is significant, highlighted by the high value of $F(1;258) = 65,200$ and with a p-value lower than 0,05 (p-value = 0,00).

“Channel” arises as a non-significant variable on participants anticipated satisfaction ($F(1;258) = 2,171$ and p-value = 0,142). Adding on, “Channel*Perceived_Value” ($F(1;258) = 6,078$ and p-value=0,014) is highlighted as significant, hence to better understand the relationship between the two independent variables with “Anticipated Satisfaction” an independent t-test was used.

This test showed that the t-test null hypothesis stating that the means between them are equal is rejected ($t(180) = 5,164$ and p-value=0,000) between the hedonic and utilitarian context when online and when offline as its p-value=0,00 (see Table 19).

Table 19 – Independent Sample T-Test for “Anticipated Satisfaction” depending on “Perceived Value” when online and in-store

Group Statistics			
	Perceived Value	Mean	Std. Deviation
Anticipated Satisfaction (Online)	Utilitarian	5,80	1,372
	Hedonic	4,64	1,639
Anticipated Satisfaction (In-store)	Utilitarian	6,00	0,986
	Hedonic	3,83	1,870

T-test for Equality of Means		
	T	P-value (p)
Equal variances assumed (Anticipated Satisfaction Online)	5,164	0,000
Equal variances assumed (Anticipated Satisfaction In-store)	6,243	0,000

Nonetheless, it should become clear through the means that, as opposed to the expected by Camille Saintives (2020), respondents under the hedonic context and also manipulated into the in-store environment feel a higher anticipated satisfaction, than when compared to the ones online, also with a hedonic manipulation ($Mean_{InStore+Hedonic} = 4,64$ and $Mean_{Online+Hedonic} = 3,83$). Even though it was only verified the effect by the perceived value on this dependent variable, and not by the channel, the analysis continued to understand if guilt arises as a mediator. To achieve this, only the hedonic cases were selected *a priori* among all cases, and a bootstrapping method was further established with Process by Andrew F. Hayes (see Table 20).

Table 20 – Mediation analysis of “Channel” on “Anticipated Satisfaction”, mediated by “Guilt, under the hedonic context

Total Effect Model (Outcome variable: Anticipated Satisfaction)			
	Coefficient	t (127)	p-value
Channel	0,2043	0,8150	0,4166

Model (Outcome variable: Guilt)			
	Coefficient	t (127)	p-value
Channel	-,0448	-,2209	0,8255

Direct effect of X on Y		
Coefficient	t	p-value
0,1836	0,7863	0,4331

Indirect effect of X on Y			
	Effect	BootLLCI	BootULCI
Guilt	0,0207	-0,1683	0,2184

As the indirect effect was analyzed – the part of the analysis that properly shows the mediation effect, if existing -, it was comprehended that “Guilt” is not a mediator of the relationship between the independent and the dependent variable, as the range between the bootstrap interval (from -0,1683 to 0,2184) does contain zero.

With this being proven, the fourth hypothesis is rejected, as there is no significant effect of the channel on the dependent variable and, adding on to this, “Guilt” does not arise as a mediator in this analysis.

4.3. Second and Third Study

The surveys made after the first survey followed the same structure like it, with additional questions that were not as conclusive as intended *a priori* on the first one. However, these extra questions do not require reliability tests.

Regarding manipulation checks, there were four of them in each survey, and those who got the channel and/or the perceived value wrong were eliminated (see Appendix 8), Moreover, in terms of the sample, the mug survey got a total of 101 valid responses and the chocolate/cereals bar one got 105 and these samples’ description can be found on Appendices (see Appendix 9).

4.3.1. Main Results

4.3.1.1. Main Results – Second Study

Firstly, the second survey was analyzed, as it included the same type of product – a mug.

To analyze respondents’ self-esteem, the first hypothesis was assessed how happy and how good they felt about themselves. When it came to “Perceived Value”, the results showed that there was no effect both on “Happiness” ($F(1; 100) = 0,568$ and $p\text{-value} = 0,453 > 0,05$) and “Good about oneself” ($F(1; 100) = 0,395$ and $p\text{-value} = 0,531 > 0,05$). Participants felt happier when purchasing the hedonic mug than the utilitarian one ($M_{\text{Hedonic}} = 4,66$ and $M_{\text{Utilitarian}} = 4,49$). This behavior highlights, once again, the opposite stated by Camille Saintives (2020), since even though guilt is a mediator both of “Happiness” and “Good”, participants feel better and happier when purchasing a hedonic product, and not the utilitarian one, thus the hypothesis is still rejected.

Onto the second hypothesis, in this survey, and opposed to the first survey results, there is no significant effect of the independent variables on “Guilt” ($F_{\text{Channel}}(1; 100) = 0,002$ and $p\text{-value}_{\text{Channel}} = 0,963$ and $F_{\text{PerceivedValue}}(1; 100) = 0,413$ and $p\text{-value}_{\text{PerceivedValue}} = 0,522$). Moreover, once again going against what Camille Saintives stated in her results, participants felt guiltier when online ($M_{\text{Online}} = 2,93$) rather than when in-store ($M_{\text{Instore}} = 2,85$), even though there is an

expected higher feeling of guilt when purchasing the hedonic product ($M_{\text{Hedonic}} = 2,95$) than the utilitarian one ($M_{\text{Utilitarian}} = 2,86$). According to these results, the second hypothesis would still be rejected.

Analyzing the third hypothesis according to the second survey's sample, it was understood that neither "Social Concerns" nor "Multisensory" had a significant effect from the independent variables (all p-values higher than 0,05). Nonetheless, it should be highlighted that this sample showed an overall higher concern for "Multisensory" than for "Social Concerns" ($M_{\text{Multisensory}}=4,94$ and $M_{\text{SocialConcerns}} =4,00$), meaning that the third hypothesis is rejected. Moreover, "Multisensory" showed to be higher in-store than online ($M_{\text{Instore}}=5,12$ and $M_{\text{Online}}=4,82$), whereas "Social Concerns" showed the opposite, i.e., there was a higher medium value online than in-store ($M_{\text{Instore}}=3,76$ and $M_{\text{Online}}=4,17$), which goes against the first study's results.

Just like in the first survey, regarding the fourth hypothesis, "Guilt" is not a mediator between "Anticipated Satisfaction" and "Perceived Value", nor between "Willingness to Purchase" and "Perceived Value". Additionally, there is no significant effect from the independent variables on the "Anticipated Satisfaction" and on "Willingness to Purchase" (all p-values above 0,05), thus, even though the descriptive statistics go along with Camille Saintives (2020), this remains not relevant. Nonetheless, it does show a higher anticipated satisfaction under the online context when purchasing the hedonic product, going against the results of the first survey.

"Willingness to Purchase" showed the same results, i.e., participants are more willing to purchase hedonic products under the online context. However, this is not relevant, as there is no significant effect from the independent variables, so the hypothesis remains rejected.

4.3.1.2. Main Results – Third Study

Moving on to the last survey, where the products under manipulation were changed to chocolate (hedonic) and a cereals bar (utilitarian), it would be expected that the results somewhat change.

Regarding the first hypothesis, "Perceived Value" has a significant effect on "Happiness" ($F(1; 104) = 6,368$ and $p\text{-value} = 0,013 < 0,05$). Participants felt significantly happier when purchasing the chocolate ($M = 5,46$) rather than the cereals bar ($M = 4,75$), and this difference

is higher online (Difference in Mean = 0,86) than in-store (Difference in Mean = 0,59). The products may highlight a stronger feeling of hedonism and utilitarianism respectively, hence the significant effect of the perceived value, meaning that considering only this variable, the first hypothesis would not be rejected.

Whereas regarding to how participants feel about themselves, the perceived value is not significant ($F(1; 104) = 1,789$ and $p\text{-value} = 0,185 > 0,05$), as well as to how nourished respondents would feel ($F(1; 104) = 0,012$ e $p\text{-value} = 0,914$).

Even though “Guilt” is a mediator between both “Happiness” and “Good”, participants feel better and happier when purchasing a hedonic product, and not the utilitarian one, which leads to rejecting the hypothesis.

Just like the previous analysis on H1, when under the chocolate and the cereals bar, the perceived value arises as significant to the dependent variable guilt ($F(1; 104) = 6,408$ and $p\text{-value} = 0,013$). Adding on, an interesting result is that, for the first time throughout all results, there is indeed a higher feeling of guilt under the in-store context when buying a hedonic product, rather than under the online one ($M_{\text{InstoreHedonic}} = 3,22$ and $M_{\text{OnlineHedonic}} = 3,19$), thus with these products we would not reject the second hypothesis, which may suggest once again that the product proposed by Camille in her study and replicated into our first study cannot be indicated under certain samples.

This third survey shows again that “Perceived Value” is not significant on “Social Concerns” ($F(1; 104) = 3,553$ and $p\text{-value} = 0,062$), neither on “Multisensory” ($F(1; 104) = 3,265$ and $p\text{-value} = 0,075$). Contrarily to the first survey results, and unexpectedly, this “Social Concerns” value is higher when online ($M = 3,81$) rather than in-store ($M = 3,78$). This behavior is the opposite when it comes to the multisensory concern, meaning that is higher in-store ($M = 4,57$) than online ($M = 4,37$), as expected. Just like the second survey results, there is an overall higher concern for multisensory ($M = 4,47$) than for social concerns ($M = 3,80$), thus the hypothesis is rejected, contrarily to the verified on the first study.

Finally, regarding the fourth hypothesis, “Guilt” is not a mediator between “Anticipated Satisfaction” and “Perceived Value”, nor between “Willingness to Purchase” and “Perceived Value”.

Regarding “Willingness to Purchase,” the results were similar to the ones on the second survey, meaning that no significant effect was detected and participants showed to be more willing to purchase hedonic products ($M = 4,98$) than utilitarian ones ($M = 4,57$), especially under the in-store context ($M_{\text{InstoreHedonic}}=5,00$) when compared to the online one ($M_{\text{OnlineHedonic}}=4,96$). However, there is a difference, that goes along with the first survey results, as there is a significant effect of the “Perceived Value” on the “Anticipated Satisfaction” when using the chocolate and the cereals bar ($F(1; 104)= 6,182$ and $p\text{-value}=0,015$).

Moreover, believing that this product leads participants to a stronger distinction between a utilitarian and a hedonic context, respondents anticipate a higher satisfaction when purchasing the hedonic product, both when online ($M_{\text{OnlineHedonic}}=5,59$) and in-store ($M_{\text{InstoreHedonic}}=5,30$). Contrarily to the first study results this anticipated satisfaction is higher when online than in-store, thus even though there is a significant effect, there is no mediator from “Guilt”, so the hypothesis is still rejected.

5. Discussion

Firstly, according to the pre-survey, it was shown that the Portuguese culture still has some constraints when it comes to online purchasing, which must be highlighted as a possible reason for the discrepancy in results when compared to Camille Saintives’ study results, that relied on the American culture – a culture known to have a good number of online purchases. (Statista, 2021).

Adding on to the first hypothesis analyzed, all the three studies evaluating respondents’ self-esteem highlighted that it is not significantly affected by the perceived value of the product, even though there is the mediation of guilt. This may be caused since, on the first study, the measure used was a trait measure, thus this guilt arose by the purchasing of the product is not a strong enough experience to impact one’s self-esteem. It could alter with a repeated event or with trauma. Adding on, we see “Happiness” being affected by the perceived value on the third survey, possibly explained by the products used, that strongly highlights the hedonism or the utilitarianism of the product.

Onto the second hypothesis, it was rejected in the three studies carried on, which goes against Camille Saintives' results. As the first study was a pure replication of the author's study, it is clear the distinctions against Camille Saintives' analysis, which may be due to cultural differences of the sample, as these studies' samples are mainly Portuguese and hers are mainly American, or even due to bad manipulations of the contexts or a bad choice of products to study these variables. Regarding the second and third surveys, as they were conceptual replications and they still suggest the opposite to Camille Saintives' results, i.e., that participants feel guiltier when online, it may be connected to the fact that Portuguese consumers are still somewhat insecure when buying online, which may increase their level of guilt, due to the fear of something go wrong, whereas when buying physically they are more confident on their choices, thus, feel less guilt on them.

Moving on to the third hypothesis, it was shown that on the first study, it is not rejected and it is verified that respondents feel a higher concern about the violation of the perceived social norms under in-store environments when compared to the concern about the multisensory effect. This may be since when in public, consumers are more worried about acting accordingly to social standards so that they don't feel judged by others, as explained in the literature reviews. Thus, in this sample it is shown that, oppositely to what Camille Saintives (2020) hypothesizes, respondents are more concerned about social judgments than about multisensory needs. The results change in the second and third surveys, as the third hypothesis is rejected in those samples, going accordingly to Camille Saintives' results.

Even though Camille Saintives hypothesized a significant effect by both the perceived value and the channel and that the perceived value would be lower in-store, mediated by guilt, in the fourth hypothesis, it was concluded that besides "Guilt" not being a mediator, the anticipated satisfaction is only significantly affected by the perceived value of the product, unexpectedly showing a higher satisfaction when purchasing the utilitarian goods and when in-store. This behavior is believed to happen due to the fact that when in-store, consumers may be more concerned about whether they are being compliant with social standards, thus they don't allow themselves to consider the hedonic component of the product as much as when online, where there is fewer social distractions and consumers can focus and be more sensible towards how much satisfaction a product can deliver or not. Also, utilitarian products assemble satisfaction goals in their core for themselves, as they are mainly purchased due to their ability to meet

needed demands, so there is a feeling of fulfilled duty which can be misunderstood by satisfaction when being assessed.

6. Theoretical and Managerial Implications

Theoretically, this thesis contributes to the extension of previous literature on the consumers' behavioral differences in distinctive channels, also relating to a very important scope in marketing – hedonism versus utilitarianism.

Besides, its results provide a new perspective to the only known article exploring the concept of guilt and anticipated satisfaction according to the purchasing channel and perceived value of the product (Camille Saintives, 2020). This study shows that the emotion of guilt might not be as significantly related to the channel the consumers purchase in, nor to the perceived value of the good purchased, as stated by the previously mentioned author, being a relevant finding as it gives the exact opposite insight on this investigation, which may be due to different cultural behaviors.

Also, the results showed that it is extremely important to acknowledge that different pieces of literature may find opposite conclusions, which leads to understanding that theories are volatile and may not be found in every context, or every sample.

Moreover, from a managerial perspective, this analysis presents key messages for companies in the marketing, retailing, or even consumer behavior industry. It suggests that anticipated satisfaction will be higher when purchasing perceived hedonic products, but that this satisfaction will not be affected by consumers' feelings of guilt.

Also, the results show that when purchasing hedonic products, there are more feelings of guilt, even though these feelings are not significantly affected by the purchasing channel and they don't affect one's self-esteem. Besides, it shows that consumers are concerned about the perceived compliance with social norms when purchasing physically at a store, which may have implications on their behavior and attitudes.

Taking this into consideration, it suggests that businesses may continue to instigate hedonic purchases, as it does not expressively disturb how consumers feel about themselves, meaning

that it will not have a long-term negative impact on their behavior towards this type of consumption. However, there must be an extra consideration towards feelings of guilt related to hedonism, to guarantee that it is not amplified by marketing actions to the point where it impacts the relationship between the brand, the product, and the consumer.

7. Limitations and Future Research

Every academic research has its limitations and this thesis is no exception. Firstly, collecting data through the use of online surveys implies some disadvantages related to it, mainly the fact that it cannot reach every population, as it implies electronic devices that may not be reachable by everyone (Wright, 2005; Evans and Mathur, 2005; Nayak and Narayan, 2019), adding on the fact that the online surveys were shared on social media platforms, which limits their reach and limits access to more data. Along with the possible increased bias because the survey cannot explain doubts that may be created throughout, as well as due to repeatedly submissions of responses (Evans and Mathur, 2005; Nayak and Narayan, 2019) and it may be threatened by crashes in the servers used and induce loss of results (Nayak and Narayan, 2019).

These disadvantages were controlled by guaranteeing the participants a line of communication in case of any doubts, as well as advising participants to answer only once and by having the survey in multiple servers, in case of any error in Qualtrics. However, there is always a low control on participants' honesty, motivation, and surroundings, which may affect the final results. Furthermore, the questions made on the first survey regarding "Self-esteem" and "Anticipated Satisfaction" were somewhat constraining the results, thus they are considered limitations. Nonetheless, this limitation was corrected in the second and third surveys, which increase the results' quality.

In addition, the sample producing the data that was further analyzed was mainly composed of Portuguese participants, which arises cultural bias. Under this case, it may even be a reason for the difference in results when compared to Camille Saintives' study. Besides, the fact that this thesis was a replication of the previously mentioned author and its conclusions, possibly emerges as a key limitation, since it may be being based on results that are not entirely correct, leading to a somewhat non-relevant discussion. Finally, due to time and space constraints and

limited access to resources, the literature outlined may lack adjacent findings that would be interesting to explore under this scope.

As for future research, even though this thesis gathers more consistent data than Camille Saintives (2020) due to all the sample size, the number of surveys, controls, manipulation checks, and manipulations changes that were done, it should be tested whether there is an actual effect of the channel and perceived value on variables such as guilt and anticipated satisfaction since these two are the ones used both in this thesis and on Camille Saintives research. Also, it would be worthy to understand whether these discrepancies are actually due to cultural differences or not, by gathering a mixed sample regarding nationality.

Moreover, it may be interesting to add other variables into the study to see if these independent variables affect other variables that may affect consumers' behavior and that may give important insights to the industries, such as the retail, the marketing, or the research industry. Or even to study whether the dependent variables are affected by different independent ones, such as the perceived ownership of a product since Peck et al. (2013) has disclosed that physically touching a product may create a positive effect on one's feelings towards the perceived ownership of that good.

8. Conclusion

This research aimed to understand whether consumers' behavior would change according to the channel they were in, and to the perceived value of the good being purchased. Throughout four experimental studies, it was understood that the initially expected effect of the perceived value and the purchasing channel on the dependent variables – guilt, self-esteem, anticipated satisfaction, and social concerns – was not significant in most cases.

To start with, consumers felt guilt in different ways according to the perceived value, but not to the purchasing channel. Self-esteem showed to have no significant changes depending on these two independent variables and anticipated satisfaction demonstrated the exact opposite result to Camille Saintives' results (2020), as there was a higher anticipated satisfaction under the in-store context, and feelings of guilt were not a mediator. Moreover, there was indeed a higher concern on the perceived social norms, rather than on the multisensory needs when in-

store, under the first study. However, this behavior was not verified on the second and third surveys, which may suggest an inconclusive overall result.

These results are believed to have a significant impact on previous literature as they included one exact replication of Camille Saintives's study, and two other conceptual replications, adding on more control, more manipulation checks, and different products and context manipulations. Thus, it is expected that the data collected is accurate and may be useful for future research.

9. Appendices

Appendix 1: Research Method

All online surveys were developed in Qualtrics Survey Software – a data collection software that enables us to create a seamless questionnaire to respondents and analysts, with different types of questions, stimulus, and randomization. Also, this software is a tool linked to SPSS, the statistical software platform on which the data was worked and analyzed.

The surveys were shared both in Portuguese and English, along with different social media platforms and accounts, in Facebook, Instagram, LinkedIn, and Reddit, to reach as many and diverse respondents as possible, using the convenience sampling method, meaning that the sample was constituted according to the geographical reach and to the respondents' availability and drive to answer (Dornyei, 2007). Alongside, to maximize responses in the first study, respondents could participate in a giveaway of three vouchers, each with 25€, to spend at a supermarket of the winners' choice. These mechanisms enabled the collection of 163 responses on the pre-study and 345 responses on the first one.

This data collecting method enables easy distribution of the survey, as well as an easy way to remind non-respondents and a time-saving one (Evans and Mathur, 2005; Nayak and Narayan, 2019). In addition, it allows researchers to reach unique populations, at a very low cost (Wright, 2005) and to start, pause or restart the survey whenever needed (Nayak and Narayan, 2019). Finally, online surveys allow several formats of data and further ways of analyzes due to their easiness to import, which may deeply enrich studies and their conclusions.

Appendix 2: Pre-Study

Introduction

Dear participant,

I would like to thank you in advance for your time and participation in this survey which aims to understand the behavior towards online grocery shopping of Portuguese people.

This analysis is being done under a Master's Thesis in Management with Specialization in Strategic Marketing, by Universidade Católica Portuguesa, and every data collected will be treated anonymously and only used for research purposes.

This survey will take you 2 minutes to complete and it is important to answer all questions as honestly as possible, after reading each question carefully. If you are not sure about your answer, please choose the one that is most close to your initial assessment. There are no right or wrong answers.

If you have any questions or interest in knowing the final results of this study, please contact: s-mgmmartins@ucp.pt

Thank you very much.

Screening Question

Are you Portuguese?

- Yes
- No

Online Shopping Behavior

1. Have you ever done your groceries online?

- Yes
- No

Online Shopping Behavior - Yes

1. On average, how often do you usually shop your groceries online?

- Never
- Rarely
- Often
- Always

2. What is the main inconvenience you find when shopping online? Please select all that apply.
- Lack of information
 - I like to compare the promotions at the store and it's more difficult to do it online
 - I like to see and touch the products at the store and it's more difficult to do it online
 - I like to see and touch the products myself and when I am online I can't
 - Having to pay the delivery fee
 - The products delivered may have less quality
 - Lack of trust that the order arrives safe and correct
 - Few available online groceries for groceries shopping.

Online Shopping Behavior - No

1. What are the main reasons for you to never buy online? Please select all that apply.
- Lack of information
 - Aversion to online shopping
 - I like to compare the promotions at the store and it's more difficult to do it online
 - I like to see and touch the products at the store and it's more difficult to do it online
 - I don't want to pay the delivery fee
 - I think the products delivered can have less quality
 - I don't trust the service is safe enough
 - I don't have a home delivery service available near my home
 - Other

Demographics

1. How do you identify yourself?
- Female
 - Male
 - Other
 - Prefer not to say
2. When were you born?
- 1928-1945
 - 1946-1964
 - 1965-1980

- 1981-1996
 - 1997-2012
 - After 2012
3. What is your current occupation?
- Student
 - Student-worker
 - Employed
 - Unemployed
 - Retired
4. What is your gross monthly income?
- Under 650€
 - 651€-1000€
 - 1001€-2000€
 - 2001€-3000€
 - 3001€-4000€
 - 4001€ or more
 - Prefer not to say

Appendix 3: First Survey

Introduction

Dear participant,

I would like to thank you in advance for your time and participation in this survey which aims to understand how consumers feel guilty in different contexts and how that will further influence other variables.

This analysis is being done under a Master's Thesis in Management with Specialization in Strategic Marketing, by Universidade Católica Portuguesa, and every data collected will be treated **anonymously** and only used for **research purposes**.

This survey will take you **8 minutes to complete** and it is important to answer all questions as honestly as possible, after reading each question carefully. If you are not sure about your

answer, please choose the one that is **most close** to your initial assessment. There are **no right or wrong answers**.

To make the most out of your time and kindness to share your insights with me, I am **randomly giving away 3 vouchers**, each with 25€ to spend at a **supermarket of the winners' choice**. If you want to participate in this giveaway, please fill in the box asking for your e-mail at the end of the survey.

If you have any questions or interest in knowing the final results of this study, please contact: s-mgmmartins@ucp.pt

Thank you very much.

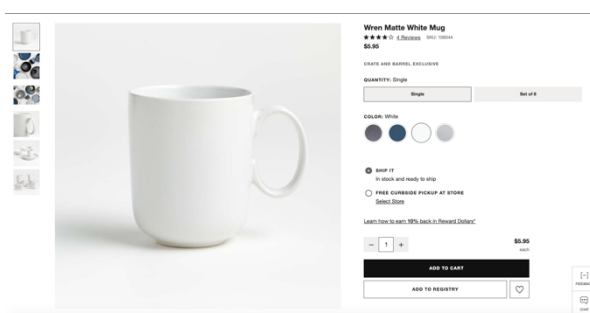
Context

Manipulation - Online

In this section, you will be given two scenarios. It is important that you read each instruction carefully to appropriate your answers and to project yourself into the corresponding context.

Imagine that you are at home and decide to visit the website of your usual local supermarket that now offers home delivery. You eventually select a mug and you place an order for it.

Please take a few minutes to imagine shopping online on the website and putting the mug in your virtual shopping trolley. If needed, use the illustrative picture below to help you imagine this situation.



Manipulation - In-store

In this section, you will be given two scenarios. It is important that you read each instruction carefully to appropriate your answers and to project yourself into the corresponding context.

Imagine that you decide to go shopping at your usual local supermarket. Among other items, you select a mug that brought to your attention. You take the mug in your hand and take time to observe it.

Having the mug in your hand, you eventually put it in your shopping trolley. Please take a few minutes to imagine this situation. If needed, use the illustrative picture below to help you imagine this situation.



Manipulation - Hedonic

In this scenario, you don't need this mug, since you already have a considerable collection of mugs in your kitchen. But you find that mug so nice that you actually buy it.

Taking into consideration the scenario previously explained, and assuming that you bought the mug, please answer the following questions.

Manipulation – Utilitarian

In this scenario, this mug that brought your attention will be useful, especially because you just broke the only mug you had a few days ago, so you end up buying it.

Taking into consideration the scenario previously explained, and assuming that you bought the mug, please answer the following questions.

Questions

1. To what extent would you feel satisfied if you purchased this mug?

- 1 (Completely dissatisfied)
- 2
- 3
- 4
- 5
- 6
- 7 (Completely satisfied)

2. How guilty do you feel?

- 1 (Not guilty at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Completely guilty)

3. How remorseful do you feel?

- 1 (Not remorseful at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Completely remorseful)

4. How bad do you feel?

- 1 (Not bad at all)
- 2
- 3
- 4
- 5

- 6
- 7 (Completely bad)

5. How useful do you believe the mug would be to you?

- 1 (Not useful at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Completely useful)

6. How much pleasure do you believe the mug would bring you?

- 1 (No pleasure at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Complete pleasure)

7. In what type of context were you imagining buying the mug?

- Buying online
- Buying at a physical store

8. When you are buying online/at a physical store, how concerned are you with the following? Please select the option that best describes you, from 1 (Not concerned at all) to 7 (Extremely Concerned)

- Concerned about seeing, touching, or smelling the product I want to purchase)
- Concerned about having a sensorial experience with the products before purchasing them.
- Concerned about the people around me.
- Concerned about what other people might think.
- Concerned about following social norms or standards.

- Concerned about how that purchase will make me feel about myself.

Control

1. How easy was it for you to imagine buying within the two scenarios presented?
 - 1 (Extremely difficult)
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7 (Extremely easy)

2. After this analysis, please indicate how strongly you agree or disagree with each statement? (Strongly disagree; Disagree; Agree; Strongly Agree)
 - On the whole, I am satisfied with myself.
 - At times, I think I am no good at all.
 - I feel that I have a number of good qualities.
 - I am able to do things as well as most other people.
 - I feel I do not have much to be proud of.
 - I certainly feel useless at times.
 - I feel that I'm a person of worth, at least on an equal plane with others.
 - I wish I could have more respect for myself.
 - All in all, I am inclined to feel that I am a failure.
 - I take a positive attitude towards myself.

3. Please indicate how confident are you in each scenario, from 1 (Not confident at all) to 7 (Extremely confident).
 - Confident in your overall shopping decisions.
 - Confident in your shopping decisions when buying online.
 - Confident in your shopping decisions when buying at a physical store.

4. You will read about situations that people are likely to encounter in day-to-day life, followed by common reactions to those situations. As you read each scenario, try to imagine yourself in that situation. Then indicate the likelihood that you would react in the way described. (Very unlikely; Unlikely; Slightly unlikely; About 50% likely; Slightly likely; Likely; Very likely)

- After realizing you have received too much change at a store, you decide to keep it because the sales clerk doesn't notice. What is the likelihood that you feel uncomfortable about keeping the money?

- You are privately informed that you are the only one in your group that did not make the honor society because you skipped too many days of school. What is the likelihood that this would lead you to become more responsible about attending school?

- You reveal a friend's secret, though your friend never finds out. What is the likelihood that your failure to keep the secret would lead you to exert extra effort to keep secrets in the future?

- You secretly commit a felony. What is the likelihood that you would feel remorse about breaking the law?

- You strongly defend a point of view in a discussion, and though nobody was aware of it, you realize that you were wrong. What is the likelihood that this would make you think more carefully before you speak?

- At a coworker's housewarming party, you spill red wine on their new cream-colored carpet. You cover the stain with a chair so that nobody notices your mess. What is the likelihood that you would feel that the way you acted was pathetic?

- While discussing a heated subject with friends, you suddenly realize you are shouting though nobody seems to notice. What is the likelihood that you would try to act more considerately toward your friends?

- You lie to people but they never find out about it. What is the likelihood that you would feel terrible about the lies you told?

Demographics

1. How do you identify yourself?
 - Female
 - Male
 - Other
 - Prefer not to say

2. When were you born?
 - 1928-1945
 - 1946-1964
 - 1965-1980
 - 1981-1996
 - 1997-2012
 - After 2012

3. What is your nationality?

4. What is your current occupation?
 - Student
 - Student-worker
 - Employed
 - Unemployed
 - Retired

5. What is your gross monthly income?
 - Under 650€
 - 651€-1000€
 - 1001€-2000€
 - 2001€-3000€
 - 3001€-4000€
 - 4001€ or more
 - Prefer not to say

Appendix 4: Second/Third Survey

Introduction

Dear participant,

I would like to thank you in advance for your time and participation in this survey which aims to understand how consumers feel guilty in different contexts and how that will further influence other variables. This analysis is being done under a Master's Thesis in Management with Specialization in Strategic Marketing, by Universidade Católica Portuguesa, and every data collected will be treated anonymously and only used for research purposes. This survey will take you 10 minutes to complete and it is important to answer all questions as honestly as possible, after reading each question carefully. If you are not sure about your answer, please choose the one that is most close to your initial assessment. There are no right or wrong answers. If you have any questions or interest in knowing the final results of this study, please contact: s-mgmmartins@ucp.pt

Thank you very much

Online Manipulation– Second Survey



Imagine that you are at home browsing through online stores and you see this mug¹.

¹ The respondent would only see one of the images.

In-store Manipulation – Second Survey

Imagine that you are at your usual supermarket and you see this mug.²



Manipulation Change – Second Survey

After all, you did not decide to purchase this product. You changed your mind and you purchased other option.

Please, continue with the survey.

Hedonic Manipulation – Third Survey

Imagine that you are at home and you are hungry, so you decide to order a snack from a delivery service, like uber eats or glovo. You are undecided between chocolate or a cereals bar. After a moment, you finally decide to choose the chocolate.

Utilitarian Manipulation – Third Survey

Imagine that you are at home and you are hungry, so you decide to order a snack from a delivery service, like uber eats or glovo. You are undecided between chocolate or a cereals bar. After a moment, you finally decide to choose the cereals bar.

² The respondent would only see one of the images.

Manipulation Change – Third Survey

After all, you did not decide to purchase this product. You changed your mind and you purchased the other option.

Please, continue with the survey.

Questions

1. How willing/driven were you to purchase this product?
 - 1 (Not at all willing/driven)
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7 (Completely willing/driven)

2. To what extent would you feel satisfied if you purchased this product?
 - 1 (Completely dissatisfied)
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7 (Completely satisfied)

3. To what extent would you feel happy if you purchased this product?
 - 1 (Not happy at all)
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7 (Completely happy)

4. To what extent would you feel nourished if you purchased this product?³

- 1 (Not nourished at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Completely nourished)

5. How good would you feel about yourself if you purchased this product?

- 1 (Not good at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Completely good)

6. How guilty do you feel?

- 1 (Not guilty at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Completely guilty)

7. How remorseful do you feel?

- 1 (Not remorseful at all)
- 2
- 3
- 4

³ This question was asked only on the third survey.

- 5
- 6
- 7 (Completely remorseful)

8. How bad do you feel?

- 1 (Not bad at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Completely bad)

9. How useful do you believe the product would be to you?

- 1 (Not useful at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Completely useful)

10. How much pleasure do you believe the product would bring you?

- 1 (No pleasure at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Complete pleasure)

11. How did you purchase the product?

- Through an online delivery service
- In a physical store

12. Which product did you purchase?⁴

- Plain mug
- Christmas mug

13. Which product did you purchase?⁵

- Chocolate
- Cereals bar

14. When you are buying online/at a physical store, how concerned are you with the following? Please select the option that best describes you, from 1 (Not concerned at all) to 7 (Extremely Concerned)

- Concerned about seeing, touching, or smelling the product I want to purchase)
- Concerned about having a sensorial experience with the products before purchasing them.
- Concerned about the people around me.
- Concerned about what other people might think.
- Concerned about following social norms or standards.
- Concerned about how that purchase will make me feel about myself.

Control

5. How easy was it for you to imagine buying within the two scenarios presented?

- 1 (Extremely difficult)
- 2
- 3
- 4
- 5
- 6
- 7 (Extremely easy)

6. After this analysis, please indicate how strongly you agree or disagree with each statement? (Strongly disagree; Disagree; Agree; Strongly Agree)

⁴ Question done only on the second survey.

⁵ Question done only on the third survey.

- On the whole, I am satisfied with myself.
- At times, I think I am no good at all.
- I feel that I have a number of good qualities.
- I am able to do things as well as most other people.
- I feel I do not have much to be proud of.
- I certainly feel useless at times.
- I feel that I'm a person of worth, at least on an equal plane with others.
- I wish I could have more respect for myself.
- All in all, I am inclined to feel that I am a failure.
- I take a positive attitude towards myself.

7. Please indicate how confident are you in each scenario, from 1 (Not confident at all) to 7 (Extremely confident).

- Confident in your overall shopping decisions.
- Confident in your shopping decisions when buying online.
- Confident in your shopping decisions when buying at a physical store.

8. You will read about situations that people are likely to encounter in day-to-day life, followed by common reactions to those situations. As you read each scenario, try to imagine yourself in that situation. Then indicate the likelihood that you would react in the way described. (Very unlikely; Unlikely; Slightly unlikely; About 50% likely; Slightly likely; Likely; Very likely)

- After realizing you have received too much change at a store, you decide to keep it because the sales clerk doesn't notice. What is the likelihood that you feel uncomfortable about keeping the money?

- You are privately informed that you are the only one in your group that did not make the honor society because you skipped too many days of school. What is the likelihood that this would lead you to become more responsible about attending school?

- You reveal a friend's secret, though your friend never finds out. What is the likelihood that your failure to keep the secret would lead you to exert extra effort to keep secrets in the future?

- You secretly commit a felony. What is the likelihood that you would feel remorse about breaking the law?

- You strongly defend a point of view in a discussion, and though nobody was aware of it, you realize that you were wrong. What is the likelihood that this would make you think more carefully before you speak?

- At a coworker's housewarming party, you spill red wine on their new cream- colored carpet. You cover the stain with a chair so that nobody notices your mess. What is the likelihood that you would feel that the way you acted was pathetic?

- While discussing a heated subject with friends, you suddenly realize you are shouting though nobody seems to notice. What is the likelihood that you would try to act more considerately toward your friends?

- You lie to people but they never find out about it. What is the likelihood that you would feel terrible about the lies you told?

Demographics

6. How do you identify yourself?

- Female
- Male
- Other
- Prefer not to say

7. When were you born?

- 1928-1945
- 1946-1964
- 1965-1980
- 1981-1996
- 1997-2012
- After 2012

8. What is your nationality?

9. What is your current occupation?

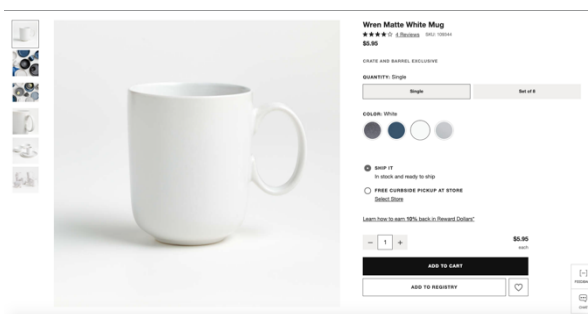
- Student
- Student-worker
- Employed
- Unemployed
- Retired

10. What is your gross monthly income?

- Under 650€
- 651€-1000€
- 1001€-2000€
- 2001€-3000€
- 3001€-4000€
- 4001€ or more
- Prefer not to say

Appendix 5: Stimuli used in the First Survey

Online Context



In-store Context



Appendix 6: Stimuli used in the Second Study

Hedonic Context
(Online and In-store)



In-store Context



Appendix 7: Reliability analysis

Even though “Guilt” was assessed according to previous literature, the three items that will convert into this variable should be tested according to its Cronbach’s alpha. Therefore, it was understood that these items’ reliability was high, as their Cronbach’s alpha was 0,902, thus above 0,7.

Moreover, when assessing concerns with social norms, its Cronbach’s alpha was analyzed and since it is higher than 0,7 it means that this measure is reliable.

Regarding consumers’ confidence in their shopping decisions, it was demonstrated that its Cronbach’s alpha was 0,754, meaning it is above 0,7 which confirms its reliability.

Also, to measure consumers’ assessment on the variable “Multisensory”, the same analysis was run. Nonetheless, as there were only 2 items to analyze this variable, their correlation was measured through Pearson’s Correlation.

As demonstrated by Ahlgren et al. (2003), the Pearson Correlation r value suggests how strong the relationship between two items of a question is, within a range between -1 and 1, i.e., the perfect negative or positive correlation, respectively. In this case, the r value is 0,206 and the p -value is 0,000 meaning that there is a significant correlation between the two items, as correlation is significant when its p -value is under 0,01.

Finally, to evaluate the guilt-proneness of our participants, the guilt-related questions of the GASP Scale were asked, creating two subscales of guilt tendency: the Guilt-Negative-Behavior-Evaluation, being the average result between the first, fourth, sixth, and eighth item; and the Guilt-Repair, which relies on the average score between the second, third, fifth and seventh item of the GASP Scale. Their reliability was analyzed and it was understood that both subscales had a Cronbach's Alpha higher than 0,7 (0,739 and 0,765 respectively), leading to good reliability on the items.

Appendix 8: Manipulation Check

Second Survey

In this survey, there was a total of 167 respondents. However, there were only 101 valid answers, as participants who got the same manipulations regarding the channel and product as the previously explained wrong were excluded from the sample, to have a more appropriate analysis and further results.

Third Survey

Of the 155 total responses, 50 were eliminated as they failed to pass the manipulation check under this survey. They were asked to point out the channel they were buying the chocolate or the cereals bar, as well as to determine the type of product they purchased, and if one of these were wrong, their participation would be discharged. Thus, it was collected 105 valid answers and additional analysis was done under this sample.

Appendix 9: Sample Characterization

Second Survey

This sample was composed of 89% of Portuguese people, where 51,5% were male and 48,5% female, going against the tendency so far of having mainly female respondents. However, it continued to have mainly participants from Generation Z (58,4%) and Generation X (23,8%).

Participants were mainly employed and students (89,1%) and the majority shared to earn between 2001€ and 3000€ (24,8%), immediately followed by participants earning between 1001€ and 2000€ (23,8 %)

This sample had even a higher easiness to imagine the scenarios presented in the survey (84,2% scoring above the middle point of the scale), as well as higher confidence when purchasing online (80,2% scoring above the middle point of the scale). Even though physical shopping decisions (84,1% scoring above the middle point of the scale) maintain to be scored above online ones, this sample showed lower values under a physical context, as well as on their overall shopping decisions confidence (82,1% scoring above the middle point of the scale).

As for their guilt tendency, 78,3% of the respondents suggested feeling guilt under repair actions, whereas a smaller percentage of them (67,4%) shared feeling guilty under negative behavior evaluations, which once again mirrors a rather tendency to guilt on the sample.

Third Survey

Of the 105 respondents under this survey, 50,5% were female and 49,5% were male. Just as the first survey, the majority of the respondents (53,3%) were born between 1997 and 2012, taking part in Generation Z, followed by Millennials (21,0%), i.e., participants born between 1981 and 1996. Regarding nationality, the sample is mainly Portuguese (91%) and participants were mainly employed (63,8%) or students (15,2%) when it came to their occupation. Finally, as for income, the sample was very even, but there was a slightly higher number of respondents earning a gross monthly income between 1001€ and 2000€.

Regarding some controls that were made, the sample showed to have a rather easiness to imagine the scenarios they were manipulated into (83,8% scoring above the middle point of the scale), which may induce a higher quality in the answers that were given regarding confidence, respondents shared to be confident in their overall decisions when shopping (82,9% selecting above the middle point of the scale), whereas regarding physical shopping, a higher percentage of participants feel confident (86,8%) and when purchasing online, a lower number of respondents feel confident on their decisions (76,2%), which once again may mirror the lower tendency to buy goods online and to feel less secure in the process.

Regarding respondents' guilt tendency according to GASP, 73,4% of them were prone to negative behavior-evaluations, whereas only 72,4% are likely to feel guilty under repair actions, which is the opposite behavior of our first study's sample (the majority of its respondents feel higher guilt under negative behavior-evaluations). Nonetheless, it also reflects a guilt tendent sample.

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