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*The adoption of sustainable practices on
personal luxury goods: impact on purchase
motivations and intention, emotions, and self-
identity.*

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ABSTRACT

With the growth of the luxury industry in recent years, especially the personal goods segment, and with environmental concerns and sustainability increasingly influencing consumers, it is crucial to understand the role of this industry in the spotlight of sustainability.

For this reason, this investigation aims to understand what perceptions, feelings, and purchase intentions current and potential consumers will have about these sustainable luxury products. To do this, based on the literature, information was gathered from individuals by (1) developing a questionnaire to assess consumers' perceptions and attitudes towards different sustainable strategies, and (2) conduction interviews to deepen the knowledge regarding consumer's emotions regarding sustainable luxury products. This way, it was possible to assess people's perspectives and understanding of the new sustainable production methods that have been implemented. The results of this investigation reveal that, in general, individuals are considerably concerned about the current state of the environment and that despite their positive purchase intentions for this type of sustainable goods, perceptions about them are not unanimous and deserve further look.

Thus, this study provides relevant academic and managerial contributions, as it indicates which sustainable strategies are most familiar to individuals, how they judge and evaluate them, and which of them generates higher purchase intentions, granting a deeper knowledge about the potential consumers in this market segment.

Keywords: Luxury Industry, Luxury Personal Goods, Sustainability, Sustainable Practices, Luxury Sustainable Goods, Consumer Behavior, Purchase Intentions, Consumer Profiles.

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RESUMO

Com o crescimento da indústria do luxo nos últimos anos, especialmente no segmento de bens pessoais, e com a sustentabilidade e preocupações ambientais a influenciarem cada vez mais os consumidores, torna-se crucial compreender o papel desta indústria num mundo que caminha para um futuro que se pretende cada vez mais sustentável.

Por esta razão, esta investigação visa compreender que perceções, sentimentos e intenções de compra terão os consumidores atuais e potenciais sobre estes produtos de luxo sustentáveis. Para tal, com base na literatura, foram recolhidas informações junto de indivíduos por meio de (1) desenvolvimento de um questionário para avaliar as perceções e atitudes dos consumidores em relação a diferentes estratégias sustentáveis e (2) realização de entrevistas para aprofundar as emoções dos mesmos em relação aos produtos de luxo sustentáveis. Desta forma, foi possível avaliar a perspetiva e compreensão das pessoas sobre os novos métodos de produção sustentável que têm vindo a ser implementados. Os resultados desta investigação revelam que, de uma forma geral, os indivíduos estão bastante preocupados com o estado atual do ambiente e que apesar das intenções de compra perante este tipo de bens ser positiva, as perceções sobre os mesmos não são unânimes e merecem ser aprofundadas.

Assim, este estudo fornece contributos académicos relevantes para a gestão, visto que indica quais estratégias sustentáveis são mais familiares aos indivíduos, como estes as avaliam e quais geram maiores intenções de compra, proporcionando um conhecimento mais profundo sobre os potenciais consumidores deste segmento de mercado.

Palavras-chave: Indústria do Luxo, Bens Pessoais de Luxo, Sustentabilidade, Práticas Sustentáveis, Bens Sustentáveis de Luxo, Comportamento do Consumidor, Intenções de Compra, Perfis do Consumidor.

Título: A adoção de práticas sustentáveis em bens pessoais de luxo: impacto nas motivações e intenções de compra, emoções e auto-identidade.

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1.1 Topic Presentation

Luxury is a subjective and controversial topic since it depends on each consumer's perceptions, which changes over time. As a result, it is difficult to come to an agreement on its definition (Christodoulides et al., 2021; Ko et al., 2019). However, many luxury brands use certain business strategies to be perceived as such by consumers. Some techniques include setting extremely high prices, manufacturing high-quality goods and connecting emotionally with customers (Holmqvist et al., 2020). In this sense, for many people, including scholars, a luxury product is one that is eccentric, exclusive, unnecessary, and one of a kind (Wang, 2022).

These characteristics have made, in recent years, the luxury industry the center of attention of activists, associations, governments, the media, and consumers who are increasingly concerned and focused on the topic of sustainability (Kapferer & Michaut-Denizeau, 2014; Ranfagni & Ozuem, 2022). Due to this growing concern for the environment, luxury companies have increasingly started to include social and environmental practices in their strategy and activities (Septianto et al., 2021). Nonetheless, it is important to analyze and understand consumer's behavior, perceptions, attitudes and thoughts regarding the new methods and products. Many authors have highlighted the fact that consumers are different from each other and, therefore, act and search for goods differently (Martín-Consuegra et al., 2019; Stathopoulou & Balabanis, 2019). Consequently, consumers have numerous ways of behaving concerning social and environmental issues. One option is to engage in more individualistic actions through green products purchase, for example. Another alternative is to embrace more collectivist behaviors by integrating into movements and organizations (Achabou & Dekhili, 2013). Furthermore, various studies conclude that specific factors can influence the choice and purchase intention of sustainable products. Starting with sociodemographic conditions, are considered variables such as gender, remuneration, and education (D'Souza et al., 2007). Additionally, other factors such as variety, aesthetics, components/materials, price, quality, and accessibility can also be considered, since sometimes consumers do not consider worth it to preserve sustainable and ethical attributes over practicality and functionality (Auger et al., 2008).

1.2 Academic and Managerial Relevance

1.2.1 Academic Relevance

There are several studies that researchers have done about luxury in parallel with sustainability over the years, standing out: the different techniques that can be adopted (Adıgüzel & Donato, 2021), the different perspective between the two concepts (Amatulli et al., 2021), the potential solutions for economic, environment and social challenges (Campos Franco et al., 2019) and the different attitudes held by customers (Ko et al., 2019).

In this regard, it is critical to understand the consumers' perception towards personal luxury goods manufactured sustainably. Some academics argue that there may be different perceptions and motives behind purchases, with some being more favorable than others. Therefore, some consumers may develop a positive predisposition towards this category of products and, as a result, demonstrate purchase intentions. On the contrary, the opposite can occur, in which consumers may be more doubtful about the products and fail to comprehend the interconnection between the two concepts (Park et al., 2022). Consequently, this dissertation is academically relevant as it will allow for better information and insights into consumers' perceptions, opinions, motivations, and decision-making processes regarding new production methods and goods.

1.2.2 Managerial Relevance

The research objective is to understand what sustainable actions luxury companies are adopting in their production processes along with the communication strategies, and what is the impact on consumers' perceptions. This way, brands will shape their business model, sales and marketing strategies, and product manufacturing to meet expectations. Thus, this analysis becomes relevant as it will provide hints to luxury companies regarding to what extent and circumstances sustainable practices should be used in their favor.

1.3 Problem Statement

The present research objective is to comprehend the impact of sustainability in the luxury industry, analyzing in each way different sustainable actions influences consumers' attitudes and purchasing decisions.

1.4 Scope of Analysis

Over time, the concept and purpose of luxury evolved, being present in multiple places and formats. Thus, nowadays, this industry is organized into nine categories, that can be classified as follows: personal luxury goods, luxury cars, luxury hospitality, fine wines and spirits, gourmet food and fine dining, art, luxury furniture and homewares, private jets, and yachts, and finally luxury cruises (Bain & Company, 2019).

Overall, this industry has grown greatly in the recent years, and it is anticipated that this trend will continue (Michel et al., 2022). This growing tendency is mainly because Asian consumers, especially Chinese, are increasingly looking for this type of product, being on the way of becoming the largest luxury market in the short or medium term. Added to the Asian phenomenon, is the importance and considerable weight that younger generations, namely Generation Z and Millennials, have been gaining and the increasing frequency of online purchases (Bain & Company, 2022). For these reasons, namely, the paradigm shift in the production of luxury goods, centered on the concern with sustainability and the changes in consumption patterns and in the profile of consumers, the dissertation focuses specifically on the luxury personal goods market.

1.5 Research Questions

For the dissertation to be consistent, six research questions will be investigated.

- **Research question 1:** What is luxury, and what makes it different from the rest of the products?

The luxury industry is quite different from the others, being guided by specific laws, rules, and motifs. Therefore, consumers' attitudes towards these products are likewise different and unique. In this sense, the question's objective is to identify and understand the characteristics that define luxury goods and how these goods differ from the others.

- **Research question 2:** Which features do consumers of luxury goods value the most?

Several factors influence the customer's decision process when purchasing the product. Thus, it is relevant to highlight the most important and persuasive ones. Hence, the aim is to understand whether consumers choose based on ephemerality, social standing, status and self-identity conveyed by the products.

- **Research question 3:** What type of sustainable strategies do luxury brands engage in?

The goal is to understand the strategies each luxury brand is accomplishing to become more sustainable and which companies are most committed to this objective, to present a benchmark between them.

- **Research question 4:** What are the attitudes and thoughts of consumers towards the more sustainable luxury production practices (recycling, upcycling, renting, selling second-hand items)? Will quality and the prestige of goods be perceived differently or even mitigated by the new products?

Luxury brands are increasingly seeking to implement more responsible and environmentally friendly manufacturing processes. Although it is an aspect highly requested by environmental associations, it is crucial to comprehend what consumers think of these practices. Among many attributes, one of the characteristics that consumers have very present in their minds when they think of luxury goods is the artisanal way in which products were manufactured, the high-quality materials and fabrics that were utilized, and the impeccable condition that they maintain after years of use. However, with the new production practices it is critical to know if the products will continue with the same features that they had for decades in the minds of consumers.

- **Research question 5:** What are consumer's purchase intention towards sustainable luxury products?

The question's purpose is to understand how interested and committed consumers are in this subject, while also elucidating the level of consumers' purchase intention in relation to novelty goods.

- **Research question 6:** What are the characteristics of potential consumers of luxury sustainable products?

Here, the purpose is to understand what kind of people search for, buy and care about whether luxury goods are sustainable. To achieve this, the plan is to characterize individuals by considering their demographic characteristics.

1.6 Methodology

To better respond to the aforementioned research questions, primary and secondary data sources were used.

Regarding secondary data, the objective was to analyze scientific studies previously elaborated and published in specific books or magazines and academic journals. Subsequently, the idea was to select the most important and relevant papers to make the thesis as concise and straightforward as possible.

Since the objective of the dissertation is to understand how new sustainable products are being manufactured and how consumers are reacting to recent offers, primary data was conducted. To achieve it, qualitative and quantitative research was carried out. Firstly, to obtain qualitative research in-depth interviews were conducted. The goal was to carry out interviews with consumers to obtain more insightful information regarding sustainable luxury products. Secondly, for the quantitative research, the intention was to elaborate an online questionnaire to stand out the different viewpoints of the consumers regarding the new methods of production and the characteristics of the products.

1.7 Thesis Organization

To develop a well-structured and consistent dissertation five chapters were elaborated. Hence, the objective is to start with the introduction, where it is presented the study's topic accompanied by the remaining information necessary for the development of the thesis. In the second chapter, a literature review was carried out, exposing the different opinions, scientific studies, and contributions previously done by several authors and writers, about the topic under analysis. Then, in the third chapter, the methodology chosen to conduct this project was explained, along with its contributions to the study. The following chapter carried out a thorough analysis of the results obtained and the presentation of their contribution to conducting the study. Finally, the fifth chapter concerns the main findings and conclusions.

2.1 Luxury Industry

2.1.1 What is Luxury?

Luxury has been present in civilization for hundreds of years and was initially observed in worship monuments such as temples and churches as a way of begging God for mercy through wealth sacrifice (Kapferer, 2012). Since the beginning, the consensual definition of this concept has been hard to reach, and even today it is revealed to be a very controversial topic (Wang, 2022). Nevertheless, most academics agrees that rarity, authenticity, and high prices are the essential characteristics of luxury goods (Fuchs et al., 2013).

Thus, according to Wang (2022) and Turunen et al., (2020), luxury items are superfluous and unnecessary and, consequently these aspects are frequently related to a phenomenon known as *luxury shame*, i.e., due to the perception that luxury products are prodigal, consumers feel as if they need to explain their purchases to others.

Traditionally, this range of goods and services is associated with upper-class and snobbish principles (Kastanakis & Balabanis, 2012). Therefore, some authors consider that luxury serves as a way for people to demarcate themselves from the lower classes (Han et al., 2010; Mazzocco et al., 2012) and ensure their position at the top of the social hierarchy (Kim et al., 2018).

For others, the motivations for luxury goods purchase are associated with psychological factors such as the desire for prestige and superiority, social integration, ostentation, and materialism (Christodoulides et al., 2021). This way, the more materialistic and ambitious for social status customers are, the more likely they are to have intentions to buy the products (Kim & Oh, 2022).

Alternatively, considering the thoughts of Kapferer (2012) and Ko et al., (2019), luxury is an absolute concept since it holds the ability to create a deep emotional connection with consumers, ultimately provoking a desire for products and brands and providing feelings of personal fulfillment and pleasure.

Evidently, given the great diversity of definitions of this concept, it seems necessary to establish a definition of luxury for this study, which will base on the different existing interpretations.

Thus, for this dissertation, a luxury good is considered and perceived by individuals as being hedonic, eternal, and rare, which confer status and prestige to the consumer who purchases it. In this way, luxury brands have the power to make consumers feel intense emotions when

buying the products (Shukla & Purani, 2012) and facilitate the consumers' search for identity and integration into social groups where they aspire to belong (Belk, 1988).

2.1.2 Luxury Evolution

While in earlier periods of history, ascension, wealth, and social position was granted by birthright, these statuses today can also be achieved through merit, qualification, and individual work (Kapferer & Valette-Florence, 2016). In fact, in the past, certain products such as wigs, make-up, and perfumes served as a way of differentiating social groups and distancing the aristocracy from the lower classes, that is, certain items were unattainable to underprivileged groups (Kapferer, 1997).

Indeed, what is currently happening is that people are increasingly seeking and desiring luxury all over the world, which has led to a paradigm shift: up until recently, luxury was only able to create social distinction in some countries, but today, this trend is present in cultures where it traditionally did not exist (Kapferer & Bastien, 2012). Nowadays, luxury is increasingly accessible and sought after by a vaster spectrum of consumers and is no longer exclusively associated with prosperous and influential individuals (Granot et al., 2013). In other words, globalization, the paradigm shift, and the democratization of luxury have contributed to making purchases of this type of goods increasingly obtainable to a widespread public and not just celebrities and the elite (Silverstein et al., 2008; Yeoman, 2010).

Despite this, over time some factors have remained recurrent in the luxury industry. Usually, in times of recession and economic crisis, most people live with significant cost containment and adopt more conscious behaviors of thoughtfulness and savings (Giesen & Pieters, 2019). Besides, the social disparities also become significantly evident at this stage (Cappelen et al., 2021). Despite that, even in unfavorable economic situations, luxury goods continue to be highly sought and desired, particularly by celebrities and upper-class individuals (Clifford, 2011). Since the Great Depression, there has been a recurring effect in low periods, which is known as the "*Lipstick Effect*." What often happens is that in periods of great stress and financial restraint, individuals contain themselves in their luxurious spending. Therefore, to maintain the emotions associated with the luxury goods acquisition, consumers replace the eccentric and luxurious purchases they usually make with more affordable products such as cosmetics, perfumes, and accessories. In this way, individuals try as best as possible to replicate the same feeling of pleasure and pampering they felt when purchasing more expensive goods by buying more modest items (David, 2020). Nevertheless, for this *effect* to result, the product must belong

to a prestigious brand, the purchase intention must be emotional and not functional, and it must necessarily require a financial sacrifice (Hubert & Mauss, 1981).

2.1.3 Luxury Business Model

In order to understand the luxury unique business model, it is necessary to establish specific conditions.

First, it is essential to point out that luxury is not premium, and it is not fashion. This industry is managed in a remarkably distinctive way and therefore applies its marketing laws, and not the traditional ones common to other businesses (Kapferer, 2016). However, many companies in other sectors, namely Apple and Nespresso, adopt the same marketing laws as luxury brands as an attempt to conquer a similar reaction from consumers. These rules, known as *luxury marketing anti-laws*, are fundamental in the luxury business model because they guarantee its elevation while maintaining the GAP between high awareness and limited access (Kapferer, 2012).

Thus, some of the *marketing anti-laws* are:

- Focus only on brand identity
- Communicate beyond the main target
- Communicate to dream and not to sell
- Always raise average price

While premium brands often compare themselves and justify why choosing their products is the best possible option, luxury does not. Luxury is a superlative concept and, therefore, cannot be compared. Furthermore, luxury communicates to build a dream and not simply to boost sales (Dubois & Paternault, 1995). Since, there are always people increasing their wealth, it is justified why the price of luxury goods should also increase. However, this strategy only works if the brands maintain their communication strategy and product quality (Kapferer, 2016).

In that regard, at times of lower demand, these brands prefer selling the so-called affordable luxury such as accessories, cosmetics, and perfumes (Wang, 2022) than lowering prices and implementing sales and discounts, as it happens in the fast fashion industry. On the contrary, when a good is highly sought, brands often stop selling it since it is crucial to preserve its exclusivity and limited accessibility. For these reasons, these brands need to maintain scarcity

and rarity, which sometimes clashes with shareholders' goals as it slows down the industry's growth (Kapferer, 2012).

Finally, according to Kapferer (2010) luxury market represents the "ordinary for extraordinary people and the extraordinary for ordinary people". Intrinsically to maintain this essence, the industry must combine its high awareness level and visibility among consumers with low market penetration and access restrictions. Only in this way luxury brands can maintain their status, because otherwise, if the products begin to be accessible to the entire population, the industry loses all its essence.

The luxury's hierarchy is another important consideration that aids understanding the business model singularity. However, it must be noted that once again the literature is divided.

For Kapferer (1997) luxury management depends on the interaction of four hierarchical levels (see Figure 1). Starting at the top of the pyramid – the *griffe* – the scholar classifies this type of product as being the creator's light as a way of maintaining the brand's aura. It is also known as the absolute luxury, that is, the one that has a more symbolic value and where access and available quantities are more restricted and limited. The next category concerns aspirational luxury. In this case, access is wider, but the quantities produced remain limited. As for the third level, mass production begins, with products such as cosmetics, accessories and textiles being offered. The profitability of this category is crucial because it will guarantee the investment needed for *griffe* products. This is often associated with affordable luxury, which for many is not considered truly luxury, despite being sold by well-known brands.

From another perspective, for Franck Vigneron and Lester W. Johnson (1999), the hierarchy is composed of four categories, known as: prestigious, premium brands, upmarket brands, and luxury brands (see Figure 2). For these authors, prestige is only achieved starting from premium brands, and its maximum exponent is gained in luxury brands. Additionally, it is expected that the quality and price of luxury brands will be superior to other categories and therefore more desirable by consumers (Turunen, 2015).



Source: own author elaboration.

Figure 1 - Luxury categorization by Jean-Noël Kapferer.



Source: own author elaboration.

Figure 2 - Luxury categorization by Franck Vigneron & Lester W. Johnson.

2.1.4 Luxury Performance

One of luxury goods' characteristics is that they are inaccessible to a large part of the population and their monetary value is too expensive for their functionality (Nia & Zaichkowsky, 2000). That said, in economic terms, a luxury good is usually characterized as having an income elasticity of demand greater than one. In other words, the increase in the quantity demanded of goods is greater than the increase in income, thus being a product mainly bought by people with more financial possibilities (Kemp, 1998).

However, in recent decades the luxury goods market has registered a paradigm shift and significant growth. In fact, despite the exception that occurred in 2020, resulting from the COVID-19 pandemic, the demand and desire for this type of goods has been increasingly recurrent, especially in emerging markets and younger generations (Bain and Company, 2022).

Like all the other businesses, the luxury industry suffered some consequences due to the impact of COVID-19 in the world. Nevertheless in 2021 the consumption of personal luxury goods surpassed the growth levels reported in 2019. Moreover, by 2025 this category is expected to exhibit annual growth rates up to 8% and it is estimated for the global market to reach up to €380b (Bain and Company, 2022; Michel et al., 2022).

2.1.5 Luxury Communication

As previously mentioned, the luxury business strategy differs from the rest of the market, and the same happens with its form of communication. When advertising its product, a luxury brand should focus on its ancestry, essence, and quality in order to nurture the dream (Kapferer & Tabatoni, 2011).

Currently, luxury brands announce and publicize new collections through social events and networks. Through the first format, brands carefully select which people are honorable to attend these events. In this way, luxury brands guarantee their exclusivity and demonstrate that not just any celebrity or wealthy person has the privilege of being a guest at these events but someone valuable enough to serve as a brand influencer (Kapferer, 2012).

Regarding social networks, companies have been focusing on the virtual aspect due to the increasingly engagement by consumers on these platforms. In this way, brands aim to capture customers' attention through the virtual world and develop deeper relationships with them (Kemper, et al., 2022). For this, luxury companies have enforced specific communication and marketing plans (Bain & Company, 2019). Taking Burberry as an example, one of the strategies implemented by the company was to have the public participate in the co-creation of content for a campaign in 2009 (Phan et al., 2011). Later on, several luxury brands have adopted similar practices to connect and capture the public's attention (Arrigo, 2018).

Through the virtual environment, consumers not only make their purchases but also demonstrate and brag to others about what they have managed to buy (Kemper, et al., 2022). However, there are some obstacles related to the media. The fact that it is difficult to perceive the piece's material, sense, and texture, makes the purchase more complex, especially in this industry where goods are not inexpensive (Kapferer & Bastien, 2012).

Due to these obstacles, companies have been striving to make their social networks more responsive to consumer needs, namely by incorporating audiovisual sensations, where consumers can perceive some features of the product, that facilitate the purchase decision. Thus,

with increasing investment in this area, luxury and fashion e-commerce is expected to grow to USD 149.34 billion by 2025 (Ornati & Kalbaska, 2022).

2.2 Sustainability

Unlike luxury, the issue of sustainability is relatively recent and is defined as “meeting the needs of current generations without compromising the ability of future generations to satisfy their own needs” (World Commission on Environment and Development, 1987). In addition, another common way of classifying the concept is through the theory of Triple Bottom Line (TBL), and in this case, a more entrepreneurial approach is taken (Johnson, 2009). Hence, it is established that companies’ sustainable practices must focus on social, environmental, and economic issues (Elkington & Rowlands, 1999).

As a result, enterprises have been adapting their production processes and final products following new ethical and responsible methods, guaranteeing the integration of diversification and inclusion principles (Mohr et al., 2022). To accomplish that, companies have begun to make thoughtful choices of raw materials and suppliers through, for example, the valorization of scarce materials and efforts to reduce the level of pollution (Kapferer & Michaut-Denizeau, 2014). In this way, industries ensure that ecosystems, populations, and workers are considered. Thus, not only do companies improve and develop their performance, but the overall economic position of the country also progress (Kumagai, 2020).

2.2.1 Luxury towards Sustainability

In recent years the luxury industry has been in the spotlight of sustainability, and several factors explain this event. Firstly, because the consumption of luxury goods is seen as unnecessary, being recognized as a symbol of consumerism, it is often associated with purchases related to elitism and craving for fame (Campos Franco et al., 2019; Christodoulides et al., 2021). Additionally, this industry is portrayed as being highly polluting, ending up harming the environment and biodiversity, subjecting animals to experimentations, eradicating unsold inventory and exploiting workers, particularly in underdeveloped countries (Kerr & Landry, 2017; Ranfagni & Ozuem, 2022).

As a matter of fact, it was in 2007 that through the World Wildlife Fund report, an approach between the two concepts, luxury and sustainability, emerged for the first time (Bendell &

Kleanthous, 2007). Since then, this topic has sparked discussions among researchers, and therefore, there is no concrete definition regarding sustainable luxury (Park et al., 2022).

Considering that luxury is associated with goods of extreme quality, rarity, superficiality, and exhibition and, in contrast, sustainability is related to moderation, unselfishness, and responsibility, the literature diverges concerning the compatibility of these two concepts (Amatulli et al., 2018; Osburg et al., 2022; Kim & Oh, 2022). Hence, in a more pessimistic view, scholars admit an antagonism between concepts because, due to previously described characteristics, consumers may be unconvinced about sustainable luxury products (Davies et al., 2012).

Inversely, from a positive perspective, luxury and sustainability can be perceived as compatible. The fact that some luxury attributes are scarcity and durability, allows consumers to be more conscious and thoughtful, avoiding waste and protecting the environment. Furthermore, this optimistic approach implies that consumers may amplify their purchase intentions and willingness to pay for these products categories since they can be perceived as of extreme artisanal quality and value (Amatulli et al., 2021). Hence, it can be explained by the fact that both luxury and sustainability focus on rarity. That is because luxury products are manufactured with scarce materials and in an artisanal way, and because sustainability focuses on preserving the environment, limiting the unnecessary use of materials (Amatulli et al., 2018).

Consequently, luxury companies encourage green and golden manufacturing since they produce long-lasting goods in limited quantities that allow minimal waste (Amatulli et al., 2018). Nevertheless, it is necessary to consider that even though some products are more sustainable and environmentally friendly, they still must incorporate materialistic attributes in order to stimulate the desire and aspiration in consumers (Achabou & Dekhili, 2013; Auger et al., 2008)

2.2.2 Sustainable Practices in the Luxury Industry

Over the last few years, the *circular economy* approach, which promotes the reuse, reduction, recovery, and recycling of materials and products (Abdelmeguid et al., 2022), has been increasingly implemented by industries to achieve sustainable development worldwide (Adıgüzel & Donato, 2021).

In this sense, the luxury industry is no exception, and, like the others, it has also been applying this concept in its production practices (Schemken & Berghaus, 2018). In this way, new luxury firms have incorporated the circular approach into their business strategies, while established

luxury brands have opted to produce just a few niche-specific sustainable product lines (Adıgüzel & Donato, 2021). Despite embracing several policies, such as the renouncing of the use of animal skins, the low emission of polluting gases, and the selection of trustworthy suppliers, it is through this circular economy approach that luxury companies can achieve goals more efficiently (Caïs, 2021).

Regarding the *recycling technique*, this process consists in using recycled materials to produce new products (Kamleitner et al., 2019). For this, it is necessary to disintegrate the materials, which requires water and energy usage. Besides, not all the material is utilized, as a part of it is considered rubbish (Wilson, 2016).

Another feasible process is *upcycling*. This procedure is relatively new and, in this case, brands instead of throwing away unwanted or useless material, transform them into new products, providing an extra artisanal feel to upcycled pieces (Adıgüzel & Donato, 2021). In this procedure, there is no downgrading of materials. What happens is that materials that were not previously used, are simply utilized on new products. Therefore, it is necessary to employ imagination and uniqueness to change the product into something valuable rather than using a considerable amount of water and energy to remodel the piece, which makes this process by itself more sustainable (Wilson, 2016).

Another proposed possibility is through *renting* and *selling second-hand products* (Caïs, 2021; Christodoulides et al., 2021) By renting, companies promote the sale of usability rather than the product itself, thus avoiding overconsumption and waste. In this way, the company continues to hold ownership of the product and manages to have, at the same time, the ability to grant temporary access of the product to various consumers who want to rent it over different periods (Frenken & Schor, 2017).

The second-hand luxury market has registered an exorbitant growth rate in recent years and has become more reachable to more and more individuals. Therefore, it seems a reasonable way to encourage people to sell the products they no longer use so they can be back on the market and satisfy the needs of other individuals (Bain & Company, 2022). In this case, the companies and individuals that sell their goods are ceding their ownership of the product and granting it to third parties (Cervellon et al., 2012)

Overall, this whole *circular economy* principle is an impressive form of conscious and sustainable actions, as it encourages thoughtful consumption and production, safeguarding natural resources.

2.2.3 Sustainable Practices adopted by Luxury Brands

Luxury brands have realized the potential opportunities that sustainable practices can generate. Thus, it is crucial to understand how and to what extent brands have implemented various sustainable and environmentally friendly techniques in the production process (Septianto et al., 2021). Notwithstanding, it is relevant to point out that through empirical evidence not all luxury brands communicate and apply these new practices similarly (Kaur et al., 2021).

For example, Gucci has made countless efforts to become a more sustainable, responsible, and conscious company. Therefore, some practices must be highlighted like the use of 100% recyclable packaging made from different materials such as corn, bamboo, and cotton (Narayanan, 2015), the etiquette regarding the sustainability of the products (Wadera & Kaur, 2019), the utilization of *liquid wood*, a biodegradable substitute to plastic, used in some ecological sunglasses (De Angelis et al., 2017) and finally a sustainable shoe sole made using bioplastic (Narayanan, 2015). In terms of a circular approach, the brand chose to reuse materials such as leather and fabrics in its production process, assuming the name Gucci-Up (Gucci-Up, 2021). Gucci has also accomplished other objectives, such as being one of the first luxury companies to control CO₂ emissions (Wadera & Kaur, 2019), forgoing the use of paper from forests at hazard of deforestation, and ceasing the use of methods that could endanger the health of its employees (Narayanan, 2015).

As for Stella McCartney, she neglects to utilize animal skin in her products due to her commitment to a vegan lifestyle. Consequently, sustainable and alternative materials are used to create goods, although they often are considered to have lower quality when compared to fur (Kapferer, 2012). Thus, among the alternatives that the company has implemented are the bag's production from recycled polyester and water bottles (Adigüzel & Donato, 2021) and the substitution of leather with a sustainable material called *mylo* that was created in a laboratory using mushroom roots. It is also notorious the preference to use sustainable material *econyl* made from plastics, synthetic fabrics, and disposable fishing nets. Furthermore, in terms of the circular approach, Stella McCartney was the pioneer luxury company to enter the second-hand market, creating a collaboration between consumers and brand The Real Real (Niemtzow, 2018).

Likewise, brands such as Prada, Hermès, Chanel, Burberry, Cartier, and Yves Saint Laurent, among others, have made immense efforts in their activities aimed at the well-being of workers and the environment. For example, Prada has also created product lines with regenerated materials (Prada, 2020) and launched a website to communicate and publicize the actions and

projects about the company's corporate and social responsibility (Amatulli et al., 2018). Chanel, in turn, has been more careful about the suppliers it chooses and the materials it uses (Campos Franco et al., 2019). Furthermore, in 2015 the brand tried to adopt measures from the Sustainable Development Goals (Wadera & Kaur, 2019). As for Cartier, by becoming a member of the responsible jewelry board it ensured that materials such as gold and diamonds were extracted in a dignified manner (Achabou & Dekhili, 2013). As far as Hermès and Yves Saint Laurent are concerned, the brands have taken advantage of some recycled, discarded, and unused materials to use in the new collections (Achabou & Dekhili, 2013). Finally, Burberry (Wadera & Kaur, 2019) has been striving to reduce its environmental impact by cooperating with associations such as Greenpeace.

Below are some concrete examples of these practices that brands have been implementing.



Figure 3 - Examples of sustainable luxury products: from left to right - Stella McCartney bag made from mushroom roots; 100% recyclable packages used by Gucci; Prada bag made from abandoned fishing nets.

To conclude, some luxury brands have demonstrated significant efforts concerning materials, carbon emissions, and working conditions associated with their production process. However, there are some strongly secretive brands about the policies they implement and its public communication.

2.3 Consumer Behavior regarding Luxury Goods

Consumers look for, choose, and purchase products for a variety of causes, motives, and justifications. Some of these factors are sociodemographic and include variables such as age, gender, and income. On the other hand, there are additional types of variables, namely economic or social, which can also influence the decision-making process (Milfont & Markowitz, 2016). In addition, it must also be included in this decision process other aspects such as purchasing power, purchase frequency, the reason for purchase, personal aesthetic taste, and product

characteristics. Taking this into account, some consumers buy luxury goods frequently, others sporadically; some buy for quality, exclusivity, and timelessness; others for materialistic, exhibitionist, and aesthetic reasons and there are still others that seek goods based on the level of responsibility and consciously with which they were produced (Kim & Oh, 2022).

Regarding the reasons for buying luxury goods, these are essential to understand the decision-making process that the consumer goes through. Consequently, research suggests that either internal or external motivations are behind the purchase motive. Starting with external motives, these are intrinsically related to the demonstration of wealth, status, and power, and are often associated with Veblen's Theory of Conspicuous Consumption (Ko et al., 2019). On the other hand, the purchase motivated by the internal stimulus is related to the satisfaction of personal taste and with the customer's fulfillment (Han et al., 2010; Wang 2022) and, in this case, this motivation is often associated with the self-concept theory (Gil et al., 2012).

Regarding the type of luxury products sought and hence the characteristics of the different consumer segments that purchase them, scholars explain that lower-class people who are not used to buying and owning luxury goods usually choose the most extravagant, remarkable, and seasonal goods. That is because these people want and sense the need to prove that they can afford and own these types of products. On the other hand, more frequent consumers of luxury goods choose more discreet, vintage, and iconic items to distance themselves from the masses because they don't want to be perceived as such (Dubois et al., 2001).

2.3.1 Consumer Behavior regarding Sustainable Luxury Goods

Nowadays, people are looking for more environmentally friendly ways to live their daily lives. Individuals are trying harder to use renewable energy sources, buy more organic food, and wear eco-friendly clothing (Kumagai, 2020). As previously mentioned, the younger generations, are more ethically and environmentally aware and, therefore, more likely to implement these practices daily. Consequently, as these are the luxury consumers of the future, luxury brands must support these causes (Mohr et al., 2022; Danziger, 2019).

However, the literature is divided regarding the behavior of different consumers toward sustainable luxury products. Some researchers claim that these more ecological products are an excellent way to captivate consumers' awareness precisely because they are unique goods. Generally, this uncommon product tends to be associated with exclusivity and uniqueness (Amatulli et al., 2021). Thus, when purchasing these items, consumers demonstrate their wealth (Kim & Oh, 2022), and even create a good image and reputation for themselves. In addition to

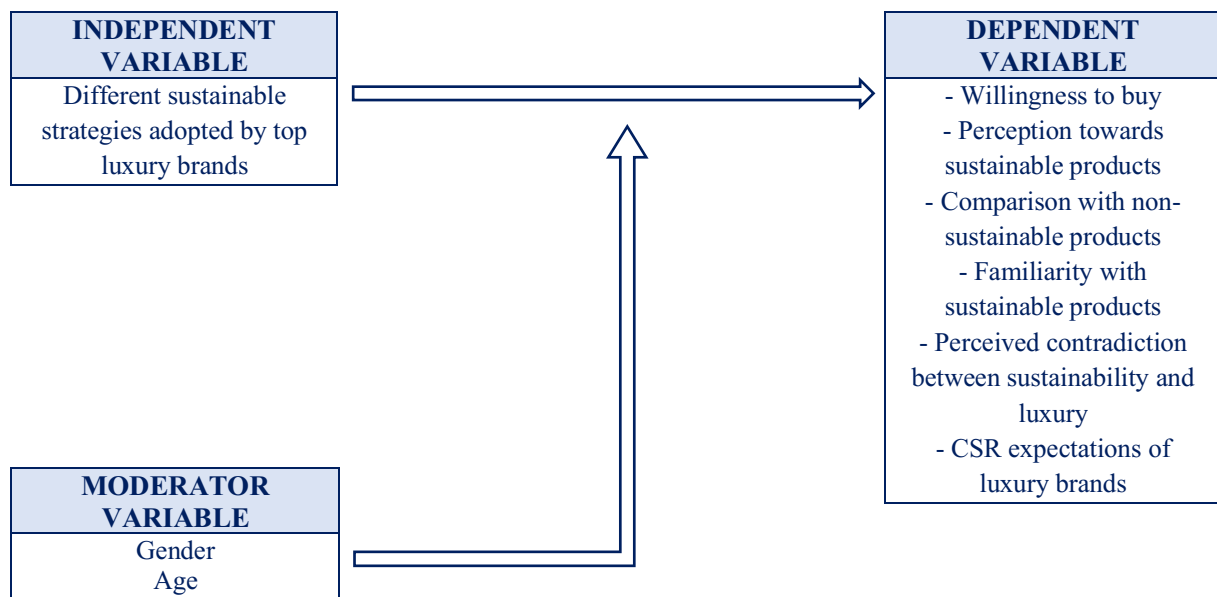
these reasons, sometimes the purchase of this type of product is intrinsic to the feeling of guilt, which can be mitigated if consumers opt for sustainable luxury products. Other reasons that may be associated with choosing sustainable luxury products are feelings of empathy and responsibility for society and the environment (Granzin & Olsen, 1991).

Thus, the willingness to pay for sustainable luxury products grows as they are associated with various reasons, emotions, and sensations that are usually the consumer's trigger to purchase luxury goods (Amatulli et al., 2021). However, more environmentally conscious and responsible consumers are willing to pay a higher price for a sustainable good (Gam et al., 2010).

From another perspective, some factors may cause some skepticism among consumers concerning these products. Despite the remarkable growth of consumers concerned about the environment, it turns out that many individuals end up not putting these concerns into practice. Notwithstanding claiming to be concerned about the environmental situation, the efforts and sustainable attitudes they put into practice in their day-to-day lives are scarce (Park et al., 2022). Scholars highlighted the limited variety of sustainable products and the less attractive aesthetic appearance. Additionally, some customers are unwilling to sacrifice some utilitarian qualities in favor of moral qualities (Auger et al., 2008). However, although customers might doubt about products that have already been used or that are built from recycled materials, this feeling may disappear if brands demonstrate that these new production formats do not harm their quality, prestige, and durability (Adıgüzel & Donato, 2021).

3.1 Conceptual Framework

The objective of this research is to understand to what extent current and potential consumers intend to purchase personal sustainable luxury products according to their attitudes and perceptions. In addition, moderating effects such as age and gender will also be considered for this analysis.



Source: own author elaboration.
 Figure 4 - Conceptual framework.

3.2 Methodology

3.2.1 Research Method and Limitations

The collection of primary data was essential to complete this investigation, specifically through in-depth interviews for the qualitative research and an online experimental questionnaire for the quantitative analysis. Both research formats have several advantages and limitations, but they are indispensable for this study to be complete and detailed.

Firstly, regarding qualitative research, interviews are particularly significant since through the conversation with the interviewees, it is possible to discover their opinions, convictions, perspectives, and interpretations on specific subjects, considering their personal experience (Mack et al., 2005). However, it takes some time to obtain the necessary and enriching results,

and usually, this research format is time-consuming, both in terms of preparing and conducting the interview as in data processing (Boyce & Neale, 2006)

In the case of the online questionnaire, this aspect of quantitative research is crucial for this study. Due to technological evolution, the dissemination of online questionnaires is becoming more straightforward, faster, and practical. Therefore, it is feasible to obtain a significant and diverse sample in a relatively short time. Still, explaining misunderstandings or unclear instructions is not manageable through this format, and some people might be skeptical about answering some personal questions online, which might interfere with the response rate (Evans & Mathur, 2005).

3.3 Online Experimental Survey

3.3.1 Questionnaire Design

The questionnaire was divided into six separate sections and was developed to measure as many opinions, beliefs, and preferences as possible.

Therefore, in the first section of the questionnaire was firstly presented a small definition of what is considered luxury personal goods since this concept is subjective. Through this definition, respondents were capable to hold a better understanding of which products should be considered luxurious, and thus avoid misunderstandings. Subsequently, were asked three screening questions in order to direct respondents to the right section of the questionnaire.

1. Do you own or buy personal luxury goods?
2. Do you have any interest regarding luxury products, or do you wish to own luxury goods someday?
3. What is your gender?

The screening questions were thought and elaborated to lead the survey as follows:

- Individuals who answered **yes** to the first screening question were forwarded to the third question concerning gender. Afterward, the respondents moved on to the second section of the survey.
- As for individuals who answered **no** to the first screening question, they were referred to the second screening question. In this case, respondents who answered **yes** were directed to the third question about gender and later to the fourth block of the questionnaire about sustainability. On the other hand, individuals who answered **no** to

the second question were conducted to the third question and later to the last section of the questionnaire, about demographic questions.

Focusing on the first case, the individuals who moved on to the second block of questions answered to topics related to the *consumption habits of luxury products*. In this section, the main objective was to understand the level of interest of consumers in luxury goods, which was the latest product purchased/received (e.g., “*clothes, jewelry, watches, shoes, handbags*”), for whom they bought the product, how much it cost, how often they buy this type of goods, and which luxury brands they own. All the items were adapted from own author source. Except for the question about the level of interest, which was asked using the net promoter score, all the remaining questions were made using the multiple-choice format, where only one answer was allowed.

After completing this block, these respondents moved on to the third section, which concerns *luxury consumption motives*. For this section, two items about social consumption were adapted from Stathopoulou & Balabanis (2019). Then two statements regarding class and status were adapted from De Angelis, Adıgüzel & Amatulli (2017). And finally, three items concerning perceived ephemerality were adapted from De Angelis, Adıgüzel & Amatulli (2017) and finally as for value-expressive, the three items were adapted from Schade, Hegner, Horstmann & Brinkmann (2016). For all sentences, (e.g., “*I own luxury products because they last forever*”) respondents had to assess their level of agreement using a five-point Likert scale (1- “Strongly disagree” to 5- “Strongly agree”).

The fourth section was intended to assess *consumers sensitivity to sustainability*. In this block, were included four items (e.g., “*I am in favor of awarding a penalty for products negatively impacting the environment*”) adapted from Kapferer & Michaut-Denizeau (2014). In this case, the respondents also had to assess their level of agreement using the same five-point Likert scale.

At this point in the questionnaire, it is essential to mention that the second, third, and fourth blocks contain variables that only helped to measure consumers' general perceptions of the luxury industry and consumption habits for these superfluous goods, as well as their opinions about the sustainability concept. Therefore, in the following sections, independent and dependent variables for this study are assessed.

Starting with the independent variable, in the fifth block an *experimental design* was elaborated where were presented a few luxury personal products that were produced sustainably. Since I wanted to assess the perceptions and likelihood of purchasing sustainable luxury products, I created six stimuli related to three sustainable practices. These practices were chosen based on a previous analysis regarding which strategies were being implemented by top luxury personal goods brands. To this end, these stimuli were made recreating product ads - a recycled luxury product for men, a recycled luxury product for women; a men's upcycled luxury product, a women's upcycled luxury product; a men's luxury product made from alternative sustainable materials, a women's luxury product made from alternative sustainable materials – so that according to their gender, respondents were randomly exposed to one of the three scenarios. That is, to make the questionnaire dynamic and somewhat personalized, there was a match between these stimuli and respondents’ gender. Only one of the three scenarios — a male/female luxury good that was recycled, upcycled, or created using alternative sustainable materials — was shown for the person who answered "male/female" to the third screening question.

Below are the news presented in the survey.

Recently, the world-renowned luxury brand, Prada, launched a whole collection, made using recycled materials to reduce the environmental impact. Below you can see one of the examples of this collection, made through a material generated from recycled plastic collected in the ocean, fishing nets and textile fibers.



Recently, the world-renowned luxury brand, Prada, launched a whole collection, made using recycled materials in order to reduce the environmental impact. Below you can see one of the examples of this collection, made through a material generated from recycled plastic collected in the ocean, fishing nets and textile fibers.



Recently, the world-renowned luxury brand, Gucci, launched a whole collection, made using alternative sustainable materials in order to reduce the environmental impact. Below you can see one of the examples of this collection, made through regenerated materials such as fish nets, carpets and other scarps.



Recently, the world-renowned luxury brand, Stella McCartney, launched a whole collection, made using alternative sustainable materials in order to reduce the environmental impact. Below you can see one of the examples of this collection, made through root structures of fungi (for example mushrooms) in replacement of fur.



Recently, the world-renowned luxury brand, Louis Vuitton, launched a sneaker collection, made using textiles and materials that were not used in the production of past collections, in order to prevent the waste of resources and reduce the environmental impact. Below you can see one of the examples of this collection, known as LV Trainer Upcycling.



Recently, the world-renowned luxury brand, Stella McCartney, launched a whole collection, made using textiles and materials that were not used in the production of past collections, in order to prevent the waste of resources and reduce the environmental impact. Below you can see one of the examples of this collection:



Figure 5 – Stimulus presented in the survey.

Therefore, it was possible to evenly evaluate the three distinct techniques and understand consumers' attitudes and perceptions towards those products. I opted to just manipulate these three types of sustainable practices since these were the ones that luxury brands were more transparent about in their communication. As the brands were not so explicit concerning the second-hand market or renting, I decided to instead assess the impact of these two practices in the interviews that were conducted afterwards.

After participants were exposed to the stimulus, some dependent variables were evaluated. Firstly, several questions about attitudes and perceptions toward sustainable luxury products were asked, naturally taking into account the products presented in the previously given scenario. Again, respondents had to indicate their level of agreement with each item on a five-point Likert scale.

Firstly, the *attitudes towards sustainable luxury personal products* were assessed. Two items concerning willingness to buy, and three items related to the comparison between sustainable and unsustainable luxury products were used. Additionally, were also displayed six items linked to perceptions of sustainable luxury products (adapted from Kamleitner, Thürridl & Martin, 2019).

Posteriorly were assessed the *consumers' perceptions of sustainable luxury personal products*. For such, were adopted three items from Adıgüzel & Donato (2021), two items from Kapferer & Michaut-Denizeau (2014), and lastly two items from De Angelis, Adıgüzel & Amatulli (2017). These statements were intended to measure respectively individuals' familiarity with sustainable products, their perception of the compatibility between luxury and sustainability, and, finally, their expectations regarding the CSR of luxury brands. The following table reveals the respective constructs, items and sources used for this study.

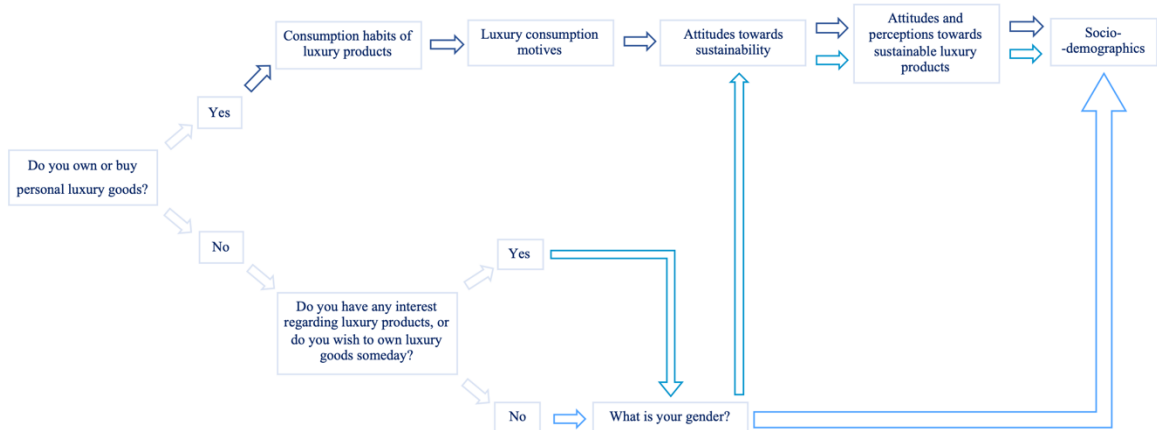
CONSTRUCT	ITEMS	SOURCE
Consumption habits of luxury products	How would you classify yourself in terms of interest in luxury products? How many luxury products do you think you own? What was the last product you bought or received? For whom did you buy it for? How much did it cost? How often do you buy luxury products? Which of the following luxury brands do you buy or own?	Own author
Social consumption	I own luxury items to satisfy my personal needs and not as an attempt to make an impression on other people Social standing is an important motivator for my luxury consumption	Stathopoulou & Balabanis (2019)
Class and status	I own luxury products because they convey status to its clients I own luxury products because they endow class to those who use it	Kapferer & Valette-Florence (2016)
Perceived ephemerality	I own luxury products because they can be worn for years and years and never go out of fashion I own luxury products because they can be worn and passed down from generation to generation I own luxury products because they last forever	De Angelis, Adıgüzel & Amatulli (2017)

Value-expressive	I own luxury products because they are an instrument of my self-expression I own luxury products because they play a critical role in defining my self-concept I own luxury products because they help me establish the kind of person I see myself to be	Schade, Hegner, Horstmann & Brinkmann (2016)
Consumer's sensitivity to sustainability	I am concerned about environment degradation I am in favour of awarding a penalty for products negatively impacting the environment During elections, issues regarding the environment are instrumental in my choice of candidate I am ready to boycott a company that does not comply with social and environmental regulations I often talk about pollution and the environment with my family, children, friends	Kapferer & Michaut-Denizeau (2014)
Willingness to buy	I would consider purchasing this sustainable luxury product instead of a similar but unsustainable luxury product I would consider purchase this luxury product even if it is at higher prices than "typical" luxury products	Own author
Perception towards sustainable products	I think this product is original This product surprised me I would feel conscious /environmentally friendly with this product I believe I would feel glamorous with this product I believe I would feel satisfied with this product I believe I would want to brag myself to others about this product	Kamleitner, Thürridl & Martin (2019) and own author
Comparison with non-sustainable products	I believe the quality of this product is similar to a non-sustainable product I believe the prestige of this product is similar to a non-sustainable product I believe the durability of this product is similar to a non-sustainable product I believe the timelessness of this product is similar to a non-sustainable product	Own author
Familiarity with sustainable products	I am familiar with recycled luxury products I am familiar with upcycled* luxury products * (production of pieces through the usage of textiles and materials that would otherwise be unused and considered waste) I am familiar with luxury products made from alternative sustainable materials, as for example, substitute materials for plastic	Adıgüzel & Donato (2021) and own author
Perceived contradiction between sustainability and luxury	Luxury and sustainable development are contradictory Luxury has no future in a sustainably driven world	Kapferer & Michaut-Denizeau (2014)
CSR expectation of luxury brands	Luxury brands have to protect endangered species It is important for luxury brands to use recycled packaging Luxury brands must make efforts to reduce carbon emission	De Angelis, Adıgüzel & Amatulli (2017)

Source: own author elaboration

Table 1 - Questionnaire items

Finally, in the sixth and last section of the questionnaire, demographic questions were asked, such as nationality, age, level of education, professional occupation, marital status, and net monthly income. Most of the questions were made using the multiple-choice format, where it was only possible to select one option. For a better understanding of the specificities of the questionnaire, the following diagram depicts its structure.



Source: own author elaboration.
Figure 6 - Survey diagram.

3.3.2 Pilot Study

Due to the various specificities of the questionnaire, a pilot study was carried out on November 10, 2022, to understand whether the questionnaire was working correctly. About 18 responses were collected and naturally not accounted for in the main study. After gathering these responses, a conversation with the respondents was established to ensure that everything was correct and unambiguous in the survey. Subsequently, the necessary changes were made so that the questionnaire was ready to be released.

3.3.3 Main Study

The questionnaire was elaborated using the Qualtrics software and shared through social networks, namely Facebook, Instagram, and LinkedIn. The survey launched on November 12, 2022, and responses were collected until November 21, 2022. This survey was available in English and Portuguese to obtain the maximum number of answers possible. In this sense, was gathered a totality of 437 responses, of which 323 were completed.

3.4 In-depth Interview

To carry out the interviews, five people with different backgrounds, ages, and gender were selected, but with one element in common: their passion for luxury. Through these interviews was possible to acquire insights that were not feasible to capture with the online questionnaire, specifically about second-hand sales and renting techniques. The five interviews lasted around

one hour and a half each, and a script was made, in order to avoid discrepancies. In this way, the interviewees were questioned about certain subjects, which are presented below:

<p style="text-align: center;">Luxury consumption</p>	<ol style="list-style-type: none"> 1. What does luxury mean to you? What would be the one definition of luxury for you, if you had to give one? 2. What luxury personal goods do you own and from which brands? 3. How was your experience with those brands? 4. Do you purchase luxury products out of need/practicality, or out of pleasure/ emotion? 5. How do you feel when you purchase luxury goods? 6. Do you prefer luxury products over fast-fashion products in certain categories? What are these categories? 7. Typically, what kind of personal luxury products are you looking for? 8. Do you usually look for new/recent luxury personal goods?
<p style="text-align: center;">Sustainability concern</p>	<ol style="list-style-type: none"> 1. Do you adopt environmentally friendly behaviors in your daily life? If yes, indicate which 2. Do you consider yourself a sustainable/conscious/environmentally friendly consumer? How? 3. Do you intend to make more thoughtful and sustainable purchases in the future?
<p style="text-align: center;">Knowledge and purchase intention regarding luxury sustainable products</p>	<ol style="list-style-type: none"> 1. Are you aware of these sustainable techniques/products that luxury brands have been implementing/producing? 2. What is your opinion about these practices and consequently about the products? 3. Would you be willing to buy this type of product instead of an unsustainable luxury product?

Source: own author elaboration.

Table 2 - Guide for the in-depth interviews carried out with consumers.

4.1 Online survey

4.1.1 Sample Characterization

To perform a more insightful analysis, the 323 participants were categorized into three distinct groups considering their level of interest in personal luxury products.

Therefore, 43.65% (n = 141) of participants were categorized as *luxury owners* since they were the ones who mentioned that they possessed luxury products. About 27.25% (n = 88) were considered *luxury admirers* because despite not having any personal luxury goods, they showed an interest and desire to have them someday. Finally, the remaining 29.10% (n = 94) who did not have luxury goods or showed any kind of interest in them were classified as *luxury disinterested*. After the demographic data analysis, it becomes evident that there are more female participants in the three participant groups than male participants. In the case of *luxury owners*, the percentage of women was 63.1%, followed by 70.5% in the group of *luxury admirers* and 61.7% in the case of *luxury disinterested*. Regarding nationality, there is great predominance of Portuguese participants in the three groups (LuxuryOwner = 86.5%, LuxuryAdmirer = 85.2%, LuxuryDisinterested = 92.6%). The 18 to 25 age group stands out the most among all three segments (LuxuryOwner = 47.5%, LuxuryAdmirer = 67.0%, LuxuryDisinterested = 39.4%), with the 46 to 55 age group being the second most significant (LuxuryOwner = 21.3%, LuxuryAdmirer = 19.3%, LuxuryDisinterested = 30.9%). As for the level of education, the groups are unanimous, with a bachelor's degree being the most significant (LuxuryOwner = 61.0%, LuxuryAdmirer = 58.0%, LuxuryDisinterested = 48.9%). Regarding professional status, 58.9% of *luxury owners*, 43.2% of *luxury admirers*, and 71.3% of *luxury disinterested* are full-time workers, with a significant percentage of *luxury admirers* being exclusively students (37.5%). Again, there is a pattern across the three categories where most respondents are single (LuxuryOwner = 46.1%, LuxuryAdmirer = 68.2%, LuxuryDisinterested = 48.9%) or married (LuxuryOwner = 33.3%, LuxuryAdmirer = 25.0%, LuxuryDisinterested = 35.1%). Finally, almost 90% of *luxury disinterested* and 85% of *luxury admirers* receive up to €2000 per month, while 11.3% of *luxury owners* receive more than €3000 per month, indicating that this last group is the wealthier (see Appendix C for more details).

4.1.2 Outliers' Analysis

Before starting the data analysis, a multivariate analysis to detect any outliers was performed. Through the Mahalanobis test, the distances were evaluated using $p < 0.001$. For the study to be as trustworthy as possible, all variables with significance < 0.001 must be omitted. However, since this did not happen in this analysis, it is concluded that there are no outliers.

4.1.3 Scale Reliability Analysis

Although the scales used in the questionnaire were adapted from the literature, it is essential to verify their reliability to obtain the most reliable results possible. Thus, the *reliability analysis* was performed for all scales, as demonstrated in the table below:

	NR OF ITEMS	CRONBACH'S ALPHA (α) / CORRELATIONS (ρ)	COMMENTS
Social consumption	2	$\rho = 0.103^*$	Items were analyzed individually
Class and status	2	$\rho = 0.607^*$	-
Perceived ephemerality	3	$\alpha = 0,727$	-
Value-expressive	3	$\alpha = 0,851$	-
Consumer's sensitivity to sustainability	5	$\alpha = 0,808$	-
Willingness to buy	2	$\rho = 0.457^*$	-
Perceptions towards sustainable products	6	$\alpha = 0,871$	-
Comparison with non-sustainable products	4	$\alpha = 0,866$	-
Familiarity with sustainable products	3	$\alpha = 0,871$	-
Perceived contradiction between sustainability and luxury	2	$\rho = 0.572^*$	-
CSR expectations of luxury brands	3	$\alpha = 0,883$	-

Note: $*p < .05$; $** p < .01$; $*** p < .001$

Table 3 - Scale reliability analysis

For the **social consumption** construct a *reverse code* was made because there was a mix of positive and negative wording between the items. After this recoding, the correlation reached the low value of 0.103 and therefore the items were analyzed separately.

4.1.4 Main Results Analysis

Because the consumers of the future are Millennials and Generation Z, as mentioned in the second chapter, and because there are differences in behavior and purchase intentions between genders (Stokburger-Sauer & Teichmann, 2013), the analysis of all research questions was carried out considering participants gender and age.

- **Research question 2: Which features do consumers of luxury goods value the most?**

To answer this question, it is interesting to firstly analyze the consumption habits of the participants who own luxury personal goods, which in the case of this sample correspond to 43.7% (n = 141). Of these, 50% of men and 46.1% of women were aged between 18-25 years. First, these individuals were asked about their level of interest in luxury personal goods, whose average reached, on a scale of 1-10 (1 - not at all interested; 10 - very interested), 6.46 in the case of men and 6.42 in the case of women. Then, with the most significant percentages, 36.5% of men and 44.9% of women claimed to own between 2 and 4 luxury products. When asked about the last product purchased/received, there was a discrepancy in the responses, as 46.2% of men mentioned that the product was a watch while 46.1% of women mentioned that it was a bag. It should be noted that, in the following question, where they were asked about the recipient of this product, 61.5% of men and 53.9% of women reported that the purchase was made for themselves. Regarding the price of these products, it was possible to conclude that the majority (50% of men, 61.8% of women) purchased items that cost between €300 and €800. However, there is a significant discrepancy in the value above 2801€ in which men (11.5%) clearly spend more than women (1.1%). Regarding the frequency of purchase of these goods, practically half of the individuals (50% of men and 48.3% of women) stated that they buy this type of goods sporadically. Finally, when asked about brands, women mostly consume products from Burberry (27%), Louis Vuitton (22.5%), Dior (22.5%), Gucci (21.3%) and Chanel (15.7%) and while men consume more products by Omega (13.5%), Hermès (11.5%) and Rolex (11.5%) than women. Also noteworthy is the relevance of the *other* option in this question, where brands such as Prada (8.1% women, 11.5% men), Carolina Herrera (8.1% women, 3.8% men), among others, were mentioned (Appendix D). Finally, through the chi-square test, except for questions about the quantity of products and which other types of brands respondents own, there is a statistically significant difference between genders.

	Sig.
How many luxury products do you think you own?	$p = 0.189^*$
What was the last product you both or received?	$p < .001^{***}$
For whom did you bought it for?	$p < .001^{***}$
How much did it cost?	$p < .001^{***}$
How often do you buy luxury products?	$p < .001^{***}$
Which of the following brands do you own? (Gucci, Louis Vuitton, Chanel, Hermès, Rolex, Dior, Omega, Burberry)	$p < .001^{***}$
Which of the following brands do you own? (Other)	$p = 1.000^*$

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 4 – Chi-square test.

To finally answer the question a two-way ANOVA was performed for the first four constructs. To begin, the response means achieved in each item of each construct were analyzed. In the case of *social consumption*, the items were analyzed separately, as state before. Regarding item one (“I own luxury items to satisfy my personal needs and not as an attempt to make an impression on other people”) of *social consumption*, gender ($M_{\text{Female}} = 4.20$, $M_{\text{Male}} = 3.73$, $F(1, 130) = 3.697$, $p = .057$), age ($F(5, 130) = 1.789$, $p = 0.120$), and the interaction between them ($F(4, 130) = 0.957$, $p = 0.434$) did not revealed a significant effect regarding the reasons for the luxury purchase. In addition, on average women demonstrate it in a slightly superior way than men, who buy luxury goods essentially for personal satisfaction ($M_{\text{Female}} = 4.2$) over men ($M_{\text{Male}} = 3.7$). In the case of the second item, the conclusions are somewhat similar to those made for item one. It was concluded that neither gender ($M_{\text{Female}} = 2.54$, $M_{\text{Male}} = 2.62$, $F(1, 130) = 0.580$, $p = 0.448$), nor age ($F(5, 130) = 1.317$, $p = 0.261$), nor the interaction between them ($F(4, 130) = 0.353$, $p = 0.842$) has a significant effect on the fact that social standing is or is not an important motivator for their luxury consumption.

As for *class and status*, we concluded that age does not have a significant effect on the perception of class and status conveyed by personal luxury goods ($F(5, 130) = 0.416$, $p = 0.837$), but gender, in turn, causes an effect ($F(1, 130) = 10.784$, $p = 0.001$) on the dependent variable. Therefore, the difference between gender significantly differs the result of this construct, i.e., considering the same age group (36-45 years old) for both genders, while in this group the average reached by men was the highest ($M_{\text{Male}} = 3.3$), in the case of women it was the lowest

($M_{\text{Female}}=1.5$). However, there is no significant interaction between the two variables and, together, they do not cause a significant effect on the construct under analysis ($F(4,130) = 1.591, p = 0.181$).

As for the construct associated with *perceived ephemerality*, age ($F(5,130) = 1.321, p = 0.259$) and gender ($F(1,130) = 0.575, p = 0.449$) when analyzed separately, do not have a significant effect on the perception of ephemerality. However, when the interaction between the two variables is analyzed, it is significant ($F(4,130) = 6.942, p < 0.001$) and explains 17.6% of the variance in the dependent variable ($\eta_p^2 = 0.176$). That is, gender and age together influence the viewpoint that luxury goods last forever, can be used for many years and even passed down from generation to generation. Finally, it is worth to mention the greatest discrepancy in averages occurred between genders in the age group from 36 to 45 years old ($M_{\text{Female}} = 3.2$; $M_{\text{Male}} = 4.6$).

Finally, for the last construct, the variables gender ($F(1,130) = 2.072, p = 0.152$) and age ($F(5,130) = 0.752, p = 0.586$), both alone and in interaction ($F(4,130) = 0.206, p = 0.935$), do not cause a significant effect on *value-expressive*. That is, these demographic variables have no effect on whether or not luxury goods are a way for consumers to define their self-expression and self-concept. Even so, it is relevant to mention that in both genders, the age group with the highest averages was from 18 to 25 years old ($M_{\text{Male}} = 2.9$; $M_{\text{Female}} = 2.7$).

	<i>Age</i>	Social consumption (item one)	Social consumption (item two)	Class and status	Perceived ephemerality	Value - expressive
Male	18-25	3.4	2.7	2.8	3.9	2.9
	26-35	3.5	2.0	2.7	3.5	2.8
	36-45	4.3	2.8	3.3	4.6	2.8
	46-55	4.4	2.9	2.8	4.3	2.5
	56-65	3.8	2.2	2.9	3.8	2.3
	+ 65	-	-	-	-	-
	Total	3.7	2.6	2.9	3.9	2.7
Female	18-25	4.0	2.7	2.6	4.5	2.7
	26-35	4.7	2.3	2.3	4.5	2.4
	36-45	4.7	2.6	1.5	3.2	2.0
	46-55	4.2	2.6	2.1	4.1	2.4
	56-65	4.3	1.3	1.9	4.3	2.0
	+ 65	3.7	2.3	2.0	3.4	1.9
	Total	4.2	2.5	2.3	4.3	2.6

F test	ME gender	$F(1, 130) = 3.697, p = .057^*$	$F(1, 130) = 0.580, p = 0.448^*$	$F(1, 130) = 10.784, p = 0.001^*$	$F(1, 130) = 0.575, p = 0.449^*$	$F(1, 130) = 2.072, p = 0.152^*$
	ME age	$F(5, 130) = 1.789, p = 0.120^*$	$F(5, 130) = 1.317, p = 0.261^*$	$F(5, 130) = 0.416, p = 0.837^*$	$F(5, 130) = 1.321, p = 0.259^*$	$F(5, 130) = 0.752, p = 0.586^*$
	ME interaction	$F(4, 130) = 0.957, p = 0.434^*$	$F(4, 130) = 0.353, p = 0.842^*$	$F(4, 130) = 1.591, p = 0.181^*$	$F(4, 130) = 6.942, p < 0.001^*$	$F(4, 130) = 0.206, p = 0.935^*$

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 5 - Analysis of constructs through two-way ANOVA.

- **Research question 3: What type of sustainable strategies do luxury brands engage in?**

An analysis of the TOP 10 most valuable luxury brands' annual reports, websites, and social networks was done in order to respond to this research question. This ranking was created according to *Brandirectory* and is solely focused on the personal luxury goods sector for the year 2021. As a result, the summary table displayed below summarizes the sustainable methods and practices that these brands have been incorporating into their production processes lately.

	Gucci ⁽¹⁾	Louis Vuitton ⁽²⁾	Chanel ⁽³⁾	Cartier ⁽⁴⁾	Hermès ⁽⁵⁾	Rolex ⁽⁶⁾	Dior ⁽⁷⁾	Tiffany & Co ⁽⁸⁾	Omega ⁽⁹⁾	Burberry ⁽¹⁰⁾	%
SUSTAINABLE PRACTICES											
PREVENTING POLLUTION - reduction in CO2 emission	Yes, e.g., in 44 of 49 countries the company is in, 100% of the energy used is green	Yes, e.g., with the increase in the proportion of renewable energy, a 25% reduction in CO2 emission was possible	Yes, e.g., working to make maritime transport the most used, and, when not possible, the transportation is made over air routes and planes that produce less CO2	Yes, e.g., through practices aimed at reducing CO2 emitted by the transport used	Yes, e.g., implementing the <i>circular economy</i> concept to reduce carbon emissions	Yes, e.g., by measuring energy and fuel use, trying to reduce year after year	Yes, e.g., with the adoption of ecological packaging, the Maison managed to reduce carbon emissions by 56%	Yes, e.g., with 80% of electricity being clean, a reduction of 30000 tons of carbon emissions was possible	Yes, e.g., through the usage of photovoltaic solar panels in the buildings	Yes, e.g., obtaining 93% of electricity from renewable energies	100%
ECODESIGN PRACTICES - adoption of recycled materials in the products	Yes, e.g., through the usage of leather, metals, fibers and plastics that are recycled	Yes, e.g., lipsticks made entirely from recycled algae	Yes, e.g., through a collaboration with a dedicated provider in order to find resources of recycled plastic	Yes, but not specified what is done	Yes, e.g., developing solutions to reuse and recycle leftover cashmere and silk	Yes, e.g., the paper, cardboard and raw materials used to manufacture jewelry often come from recycled materials	Yes, e.g., through transformation of textiles into high quality fibers for use in new products	Yes, e.g., in 2017 55% of silver and 75% of gold came from recycled sources	--	Yes, e.g., the transportation of the products is made with recyclable hangers and garment bags made from 100% recycled polyester	90%
INNOVATIVE MATERIALS - adoption of more sustainable materials in replace of fur, plastics and leather	Yes, e.g., incorporating an ecological material free of animal skins	Yes, e.g., over a partnership with enterprises that developed artificial fibres from throwaway clothing	Yes, e.g., through the production of a collection with fabrics made using sustainable fibers	--	Yes, e.g., developing a product using materials processed in laboratories from fungal threads	--	Yes, e.g., through the partnership with Parley, creating a line of products made with plastics found in the oceans	--	--	Yes, e.g., through efforts being made to find more sustainable cotton and leather and wool	60%
UPCYCLING strategy	Yes, e.g., through the Gucci-Up program the brand provide a new life to leftover fabrics	Yes, e.g., through the development of the LV Trainer by upcycling an existing model	--	Yes, but not specified what is done	Yes, e.g., through the transformation of unused materials, like two scarves being split in half and put back together to create a single new scarf	--	--	Yes, e.g., recycling and reusing paper to prepare the packages	--	Yes, e.g., the distinctive oak paper is made from a minimum of 40% upcycled coffee cups that would have otherwise ended up in dumpsters	60%
RENTING strategy	Not found	Not found	Not found	Not found	Not found	Not found	Not found	Not found	Not found	Not found	--
SELLING SECOND-HAND strategy	Not found	Not found	Not found	Not found	Not found	Not found	Not found	Not found	Not found	Not found	--

Table 6 - TOP 10 personal luxury brands in 2021 and current sustainable practices. Source: own author elaboration.

As one can see on the table, the most used strategies aim to reduce air pollution, and 100% of the companies analyzed take preventive measures. On the other hand, only 60% of the companies incorporate sustainable materials and adopt environmentally friendly techniques in their production processes, although 90% of the companies mentioned that they integrate recycled materials in their collections. Finally, no clear information was found in the brands' reports and social networks regarding renting and selling second-hand. Additionally, it is crucial to mention that it was through this analysis that the scenarios were made and presented in the questionnaire.

- **Research question 4: What are the attitudes and thoughts of consumers towards the more sustainable luxury production practices (recycling, upcycling, renting, selling second-hand items)? Will quality and the prestige of goods be perceived differently or even mitigated by the new products?**

In order to answer this question, an experimental section was included in the survey. Here, each participant was exposed to a different scenario, related with a one of the specific sustainable strategies identified in RQ 3, and asked to complete a set of questions. Therefore, to understand if participants evaluated differently the different strategies, a multivariate analysis (MANOVA) was performed considering the different scenarios as the independent variables and the perception towards sustainable products, the comparison with non-sustainable products, the familiarity with sustainable products, the perceived contradiction between sustainability and luxury and finally the CSR expectations of luxury brands as dependent variables.

	Sustainable materials scenario – Men	Sustainable materials scenario - Women	Upcycled scenario - Men	Upcycled scenario - Women	Recycled scenario – Men	Recycled scenario – Women	F-test
Perception towards sustainable products	3.5	3.9	3.3	3.8	3.3	3.8	$F(5,223) = 3.982$, $p = 0.002^*$
Comparison with non-sustainable products	3.6	3.8	3.8	3.6	3.5	3.7	$F(5,223) = 0.653$, $p = 0.660^*$
Familiarity with sustainable products	2.8	3.0	2.6	2.8	3.1	3.2	$F(5,223) = 1.423$,

							$p = 0.217^*$
Perceived contradiction between sustainability and luxury	1.9	2.2	1.9	2.1	2.2	2.2	$F(5,223) = 0.616,$ $p = 0.688^*$
CSR expectations of luxury brands	4.3	4.6	4.4	4.6	4.2	4.6	$F(5,223) = 2.178,$ $p = 0.058^*$

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 7 – MANOVA (scenarios, attitudes and perceptions towards sustainable luxury products).

Through a generalized analysis, the scenarios only influence the participants' perceptions of sustainable luxury products ($F(5,223) = 3.982, p = 0.002$). In this construct, it was observed that in general, for the three techniques under analysis, women have more positive perceptions towards sustainable products when compared to men ($M_{\text{SustainableFemale}} = 3.9; M_{\text{UpcycledFemale}} = 3.8; M_{\text{RecycledFemale}} = 3.8; M_{\text{SustainableMale}} = 3.5, M_{\text{UpcycledMale}} = 3.3, M_{\text{RecycledMale}} = 3.3$).

Furthermore, we can conclude that, in general, respondents are not very familiar with these techniques and that, on average, they have positive expectations regarding this type of product and believe that luxury brands have a place in a sustainable world.

Subsequently, the same analysis was carried out, but with the objective of testing two different aspects. For the first analysis, gender, age and scenarios were considered as independent factors, and for the other, scenarios and type of participant were the ones chosen. However, none of them showed a statistically significant interaction with the dependent variables.

Since scenarios involving used or rented goods could not be included in the questionnaire, these methods were investigated through interviews. It was determined that the majority of the respondents had favorable opinions of them and even thought that attributes frequently associated with luxury goods, including quality, timeless design, and longevity, wouldn't be questionable.

- **Research question 5: What are consumer's purchase intention towards sustainable luxury products?**

First, a bivariate correlation was made between sensitivity to sustainability and willingness to buy sustainable luxury products to attest to the correlation between the two. A significant association ($\rho = 0.525; p < 0.01$) between the variables was verified suggesting that the willingness to buy sustainable products is correlated with individuals' concern and

environmental care. After that, a linear regression was done between consumer sustainability level and how they perceived the products in the scenarios, as well as their willingness to buy sustainable luxury goods. Since the model is significant ($F(2,226) = 80,350; p < 0.001$), it is inferred that perceptions of both sustainability and the products explain approximately 41% ($R^2_a = 0.410$) of the variance in purchase intentions. Finally, the same analysis was conducted but considering gender and no statistically significant difference was detected. However, it is possible to observe, in table 9, that the recycled scenario was the one that recorded the highest purchase intentions ($M = 3.5143$).

	Unstandardized B	Coefficients Std. Error	Standardized coefficients Beta	t	Sig.
(Constant)	0.213	0.268		0.792	0.429*
Sensitivity to sustainability	0.458	0.064	0.388	7.172	<.001*
Perception towards sustainable products	0.423	0.057	0.399	7.369	<.001*

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 8 – Linear regression (Dependent variable: willingness to buy).

	Mean
Sustainable material scenario	3.5071
Upcycled scenario	3.3598
Recycled scenario	3.5143

Table 9 – Descriptive statistics (willingness to buy).

- **Research question 6: What are the characteristics of potential consumers of luxury sustainable products?**

For this research question a *K-Means Cluster Analysis* was carried out to characterize different types of potential consumers, therefore only considering *luxury owners* and *luxury admirers* ($n = 229$), since the remaining participants, namely *luxury disinterested*, are not eligible to answer this research question. Hence, the analysis was conducted by considering consumers' purchase intentions and demographic questions and three clusters emerged, each composed respectively by 95, 59 and 75 participants.

Results from this cluster analysis indicate that there is one segment, *the promising*, that is composed mostly by young people, with a bachelor's degree who are studying and have an

income of less than €750 per month. The second group, *the connoisseur*, aggregates young adults with a master's degree, full-time workers with a monthly income between €1001-1500€. Finally, the last cluster, *the faithful*, is composed by adults, with higher education, full-time workers and with higher incomes when compared to the other groups. Table 10 provides a more detailed characterization of each cluster (Appendix E for more detail).

	<i>The promising</i>	<i>The connoisseur</i>	<i>The faithful</i>
Gender	67.4% female	61% female	68% female
Age	94.7% aged between 18-25 years old	32.2% aged between 26-35 years old	62.7% aged between 46-55 years old
Education	67.4% have a bachelor's degree	45.8% have a master's degree	74.7% have either a bachelor's, master's, or Ph.D.
Profession status	66.3% are studying	81.4% have a full-time job	92% have a full-time job
Marital status	90.5% are single	54.2% are single	81.3% are married
Income	65.3% have a monthly income less than 750€	37.3% earn between 1001€-1500€	44% have earnings exceeding 2000€ per month.

Table 10 - Cluster characterization.

Thus, through ANOVA, we can conclude that all variables except for gender ($F(2,226) = 0.428$, $p = 0.652$) contribute and allow the separation of clusters ($p < 0.001$).

	df (cluster)	df (error)	F	Sig.
Gender	2	226	0.428	0.652
Age	2	226	712.872	<.001
Education	2	226	11.121	<.001
Marital status	2	226	191.843	<.001
Professional status	2	226	264.587	<.001
Income	2	226	101.728	<.001

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Table 11 – ANOVA.

4.2 In-depth Interviews

The five people interviewed have different backgrounds, yet they are united by their enthusiasm and ownership of luxury goods. All individuals are Portuguese. Three of them are male, and two are female. Only one person is a student majoring in communication, and the other four

work in design, management, marketing, and biology. The age group also varies, with the majority aged between 20 and 30 years old and only one individual over 50 years old.

Despite the mention of a few distinct characteristics - with one individual highlighting the heritage and transparency of luxury brands, while another emphasized its uniqueness - everyone agreed luxury goods were unique, differentiated, durable, and of extreme quality.

As mentioned, all respondents own more than one luxury product, and at the time of purchase, everyone experienced the same emotions and feelings. In addition, respondents highlighted the support and helpfulness of employees, personalized service, and the store environment as something unique, unusual, and worthy.

Regarding the *type of products most desired* by these individuals, they prefer jewelry, watches, bags, shoes, coats, and suits to be luxurious. In addition, all respondents agreed that the type of luxury product they look for is always discreet, versatile, and with neutral colors – *quite luxury* – so that it can be used on any occasion.

As for the *motivation for buying these goods*, three respondents admitted that it is exclusively for pleasure and personal achievement reasons, and if it were just out of necessity, they would opt for products of much more affordable prices. As for the other two respondents, one stated that the purchase reason was the almost unique opportunity to purchase the product on a trip, as it is not for sale in Portugal. The other respondent mentioned that what motivated him were both factors - need and pleasure - because despite being able to buy the same products from more affordable brands, he does not identify with them.

Finally, regarding *new collections/products from luxury brands*, only one respondent follows the latest from the Golden Goose brand, whereas another person makes no effort to find anything. The remaining three people do not research directly on social media, but when they see something that arouses their interest, they appreciate it and do more intensive research.

When asked if they employ sustainable methods daily, the interviewees responded affirmatively, although two acknowledged that they could do better. On the other hand, when asked about their type of consumption, whether it is responsible and sustainable, only one respondent said he did. As for the remaining four respondents, all had difficulty thinking of themselves as responsible consumers because, in their sense, they could improve. Finally, when asked if they intend for their future consumption to be more thoughtful and responsible, four responded that they had that intention and one said that the product category influences that decision.

When asked about their *knowledge concerning the sustainable practices* that luxury brands have been implementing the answers were not unanimous. Three respondents were aware of all

these techniques, some in more detail than others. One respondent had heard about recycling, selling in second-hand markets, and alternative materials usage. Finally, another interviewee only knew the technique of recycling and second-hand sales. Furthermore, two respondents thought highly of these practices and recommended that the rest of the business perceived the luxury sector as a model to imitate. Additionally, one person pointed out that these methods are a plus for the industry since they increased her interest in that kind of goods. The other two respondents stated that the practices are somewhat favorable if quality and comfort are not at compromise, and another noted that he perceived the practices favorably and that he even currently uses luxury goods of this nature. Finally, regarding the future purchase intentions of sustainable luxury goods, three individuals noted that they are willing and intend to purchase products made through any of the five techniques and one of them even remarks that she is willing to pay more for it. The remaining two individuals stated that all options are valid for them, except for the renting option, due to a lack of reasons/occasions to do so. The other individual stands out for a different opinion in which he states that the sustainability issue is secondary to him and that he gives more importance to the quality and comfort of the product.

		Portuguese male, 23 years old, Biologist	Portuguese woman, 22 years old, Marketing Intern	Portuguese woman, 24 years old, Communication Master Student	Portuguese male, 27 years old, Designer	Portuguese male, 52 years old, COO
Luxury consumption	1. What does luxury mean to you? What would be the one definition of luxury for you, if you had to give one?	Luxury boils down to extravagance and exclusivity. The industry has the capacity to offer products of extreme quality and durability	Luxury is subjective, but its ability to be differentiators is unanimous. Not in the sense that products represent a social differentiator, but as an opportunity for people to acquire different goods that are not used by everyone	Luxury is something special that confers privilege on its users. People who own these objects experience positive emotions like joy, pride, and fulfillment	A luxury product and experience is the transmission of the value and history of the product, as well as the explanation of the production techniques, the reason for choosing the materials used and the type of pre- and post-sales service	Luxury personal goods industry refers to scarce products, with high quality, durability and high value, not only monetary but also sentimental/emotional
	2. What luxury personal goods do you own and from which brands?	Two Yeezy sneakers	One bag from Zadig Voltaire, Gucci and Louis Vuitton, a pair of sneakers from Gucci and Golden Goose and sunglasses from Prada	Two Chanel, two Prada, one Gucci, one Balenciaga and a Givenchy handbag, a pair of Dior, Prada, Gucci and Balenciaga sneakers and a Gucci belt	Some shirts and a bag from Lemaire, some shirts, shoes, a blazer and a wallet from Balenciaga. A Chanel, Loewe, Jill Sander and Louis Vuitton bag and a Gucci watch	One watch from IWC and Tag Heuer, a wallet from MontBlanc and a pen from Cartier
	3. How was your experience with those brands?	Positive, worthy	Wonderful, unique	Amazing, superb	Uncommon, excellent	Great
	4. Do you purchase luxury products out of need/practicality, or out of pleasure/emotion?	Emotion, enthusiasm, pleasure	Despite the need, the main reason was for pleasure, emotion and personal fulfillment	Pure pleasure, vanity, personal fulfillment and desire	Both need and pleasure	Pleasure
	5. How do you feel when you purchase luxury goods?	Happy, proud, and fulfilled	Pleased and accomplished	Confident, powerful, and fulfilled on a personal level	Vain, stylish, and happy	Fulfilled and with that feeling of achievement
	6. Do you prefer luxury products over <i>fast-fashion</i> products in certain categories? What are these categories?	Yes. Shoes and coats	Yes. Bags	Yes. Bags, jewelry and shoes	Yes. Bags, coats and shoes	Yes. Watches and suits
	7. Typically, what kind of personal luxury products are you looking for? (extravagant products, small logo, products that only the elite know about, etc.)	Mostly recognized by the experts and users	Neutral and simple	Classic models	<i>Quite luxury</i>	Discreet
	8. Do you usually look for new/recent luxury personal goods?	No, but when watching an advertising of interest, looks for more information	Only from Golden Goose	No, but when watches brand advertisements about new products and new collections, appreciates it	No. But usually become aware about new products or new collections through social media or friends who work for these brands	No
Sustainability concern	1. Do you adopt environmentally friendly behaviors in your daily life? If yes, indicate which	Yes. Recycles, opts for local and organic food, uses public transportation whenever possible and buy from some sustainable and eco-friendly brands	Yes, but could improve. Recycles, opts for reusable products and participate in volunteering activities	Yes, but could do better. Only buys what is needed, utilizes washing machines and dishwashers in the economic program and avoids the usage of heat sources at home	Yes. Through garbage separation, conscious energy consumption and usage of public transportation	Yes. Recycles, uses an electric car, avoids heating/cooling sources at home and uses his own bags in supermarkets
	2. Do you consider yourself a sustainable/conscious/environmentally friendly consumer? How?	Yes. Only buys what is needed choosing responsible, conscious brands that respect the environment, workers and society, and avoids buying products with excessive packaging or plastics	Not sure. Can be a bit of a spendthrift sometimes. However, always tries to buy from companies/brands that are socially, environmentally, and animal conscious	Not so much. But considers the brand and type of products before purchase in order to avoid supporting harsh and environmentally destructive behavior	More or less. Tries to buy only what is needed and avoids getting along with companies are unsustainable and that do not take into account the rights of workers, animals and the environment	Not so much. Tries to reduce consumption
	3. Do you intend to make more thoughtful and sustainable purchases in the future?	Yes	Yes	Yes	Yes	More or less
Knowledge and purchase intention regarding luxury sustainable products	1. Are you aware of these sustainable techniques/products that luxury brands have been implementing/producing?	Sort of. Is aware about the recycling procedure, the adoption of sustainable alternative materials and the option of selling second-hand	Yes. Had already heard about all the techniques	Yes. Had heard about all the methods, but was least aware about renting	Yes. Knew very well all the techniques and several luxury brands that implement them	Not really. Only knew the recycling technique and selling through second-hand market
	2. What is your opinion about these practices and consequently about the products?	These practices make perfect sense and they should continue to be improved and implemented in more and more brands and products because, the luxury industry should set an example and should be a model to follow	The fact that brands are adapting to today's problems and trying to act on it only makes appreciate and desire the products even more	Believes these are excellent initiatives on the part of the luxury industry and thinks they drive other industries to do the same, which contributes to a healthier and more sustainable world	Regarding the three most sustainable production techniques, would totally buy this type of product. As for the renting option, would not be considered an option and regarding the sale of second-hand products, believes it is a great option	Believes these practices are a good initiative and that as long as quality, comfort, prestige, feeling of pleasure and personal fulfillment are guaranteed
	3. Would you be willing to buy this type of product instead of an unsustainable luxury product?	Of course yes	Undoubtedly yes	Yes	Yes, absolutely yes.	A sustainable product would only be considered a possible option if quality and comfort are guaranteed and are of excellence. The issue of sustainability is secondary

Table 12 – Consumer’s in-depth interview output

5.1 Conclusion

As mentioned in the literature review and as a response to RQ1, the luxury industry, specifically the personal goods segment, is superlative and subjective. However, as this market has a business model quite different from the others, it can convey to its consumers feelings such as status, glamour, and timelessness, which are difficult to achieve in other industries.

As for RQ2, the main findings revealed no significant effect of gender and age on the *social consumption* construct. However, it is possible to state that, in general, individuals acquire luxury products to satisfy their personal needs without having social standing as a motivator. Through study, it was determined that gender significantly affects *class and status*. Therefore, it is possible to infer that men care more about class and status conferred by luxury personal products than women. Regarding *ephemerality perception*, since the interaction between gender and age causes significant differences, it is stated that younger women are the ones who most value the durability and timelessness of goods. Finally, according to the literature, there are significant differences between ages in the *value-expressive* construct (Schade et al., 2016). On the contrary, in the study carried out, no statistically significant differences were found between genders and ages. Hence it is concluded that, in general, luxury goods contribute smoothly to the self-expression and self-concept of the individuals who own them.

Moving forward to RQ3, the detailed analysis reveals to what extent the ten most valuable luxury companies in 2021 are committed to sustainable practices, such as preventing CO2 emissions and including recycled materials in their products. In this way, we can conclude that brands like Gucci, Louis Vuitton, and Burberry are more transparent than Rolex, Omega, and Cartier, hence more involved in making a change.

Regarding RQ4, several variables were investigated. As for the perceptions of sustainable luxury products, these were viewed positively by the respondents, while in the literature this perception was seen more effusively, mainly in recycled and upcycled products (Kamleitner et al., 2019). Related to product familiarity it is generally satisfactory and in line with the research done by Adıgüzel & Donato (2021). People are more familiar with recycled items than upcycled ones. As for the contradiction between luxury and sustainability, following the investigation conducted by Kapferer & Michaut-Denizeau (2014), there was no significant interaction between gender and age. Moreover, in this study, the percentage of individuals who stated that the two concepts are not contradictory was similar in both studies.

Finally, the respondents revealed high CSR expectations concerning this industry, as seen in the study by De Angelis et al., (2017). About the other techniques that were addressed in the interviews, the individuals demonstrated some knowledge about them and a willingness to purchase mostly second-hand products.

With respect to RQ5, it was concluded through the questionnaire that individuals have acceptable purchase intentions about different sustainable luxury products. In addition, it was inferred that there is an interconnection between sustainability and the demand and willingness to buy sustainable products, which supports the research carried out by Kapferer & Michaut-Denizeau (2014), which states that sustainability has become an increasingly important factor in consumer choice. The interviews carried out further highlight the importance of this topic these days, and for the majority of respondents, sustainability is increasingly a factor to be taken into account in their consumption choices.

Finally, in RQ6, through the creation of the profile of potential consumers of sustainable luxury goods, a significant presence of younger people is notorious, as already mentioned in the literature. In this study, it was ensured that the youngest are the age group with the highest quantity of luxury products, which is an indication that proves the fact that they are considered the consumers of the future, and in addition, they are the group with the most outstanding environmental concern (Tiseo, 2019). Thus, as mentioned by the consultant, Bain & Company (2022), the luxury personal goods industry must pay special attention to the expectations and desires of Millennials and Generation Z, which in the case of this study correspond to cluster one.

5.2 Limitations

Despite the contribution of this dissertation to understanding the impact of sustainable luxury products on consumers' perceptions and purchase motivations, there are some limitations in this study. Firstly, it is common for participants to be socially desirability biased, and, adding to the fact that the luxury topic is sensitive by itself, sometimes individuals do not share their honest opinions and convictions and may lead them to over/underestimate what they own.

Moreover, no specific information was found regarding selling second-hand and renting. Therefore, these two practices were only in the interviews, and it would have been interesting to observe more opinions about it. Furthermore, as the sample is mainly composed of women (64.7%) and individuals aged between 18 and 25 years (50.5%), it is not significantly representative. Finally, in terms of the interviews, it would have been interesting to question

participants with diverse backgrounds to develop more general findings that would be more representative of the population.

5.3 Future Research

In the literature, it has already been mentioned several times that younger generations, in addition to having a notorious concern regarding environmental sustainability, also represents the segment of luxury consumers of the future (Mohr et al., 2022). Thus, for further research, it would be interesting to investigate even more about demographic characteristics, tastes, preferences, opinions, and convictions and what these types of individuals (*“the promising”*) pursue.

In this regard, in line with the reasons mentioned above, it would be interesting to investigate this industry’s online channel. As consumers live in an increasingly technological world, it would be interesting to explore the online sales of these products, since it has been increasing over the years, and also the connection between luxury and the metaverse, NFT, and artificial intelligence. Finally, it would be enriching to have a more in-depth and insightful perspective with the heads of the luxury personal goods sales department to understand whether consumers are increasingly looking for them, how they react, and if consumers are interested in knowing about the components/materials of the goods. Furthermore, there is the advantage of getting information on this topic from companies that are not as transparent about their practices.

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APPENDICES

Appendix A: *In-depth interviews with personal luxury goods consumers*

LUXURY CONSUMPTION

1. What does luxury mean to you? What would be the one definition of luxury for you, if you had to give one?

<p>Portuguese male, 23 years old, Biologist</p>	<p>For me, luxury boils down to extravagance and exclusivity. The industry has the capacity to offer products of extreme quality and durability. In addition, I think that one of the obvious characteristics that define luxury is its exorbitant price, which in my opinion is fair given the rarity and quality of its products.</p>
<p>Portuguese woman, 22 years old, Marketing Intern</p>	<p>Although I think luxury is subjective, I believe that the ability of these products to be differentiators is unanimous. Not in the sense that products represent a social differentiator, but as an opportunity for people to acquire different goods that are not used by everyone. Furthermore, I find that these products are often associated with durability, class, timelessness and quality. If we value these goods, we can use them for a lifetime because they don't deteriorate.</p>
<p>Portuguese woman, 24 years old, Communication Master Student</p>	<p>For me, luxury is something special that confers privilege on its users. I believe that people who own these objects experience positive emotions like joy, pride, and fulfillment since they are typically items that individuals think about and hence appreciate more than fast-fashion items.</p>
<p>Portuguese male, 27 years old, Designer</p>	<p>For me, a luxury product and experience is the transmission of the value and history of the product, as well as the explanation of the production techniques, the reason for choosing the materials used and the type of pre- and post-sales service, namely the explanation of guarantees and product specificities. Basically, it's trying to understand what's special about the product and what makes it stand out from others. For this, it is essential for me the transparency of luxury brands in terms of materials, the practices used and the partners chosen to make that product. This transparency for me justifies the prices and why that product is the best product for me.</p>
<p>Portuguese male, 52 years old, COO</p>	<p>For me, the luxury personal goods industry refers to scarce products, with high quality, durability and high value, not only monetary but often sentimental/emotional, since they have the ability to fulfill personal desires while satisfying functional needs.</p>

2. What luxury personal goods do you own and from which brands?

Portuguese male, 23 years old, Biologist	I have two luxury products, and both are Yeezy sneakers. They are respectively the Yeezy Boost 350 V2 "Tail Light", and the Yeezy Boost 350 V2 "Beluga 2.0"
Portuguese woman, 22 years old, Marketing Intern	The luxury products I own are a bag from Zadig Voltaire, a pair of sneakers and a bag from Gucci, a bag from Louis Vuitton, sunglasses from Prada and sneakers from Golden Goose.
Portuguese woman, 24 years old, Communication Master Student	I own two Chanel, two Prada, one Gucci, one Balenciaga and a Givenchy handbag. Finally, I also have a pair of Dior, Prada, Gucci and Balenciaga sneakers and a Gucci belt.
Portuguese male, 27 years old, Designer	I have some shirts and a bag from Lemaire, I also have some shirts, a blazer, some shoes and a wallet from Balenciaga. Finally, I own a Chanel, Loewe, Jill Sander and Louis Vuitton bag and a Gucci watch.
Portuguese male, 52 years old, COO	I have a watch from IWC and Tag Heuer, a wallet from MonBlanc and a pen from Cartier.

3. How was your experience with those brands?

Portuguese male, 23 years old, Biologist	My experience with the Yeezy brand has been very positive. I think the products are of extreme quality and durability. Since I've had them for around 2 years and they're still like new. In my opinion this type of product is worth it, and when I want to buy a product that I want to use many times and I don't want it to go bad quickly, I easily consider this type of brand as an option because from my own experience I know that they will satisfy my needs. Regarding my experience with the brand, it was quite positive as the workers were very friendly and enlightening.
Portuguese woman, 22 years old, Marketing Intern	Regarding my experience with the brands, I found the service at Gucci spectacular. The staff was extremely cordial, helpful, and attentive. At Louis Vuitton, I also found the service wonderful, but a little more snobbish. The store experience is unique. The employees offer drinks and accompany the consumer to the door after the purchase, which made me feel like I was receiving an exclusive and personalized service. Regarding the products themselves, I thought the packages were superb, they seem to be the products themselves, and I even found myself afraid of using and ruining them because of how well-wrapped and packaged they are. Finally, I can say that I would buy from any of these stores again and would recommend them to friends and family.
Portuguese woman, 24 years old,	Overall, I am extremely satisfied with all my luxury products, and this is one of the reasons I continue to purchase them. Without a doubt, I would recommend these products to anyone and would buy them again without thinking twice. Regarding my experience with brands, I think the most remarkable experience I had was at Chanel

<p>Communication Master Student</p>	<p>in Milan. The employees were extremely attentive, they explained me all the details and even the history of the product, they brought drinks and food, so it was a really unique experience.</p> <p>I also highlight an experience I had at the Balenciaga store in which the employees gave me honest advice about the products and advised what they thought was best for me with total transparency.</p>
<p>Portuguese male, 27 years old, Designer</p>	<p>Most of the products I own, I bought online because I feel it's more convenient for me. However, I've had some experiences in physical stores like Louis Vuitton and Loewe where the employers offered me drinks while I waited for the product to be brought to me. In addition, I also had the opportunity to experience more exclusive events such as private sales at Balenciaga, where I was able to purchase products at more attractive prices.</p> <p>As for the products themselves, I am extremely satisfied and intend, if it continues to be possible, to buy more luxury products.</p>
<p>Portuguese male, 52 years old, COO</p>	<p>Overall, my experience was quite positive. To date, I haven't had any problems with the products, and I don't regret the products I bought at all. I think this has to do with the fact that purchases were thoughtful and because the products are of immense quality.</p> <p>My experience in the store was great, the employees were very friendly, they explained everything to me about the watch guarantee, and they were very helpful. The atmosphere and layout of the store is very different from the norm, I was seated in a very comfortable chair when I bought it and they accompanied me to the door when I left.</p>

4. Do you purchase luxury products out of need/practicality, or out of pleasure/ emotion?

<p>Portuguese male, 23 years old, Biologist</p>	<p>These two products I own were purchased on a trip I took outside of Portugal and therefore I saw this purchase as an opportunity, since at the time it was very difficult to buy these sneakers here. Therefore, I believe that this purchase was made out of emotion/enthusiasm rather than need.</p>
<p>Portuguese woman, 22 years old, Marketing Intern</p>	<p>I bought these products because I needed them, but the main reason for the purchase goes far beyond that. If I only wanted functionality/practicality, I would opt for much more affordable products. I bought these items for the emotion, pleasure, and happiness they convey.</p> <p>I do not consider that the purchase is due to consumerism because I rarely do it, and when I do it, it is in a very thoughtful way. So overall, I think I make these purchases to feel that sense of personal fulfillment and accomplishment, as I've been craving these types of products for a long time.</p>

Portuguese woman, 24 years old, Communication Master Student	I think that needing a bag is real, but needing a luxury bag is no longer the case, as there are cheaper options that offer the same functions. So these purchases I made were for pure pleasure, vanity, personal fulfillment and desire.
Portuguese male, 27 years old, Designer	I think for the two reasons. On the one hand, I'm happy to be able to purchase these items because it makes me feel good about myself and as a validation to myself. But on the other hand, I never purchase anything that I won't use or find necessary. Of course, I could get this kind of items from more reasonable prices and brands, but I prefer to choose a product that is a fashion icon, and that I know I will always appreciate and that will last a long time over purchasing something less expensive that is not in my style and that I don't identify with.
Portuguese male, 52 years old, COO	The luxury products I bought were essentially for reasons of pleasure, quality and comfort. Because if they were for purely and exclusively functionality reasons, I would opt for more affordable products.

5. How do you feel when you purchase luxury goods?

Portuguese male, 23 years old, Biologist	I feel very happy, proud, and fulfilled when I wear these sneakers, mostly because I bought a product that I really like, that I use a lot and that is of the highest quality.
Portuguese woman, 22 years old, Marketing Intern	I feel pleased and accomplished when I buy luxury goods. I believe that happens because I have to give it a lot of thought and need to save money to be able to afford it. So, when I finally have the chance to acquire these kinds of goods, I feel very proud of myself. Furthermore, I never felt that feeling of regret for buying luxury products, as I have sometimes felt with fast-fashion goods. I think that occurs because the luxury industry is more expensive, which forces me to think twice before buying the product.
Portuguese woman, 24 years old, Communication Master Student	When I use my luxury products, most of the times I feel confident, powerful, and fulfilled on a personal level. However, sometimes I feel that I am using completely banal products, which I think should not occur since they are rare and expensive items.
Portuguese male, 27 years old, Designer	Most of the time when I use luxury products, I feel vain, stylish, and happy. However, there are certain moments when I feel like I'm using a basic product. Despite this, I emphasize that I have never regretted buying this type of product because I only buy what I like and that I am going to use, it is not because I find a cheap luxury product that I am going to buy it. Of course it gives me the impulse to want to buy it, but I only do it if I think it's worth it.
Portuguese male, 52 years old,	When I buy or when I use luxury goods, I feel fulfilled and with that feeling of achievement

COO	because, with my work and dedication, I managed to buy that special product for myself.
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6. Do you prefer luxury products over *fast-fashion* products in certain categories? What are these categories?

Portuguese male, 23 years old, Biologist	Yes, there are certain categories where I prefer luxury products over fast-fashion products, namely shoes and coats. I have this preference because I feel that they are products with greater longevity, more exclusive and made by the best designers. In addition, since these are goods to be used daily and they are unlikely to spoil quickly, I believe they are worth the money.
Portuguese woman, 22 years old, Marketing Intern	I would say that I prefer luxury bags over bags from fast-fashion brands. Usually, when I need to buy a handbag, I prefer to opt for pricy or luxury bags because they are the material goods that I cherish and like the most. However, when I need bags for specific situations, or when I want a bag with a more seasonal facet, and therefore I won't be using it that often, I opt for cheaper and fast-fashion bags for cost reasons.
Portuguese woman, 24 years old, Communication Master Student	Without a doubt, I prefer luxury bags, jewelry, and shoes over these same items from so-called "normal" brands. I feel that they are products with extreme quality, reputation, and prestige, which does not happen with the other brands in my point of view. Regarding clothing items such as sweaters, pants, and skirts, for example, it costs me to spend hundreds of euros on these types of items because, for me, they do not provide the same sensations and feelings.
Portuguese male, 27 years old, Designer	The luxury products that I value the most are without a doubt bags, coats and shoes and whenever I have the opportunity to purchase this type of product in a luxury format I do so. Despite owning a few luxury t-shirts and pullovers, I don't feel they are worth it, nor they are a preference for me. I have them because they were gifted to me or because I managed to buy them at high discounts.
Portuguese male, 52 years old, COO	I usually prefer luxury watches and suits instead of having these same products but from "typical" brands. I have this preference because in my opinion these are products that last a lifetime, in the case of watches, or that I use every day, as in the case of suits, so I look for products with the highest quality and I think that the items from this industry satisfy that need.

7. Typically, what kind of personal luxury products are you looking for? (extravagant products, small logo, products that only the elite know about, etc.)

	What I did and what I intend to continue doing in my next luxury purchases is to opt for discreet luxury products, unnoticed by the majority and
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Portuguese male, 23 years old, Biologist	that only a few people, experts or admirers, recognize them, and are capable to identify the brand, model, and price.
Portuguese woman, 22 years old, Marketing Intern	I always buy luxury goods that match my preferences, so I choose more subtle items with neutral tones and simple logos that are nevertheless bold and timeless. Typically, I don't consider or choose extravagant goods with large logos or eye-catching colors as an option.
Portuguese woman, 24 years old, Communication Master Student	I feel that the handbags I own are timeless because of the models, colors, and textures I choose. Most of the time, I choose neutral and classic pieces that never go out of style and are included in nearly all collections each year.
Portuguese male, 27 years old, Designer	Usually, I don't appreciate the logos. Of course many luxury products have their logo present on the products, but I like it when the logo goes unnoticed and only good connoisseurs notice it or identify which brand that item is. Personally, I prefer and choose <i>quite luxury</i> and most of the items I have are in this format. I would never buy or use items with loud and flashy logos and colors.
Portuguese male, 52 years old, COO	I always look for discreet luxury products because I don't like to ostentate or brag myself to others. But more than that, I really look for comfort and quality. For me, these are the most important details combined with elegance and sobriety.

8. Do you usually look for new/recent luxury personal goods?

Portuguese male, 23 years old, Biologist	I do not have the habit of looking for or browsing the websites or social networks of luxury brands. What sometimes happens is that I come across some advertising for a product on the communication channels and it awakens my attention, which can lead me to do more intensive research on the product.
Portuguese woman, 22 years old, Marketing Intern	In the past few months, I have only been following new collections and products and the latest news from the Golden Goose brand. I know several products and models from other luxury brands, but I don't usually follow the news.
Portuguese woman, 24 years old, Communication Master Student	I don't usually follow the websites or communication channels of luxury brands. However, when I see brand advertisements about new products and new collections, I don't devalue it and I like to watch and appreciate it.
Portuguese male, 27 years old, Designer	Normally I don't follow news from any luxury brand, but when I come across luxury products that interest me on social media, I am able to research more about them. In addition, as I have several friends linked to fashion, including those who work for some of these brands, sometimes I have the opportunity to see products in advance, although this does not change my purchase record.
	No, I don't. When I want to buy some luxury product I go to the store and observe what they

Portuguese male, 52 years old, COO	have on display. I don't usually look for anything like new collections or limited/special editions on their websites or their social media.
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SUSTAINABILITY CONCERN

1. Do you adopt environmentally friendly behaviors in your daily life? If yes, indicate which.

Portuguese male, 23 years old, Biologist	Yes, I am aware of the environmental problems we face today and in my day-to-day activities I always try to measure my impact. That's why I do all kinds of recycling, I almost always buy local and organic products, I try to use public transport as much as possible and I try to buy from sustainable and eco-friendly brands.
Portuguese woman, 22 years old, Marketing Intern	I consider that I am concerned with the environment, although I am aware that I could improve in some aspects. Among the various environmentally responsible attitudes that I try to adopt in my day-to-day life, I highlight recycling, buying products that can be used more than once, such as make-up removal wipes, and volunteering activities.
Portuguese woman, 24 years old, Communication Master Student	I am conscious that I could and should do more to protect the environment, but for now, all I can do is make an effort to think through my purchases to ensure that I only buy what I need and therefore avoid waste. In addition, I try to utilize washing machines and dishwashers in the economic program and avoid the usage of heat sources at home.
Portuguese male, 27 years old, Designer	Yes, I think so. I do garbage separation, I am conscientious in energy consumption and whenever I have the opportunity I use public transport.
Portuguese male, 52 years old, COO	Yes, I consider myself a person concerned with the environment and in my day-to-day life I try to leave a positive impact. I always recycle, I use an electric car, I don't use heating/cooling sources at home, and I always use my own bags in supermarkets in order to avoid plastic consumption.

2. Do you consider yourself a sustainable/conscious/environmentally friendly consumer? How?

Portuguese male, 23 years old, Biologist	Yes, I consider myself a conscious and responsible consumer. I often buy only what I need, and I always try to choose responsible, conscious brands that respect the environment, workers and society. Also, I avoid buying products with excessive packaging or plastics.
	I'm not sure whether I can describe myself as an eco-friendly consumer because I can be a bit of a

Portuguese woman, 22 years old, Marketing Intern	spendthrift sometimes and buy stuff I don't need. I consider this behavior unsustainable because I'm wasting resources needlessly, but I'm making an effort to improve. However, I always try to buy from companies/brands that are socially, environmentally, and animal conscious.
Portuguese woman, 24 years old, Communication Master Student	I don't think of myself as the most conscious consumer because I believe I can do better. For the time being, I make an effort to consider the brand and type of products I purchase in order to avoid supporting harsh and environmentally destructive behavior.
Portuguese male, 27 years old, Designer	In a way I think so. I try to buy few things and only what I need, and I try not to go along with companies and brands that I know are unsustainable and that do not take into account the rights of workers, animals and the environment.
Portuguese male, 52 years old, COO	Not really. I usually only buy what I need, and I try to buy durable goods so that they will last a long time and I won't have to buy the same goods shortly afterwards.

3. Do you intend to make more thoughtful and sustainable purchases in the future?

Portuguese male, 23 years old, Biologist	Of course, I have adopted this type of behavior in my life, and I intend to continue in the future and even improve, through a more careful reading of product labels, for example.
Portuguese woman, 22 years old, Marketing Intern	Yes, no doubt. As an example, I've been trying to opt for more durable and irreverent pieces that don't require to be changed every season, and I intend to continue this behavior in the future.
Portuguese woman, 24 years old, Communication Master Student	Yes, without a doubt I intend to consider my choices and purchases in the future in order to preserve the environment
Portuguese male, 27 years old, Designer	Yes. I feel that I already do it nowadays, not with everything I buy, but I'm on the way to it and I hope in the future to be even more conscientious and responsible.
Portuguese male, 52 years old, COO	Yes, at least in some categories. I intend to continue with the behaviors I have today, but I think there is room for further improvement.

KNOWLEDGE AND PURCHASE INTENTION REGARDING LUXURY SUSTAINABLE PRODUCTS

Nowadays, several luxury brands have been adopting sustainable practices in their business model. In this way, five procedures have been implemented by this industry: recycling technique, upcycling, sustainable alternative materials, renting and selling second-hand.

The recycling technique consists of reusing products to give them a new life. The upcycling technique concerns the use of materials that were not used in the production of previous collections. The usage of alternative materials is about choosing more sustainable materials

(econyl, for example) rather than unsustainable materials. In turn, renting promotes the sale of use rather than the product itself to avoid waste. Finally, second-hand sales refer to the sale of products that were once used by other people and therefore are not considered new.

1. Are you aware of these sustainable techniques/products that luxury brands have been implementing/producing?

<p>Portuguese male, 23 years old, Biologist</p>	<p>I was already aware that luxury brands were generally moving toward a more sustainable performance. In terms of the specific techniques, I already knew the recycling procedure, the adoption of sustainable alternative materials and the option of selling second-hand. However, he did not know the practice of renting or upcycling was being implemented.</p>
<p>Portuguese woman, 22 years old, Marketing Intern</p>	<p>Yes, I am aware that in general this industry is trying to adopt a more circular economy, which discourages waste. I had already heard about all these techniques, but some specific methodologies I had never heard of, such as the production of handbags with mushroom roots to replace animal skin.</p>
<p>Portuguese woman, 24 years old, Communication Master Student</p>	<p>I've heard of all these methods, but the one I'm least aware of is renting. To be honest I think this technique would be the least likely option for me to choose because in my view it would only make sense to rent a product if I had a gala or important event, and since I never or rarely have this type of event I don't see myself choosing this option and maybe that's why I don't know so well.</p>
<p>Portuguese male, 27 years old, Designer</p>	<p>I am aware of upcycling technique and one of my favorite luxury brands Marine Serre relies heavily on this technique. I am also aware that Balenciaga does a lot of textile manipulation to look like leather. I also know some alternative materials used by Prada for example, like econyl and alternative leathers used by Stella McCartney. Finally, I am also aware of the selling second-hand and renting technique.</p>
<p>Portuguese male, 52 years old, Manager</p>	<p>I wasn't aware of most of these new techniques. I only knew the recycling technique and selling through second-hand market, the other procedures are new to me.</p>

2. What is your opinion about these practices and consequently about the products?

<p>Portuguese male, 23 years old, Biologist</p>	<p>In my opinion, I think these practices make perfect sense and I think they should continue to be improved and implemented in more and more brands and products because, in my opinion, the luxury industry should set an example and should be a model to follow. I believe that by taking the lead in this area, the luxury business will automatically influence other industries of the economy, including fast fashion, to adopt a</p>
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	different attitude that is more sustainable and conscious.
Portuguese woman, 22 years old, Marketing Intern	For me, the fact that luxury brands adopt these practices and techniques is a bonus. Seeing that brands are adapting to today's problems and trying to act on it only makes me appreciate and desire their products even more. The fact that luxury brands care about and apply sustainable techniques will make me prefer them over those that do nothing about this subject. Furthermore, in my opinion, quality and durability are not a problem because these are brands with steady standards and excellent reputations.
Portuguese woman, 24 years old, Communication Master Student	I believe these are excellent initiatives on the part of the luxury industry and I think they drive other industries to do the same, which contributes to a healthier and more sustainable world. Regarding the products, I don't think there are any obstacles because I believe that the quality and durability will remain intact.
Portuguese male, 27 years old, Designer	Regarding the three more sustainable production techniques, I would totally buy this type of product without a doubt. As for the option of renting, I don't see myself considering that option because I feel that I don't need products for a specific situation. Finally, regarding the sale of second-hand products, I am very apologist, I even buy a lot of luxury second-hand things at Farfetch, Vestiarie, Vinted, Depop and I feel that I can find great deals, original and new pieces. I think this last option allows me to find items that were never sold in Europe, but in other parts of the world and I have the opportunity to have a mega exclusive product.
Portuguese male, 52 years old, Manager	I think these practices are a good initiative on the part of luxury brands. Regarding my opinion on products manufactured using these techniques, I think that as long as these sustainable practices guarantee the same quality, comfort, prestige and feeling of pleasure, personal fulfillment, these types of products can be a good alternative to unsustainable products.

3. Would you be willing to buy this type of product instead of an unsustainable luxury product?

Portuguese male, 23 years old, Biologist	Of course yes, as long as quality, durability, rarity and prestige are guaranteed, which I have no doubt they are, it is up to each one of us to choose the brand and product that make the difference and positively impact the environment. Therefore, without any doubt in my next luxury purchases, I will pay attention to the techniques and materials used in order to make the most responsible choice possible, and for sure that buying a second-hand product will be a valid possibility for me.
	Undoubtedly yes. I think it would be interesting for luxury brands to have iconic/bestseller lines in

<p style="text-align: center;">Portuguese woman, 22 years old, Marketing Intern</p>	<p>a sustainable version, and I would surely opt for the more sustainable option. Having that stated, I would be willing to pay 15%/20% more than the regular price to have a sustainable luxury good. That is, if I consider the price increase to be fair, I am willing to pay more for a sustainable luxury good. That is because I assume myself concerned about the environment and I think brands should be concerned too, so, in my choices, I will try to make a difference and improve the environmental impact. As for the other two methods, I think I would opt for the rental option in very specific situations such as events and ceremonies. In the case of second-hand luxury goods, I would have no problem purchasing this type of goods if I found a reasonable price.</p>
<p style="text-align: center;">Portuguese woman, 24 years old, Communication Master Student</p>	<p>As I have already mentioned, I am in favor that luxury companies adopt these techniques in their production processes. If I had to choose between two products with similar characteristics and from the same brand but knowing that one was produced using sustainable techniques and the other not, without a doubt I would opt for the sustainable one, even if the price was higher.</p>
<p style="text-align: center;">Portuguese male, 27 years old, Designer</p>	<p>Yes, absolutely yes. As I mentioned, I already purchase some products resulting from these techniques and without a doubt I intend to continue to do so in the future.</p>
<p style="text-align: center;">Portuguese male, 52 years old, Manager</p>	<p>Honestly, for me, a sustainable product will only be considered a possible option if quality and comfort are guaranteed and are of excellence. The issue of sustainability is secondary to me. Naturally, if the product is excellent and sustainable even better, and if there are two products that are practically the same, the only difference being that one is sustainable and the other is not, obviously my choice is the sustainable product.</p>

Appendix B: Online experimental survey

Welcome, dear Participant!

I am a 2nd year student of the Master's in Management with a Specialization in Strategic Marketing at Católica Lisbon School of Business and Economics. In order to complete my Master's degree, I am developing my dissertation and, therefore, I thank you in advance for your participation and contribution.

In the present survey there are no right, or wrong answers and the objective is that you answer as honestly as possible. The questionnaire is anonymous and for that reason your data is confidential. For any information you can contact me via email:

vmasterthesis2022@gmail.com

This survey aims to understand to what extent new sustainable practices in the luxury industry can impact consumers' perception and decision-making process.

Thus, in order to answer this questionnaire, it is important that you only consider personal luxury goods (such as clothes, jewelry, watches, bags, etc.) and that you perceived them as being timeless and unique. Additionally, you should also keep in mind that these products confer status and satisfaction to its consumers while also fulfilling their functional and emotional needs.

1. Do you own or buy personal luxury goods?

- Yes
- No

2. Do you have any interest regarding luxury products, or do you wish to own luxury goods someday?

- Yes
- No

3. What is your gender?

- Female
- Male

Block 2 – Consumption habits of luxury products

Now I would like to ask you some questions regarding your consumption habits of luxury products.

1. How would you classify yourself in terms of interest in luxury products?

Not at all interested Very much interested

Please select only one answer.

2. How many luxury products do you think you own?

- At least one
- Between 2 and 4

- Between 5 and 7
- More than 8

3. What was the last product you bought or received?

- Clothes
- Jewelry
- Watches
- Shoes
- Handbags
- Other: _____

4. For whom did you buy it for?

- For myself
- Friends
- Family
- Spouse/ Boyfriend/ Girlfriend
- I did not buy it, it was offered

5. How much did it cost?

- 300€-800€
- 801€-1300€
- 1301€-1800€
- 1801€-2300€
- 2300€-2800€
- More than 2800€
- I do not know

6. How often do you buy luxury products?

- Only once
- Sporadically
- At least once a year
- Between 2 and 4 times a year
- More than 5 times a year

- I do not buy, it is a gift

7. Which of the following luxury brands do you buy or own? (you can choose more than one option)

- Gucci
- Louis Vuitton
- Chanel
- Hermès
- Rolex
- Dior
- Tiffany & Co
- Omega
- Burberry
- Other: _____

Block 3 – *Luxury consumption motives*

Now it will be presented to you some of the various motives that may or may not lead you to purchase personal luxury goods. Please indicate your level of agreement with each statement, choosing the number that best fits your opinion (1 = Strongly disagree to 5 = Strongly agree):

1. Social consumption

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
I own luxury items to satisfy my personal needs and not as an attempt to make an impression on other people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social standing is an important motivator for my luxury consumption	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Class and status

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
I own luxury products because they convey status to its clients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I own luxury products because they endow class to those who use it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Perceived ephemerality

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
I own luxury products because they can be worn for years and years and never go out of fashion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I own luxury products because they can be worn and passed down from generation to generation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I own luxury products because they last forever	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Value-expressive

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
I own luxury products because they are an instrument of my self-expression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I own luxury products because they play a critical role in defining my self-concept	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I own luxury products because they help me establish the kind of person I see myself to be

Block 4 – Attitudes towards sustainability

Now I would like to ask you some questions regarding your attitudes towards sustainability. Please indicate your level of agreement with each statement, choosing the number that best fits your opinion (1 = strongly disagree to 5 = strongly agree):

1. Consumer’s sensitivity to sustainability

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
I am concerned about environment degradation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am in favour of awarding a penalty for products negatively impacting the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During elections, issues regarding the environment are instrumental in my choice of candidate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am ready to boycott a company that does not comply with social and environmental regulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often talk about pollution and the environment with my family, children, friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Block 5 – Attitudes and perceptions towards sustainable luxury products

Now I would like to ask you some questions regarding sustainable luxury products. Please read the following news carefully:

(Upcycled example for men)

Recently, the world-renowned luxury brand, Louis Vuitton, launched a sneaker collection, made using textiles and materials that were not used in the production of past collections, in order to prevent the waste of resources and reduce the environmental impact. Below you can see one of the examples of this collection, known as LV Trainer Upcycling.



OR

(Upcycled example for women)

Recently, the world-renowned luxury brand, Stella McCartney, launched a whole collection, made using textiles and materials that were not used in the production of past collections, in order to prevent the waste of resources and reduce the environmental impact. Below you can see one of the examples of this collection:



(Recycled example for men)

Recently, the world-renowned luxury brand, Prada, launched a whole collection, made using recycled materials to reduce the environmental impact. Below you can see one of the examples

of this collection, made through a material generated from recycled plastic collected in the ocean, fishing nets and textile fibers.



OR

(Recycled example for women)

Recently, the world-renowned luxury brand, Prada, launched a whole collection, made using recycled materials in order to reduce the environmental impact. Below you can see one of the examples of this collection, made through a material generated from recycled plastic collected in the ocean, fishing nets and textile fibers.



(Sustainable material for men)

Recently, the world-renowned luxury brand, Gucci, launched a whole collection, made using alternative sustainable materials in order to reduce the environmental impact. Below you can see one of the examples of this collection, made through regenerated materials such as fish nets, carpets and other scarps.



OR

(Sustainable material for women)

Recently, the world-renowned luxury brand, Stella McCartney, launched a whole collection, made using alternative sustainable materials in order to reduce the environmental impact. Below you can see one of the examples of this collection, made through root structures of fungi (for example mushrooms) in replacement of fur.



Now please answer the following questions considering the information you have just observed indicating your level of agreement with each statement.

Attitudes towards sustainable luxury goods

1. Willingness to buy

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
I would consider purchasing this sustainable luxury product instead of a similar but unsustainable luxury product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider purchase this luxury product even if it is at higher prices than “typical” luxury products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Perception towards sustainable products

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
I think this product is original	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This product surprised me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel conscious /environmentally friendly with this product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I would feel glamorous with this product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I would feel satisfied with this product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I would want to brag myself to others about this product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Comparison with non-sustainable products

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
I believe the quality of this product is similar to a non-sustainable product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe the prestige of this product is similar to a non-sustainable product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe the durability of this product is similar to a non-sustainable product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I believe the timelessness of this product is similar to a non-sustainable product

Perceptions of sustainable luxury goods

1. Familiarity with sustainable products

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
I am familiar with recycled luxury products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am familiar with upcycled* luxury products * (production of pieces through the usage of textiles and materials that would otherwise be unused and considered waste)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am familiar with luxury products made from alternative sustainable materials, as for example, substitute materials for plastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Perceived contradiction between sustainability and luxury

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
Luxury and sustainable development are contradictory	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Luxury has no future in a sustainably driven world	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. CSR expectations of luxury brands

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree or disagree (3)	Somewhat agree (4)	Strongly agree (5)
Luxury brands have to protect endangered species	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important for luxury brands to use recycled packaging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Luxury brands must make efforts to reduce carbon emission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Block 6 – Sociodemographics

To conclude, I would like to ask you some demographic questions

1. Where are you from?

-

2. How old are you?

- Less than 18 years old
- 18-25 years old
- 26-35 years old
- 36-45 years old
- 46-55 years old
- 56-65 years old
- More than 65 years old

3. What is your highest level of education?

- Middle school graduate
- High school graduate
- Professional degree

- Bachelor's degree
- Master's degree
- Doctorate degree

4. What is your current professional status?

- Full-time employed
- Part-time employed
- Unemployed
- Student
- Student worker
- Retired

5. What is your marital status?

- Single
- Living with my partner
- Married
- Divorced
- Widowed

6. What is your current net monthly income?

- Less than 750€
- 750€-1000€
- 1001€-1500€
- 1501€-2000€
- 2001€-2500€
- 2501€-3000€
- 3001€-3500€
- More than 3500€

Appendix C: Sample characterization

		Participant type 1 Luxury owners	Participant type 2 Luxury admirers	Participant type 3 Luxury disinterested
N		43.7% (n=141)	27.3% (n=88)	29.1% (n=94)
Gender	Male	36.9%	29.5%	38.3%
	Female	63.1%	70.5%	61.7%
Nationality	Portuguese	86.5%	85.2%	92.6%
	English	1.4%	1.1%	2.1%
	Venezuelan	2.1%	3.4%	2.1%
	Brazilian	0.7%	3.4%	-
Age	18-25 years old	47.5%	67%	39.4%
	26-35 years old	12.8%	6.8%	10.6%
	36-45 years old	9.2%	4.5%	7.4%
	46-55 years old	21.3%	19.3%	30.9%
	56-65 years old	7.1%	1.1%	11.7%
	Above 65 years old	2.1%	1.1%	-
Education	Middle school graduate	-	2.3%	2.1%
	High school graduate	12.1%	14.8%	21.3%
	Professional degree	4.3%	2.3%	5.3%
	Bachelor's degree	61%	58%	48.9%
	Master's degree	22%	21.6%	18.1%
	Doctorate degree	0.7%	1.1%	4.3%
Profession status	Full-time employed	58.9%	43.2%	71.3%
	Part-time employed	2.8%	2.3%	2.1%
	Unemployed	2.8%	2.3%	2.1%
	Student	26.2%	37.5%	14.9%
	Student worker	7.8%	14.8%	7.4%
	Retired	1.4%	-	2.1%
Marital status	Single	46.1%	68.2%	48.9%
	Living with partner	19.1%	6.8%	7.4%
	Married	33.3%	25%	35.1%
	Divorced	1.4%	-	6.4%
	Widowed	-	-	2.1%
Income	Less than 750€	19.1%	39.8%	19.1%
	750€-1000€	14.9%	13.6%	23.4%
	1001€-1500€	20.6%	21.6%	29.8%
	1501€-2000€	16.3%	10.2%	16%
	2001€-2500€	9.9%	4.5%	5.3%
	2501€-3000€	7.8%	8%	1.1%
	3001€-3500€	3.5%	1.1%	1.1%
	More than 3500€	7.8%	1.1%	4.3%

Appendix D: Consumption habits of luxury products

	LUXURY OWNERS
Gender	63.1% female 36.9% male
Age	50% male aged between 18-25 years old 46.1% female aged between 18-25 years old
Interest in luxury	MMale = 6.46 MFemale = 6.42
Luxury products possession	36.5% male between 2 and 4 products 44.9% female between 2 and 4 products
Purchase recipient	61.5% for himself 53.9% for herself
Cost	50% male between 300€-800€ 11.5% male more than 2801€ 61.8% female between 300€-800€
Frequency of purchase	50% male sporadically 48.3% female sporadically
Ownership of Gucci products	21.3% female 17.3% male
Ownership of Louis Vuitton products	22.5% female 19.2% male
Ownership of Dior products	22.5% female 7.7% male
Ownership of Burberry products	27% female 21.2% male
Ownership of Chanel products	15.7% female 15.4% male
Ownership of Omega products	2.2% female 13.5% male
Ownership of Rolex products	1.1% female 11.5% male
Ownership of Hermès products	1.1% female 11.5% male
Ownership of Prada products	8.1% female 11.5% male
Ownership of Carolina Herrera products	8.1% female 3.8% male

Appendix E: Personas

The promising persona



Personal data:

-  Teenage woman
-  20 years old
-  Bachelor's degree
-  Student
-  Single
-  Less than 750€ / month
-  Concerned about the environment and dedicated to make a change about it
-  Aware of the sustainable practices used by personal luxury goods brands


The connoisseur persona











Personal data:

-  Young woman
-  27 years old
-  Master's degree
-  Full-time employed
-  Single
-  1350€ / month
-  Moderate concern for the environment
-  Knowledgeable of many luxury products and some of the sustainable techniques used

The faithful persona



Personal data:

-  Woman
-  52 years old
-  Master's degree
-  Full-time employed
-  Married
-  2100€ / month
-  Concerned about the environment and believes that actions should be taken about it
-  Low awareness of the new sustainable practices used by the luxury industry