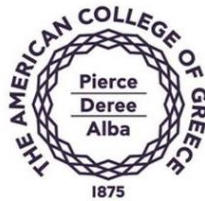


**“Consumer Behavior and the Consumption of Counterfeit Luxury  
Brands: An Evolutionary Perspective”**

**CN6460 – THESIS IN STRATEGIC COMMUNICATION**

**Winter & Spring term 2024**



Chrysoula Drosou

**Instructor: Dr Vasiliki Kontopoulou**

## **Acknowledgments**

For the completion of this thesis, I would like to express my gratitude to my supervisor, Vasiliki Kontopoulou, for her continuous guidance, advices and support. I am also really grateful for her patience and understanding throughout this process and for being such a calm supervisor. I deeply appreciated this collaboration.

Additionally, I would like to extend my heartfelt thanks to my family for their encouragement throughout this challenging period and to my best friend for her constant support times.

Finally, my mother deserves special thanks as she taught me that no matter the challenges ones faces, life continues. Even in painful situations, it is possible to find the strength and courage to continue. She is a true fighter and this thesis is dedicated to her.

## Abstract

For decades, counterfeit luxury brands have posed a global challenge to society. Over time, counterfeits have increasingly entered the market, gaining considerable interest from researchers, practitioners and public policy makers. This thesis aims to explain the influence of fundamental mating motives on the preference for counterfeit luxury brands among men and women from an evolutionary perspective, while examining loneliness as a potential moderator of this relationship.

Based on evolutionary psychology and through an experimental study, it was found that the consumption of counterfeit luxury brands has different functions for men and women in a mating context. More specifically, counterfeit luxury brands possibly act as a deceptive signal of underlying mate value for men, as they aim to display their wealth to their potential romantic partners. Conversely, women use counterfeit luxury products as a signal to their female rivals, indicating their ability to compete.

Loneliness was examined as a potential moderator, but it is not found any significant influence on the relationship between mating motives and counterfeit consumption. These findings contribute to the theoretical understanding of counterfeit luxury brand consumption and have practical implication for marketers. They can use these insights to create targeted content and campaigns which address to the distinct motivations of male and female consumers in the luxury brand market.

**Keywords:** Counterfeit Luxury Brands, Evolutionary Psychology, Mating Motives, Consumer Behaviour, Loneliness

## Table of Contents

Introduction .....	1
Literature Review .....	5
Introduction .....	5
From Luxury Consumption to Counterfeiting.....	5
Conspicuous Consumption.....	6
Conspicuous Motivation.....	7
The Rise of Counterfeit Consumption.....	9
Counterfeit Consumption .....	10
Negative Effects of Counterfeiting.....	11
Motivations behind Counterfeit Consumption .....	13
Counterfeiting and Need for Status .....	17
Evolutionary Psychology.....	18
Fundamental Motives .....	19
Proximate and Ultimate Expectations .....	20
Evolution Psychology as a Framework to study Conspicuous Consumption .....	21
Evolution Psychology as a Framework to study Consumption of Counterfeit Luxury Brands.....	27
Loneliness: A contemporary Public Health Issue .....	30
Types of Loneliness .....	31
Evolutionary Psychology and Loneliness.....	32
Loneliness and Social Reconnection .....	33
Characteristics of Loneliness.....	33
Sociosexuality, Relationship satisfaction and Loneliness .....	34
Loneliness and Consumption .....	35
Loneliness, Mate-Seeking and Conspicuous Consumption .....	36
Methodology and Results .....	37
Method.....	37
Participants and design .....	38
Procedure.....	40
Manipulations.....	41
Pretest.....	41
Dependent measure .....	42
Other measures .....	42
Data Collection.....	45
Results .....	46

General Discussion .....	54
Contributions of the Thesis .....	56
Limitations and Future Research.....	58
References .....	59
APPENDIX .....	79

## List of Figures

Figure 1: Sex distribution.....	38
Figure 2: Age distribution .....	39
Figure 3: Education distribution .....	39
Figure 4: Relationship Status Distribution.....	40
Figure 5: Annual Income .....	40
Figure 6: Men's intention to purchase counterfeit luxury brands vs. low-status brands as a function of motive manipulation (intrasexual competition).....	47
Figure 7: Men's intention to purchase counterfeit luxury brands vs. low-status brands as a function of motive manipulation .....	47
Figure 8: Women's intention to purchase counterfeit luxury brands vs. low-status brand as a function of motive manipulation (intrasexual competition).....	48
Figure 9: Women's intention to purchase counterfeit luxury brands vs. low-status brand as a function of motive manipulation .....	48
Figure 10: Men's intention to purchase counterfeit luxury brands vs. low-status brand as a function of motive manipulation (intersexual attraction).....	49
Figure 11: Men's intention to purchase counterfeit luxury brands vs. low-status brand as a function of motive manipulation .....	50

## **List of Tables**

Table 1: Reliability of Loneliness Scale .....	43
Table 2: Reliability of Materialism .....	43
Table 3: Reliability of SOI.....	44
Table 4: Reliability of Social Subscale of Loneliness .....	44
Table 5: Reliability of Family Subscale of Loneliness .....	45
Table 6: Reliability test of Romantic Subscale of Loneliness .....	45
Table 7: Summary of Empirical Support for Study Hypotheses.....	52

## **Introduction**

Recent trends show that counterfeiting is increasingly affecting countries globally (Samaddar & Gandhi, 2022). By the end of 2022, the value of global counterfeit product reached \$3 billion (Samaddar & Gandhi, 2022). Counterfeit luxury products involve unauthorized reproductions of genuine luxury brands, sold at lower prices with identical packaging, labelling and branding (Shan et al., 2021). For example, a genuine Hermes Birkin bag can cost \$10,000, a Chinese vinyl knockoff \$60 and a quality imitation Turkish leather bag \$450 (Ndereyimana et al., 2021).

In general, counterfeit products are now easily accessible through various forms of deception. In diverse luxury goods, from painting to jewellery, there is confusion between what is real and what fake. In fact, some counterfeit products are reproduced so well that even the brand owner cannot distinguish them from the genuine ones.

Counterfeiting has negative effects on consumers, manufacturers and society as a whole. First of all, they can endanger individual health due to safety reasons, and support child labor and other criminal activities. Moreover, they affect the business world in various ways, creating unfair competition and reducing demand for legitimate goods (Davidson et al., 2017). This issue has serious implications, including the loss of \$77.5 billion in tax revenue and more than 2.5 million jobs each year (Eisend, 2016). Additionally, according to IACC, 5 to 7% of global trade involves illegal goods potentially reaching up to \$600 billion annually (Norum and Cuno, 2011).

Despite global efforts to combat counterfeiting, there are no signs of relief. A catalyst for this global threat is the strong consumer demand. To develop effective countermeasures, the underlying motivation for purchasing counterfeit products must be extensively analysed (Khan et al., 2023).

Counterfeit products offer a desired image of luxury at a lower cost, making them appealing to consumers who desire genuine brands but seek cheaper alternatives (Shan et al., 2021). Counterfeits allow consumers to fulfil social needs, such as gaining social approval and signalling (Shan et al., 2021). Consequently, consumers may be drawn to counterfeit luxury brands because of their functional, socio-political and economic



value. Additionally, psychographic, socio-political and product factors play important roles (Khan et al., 2023).

While research on counterfeit luxury consumption is growing, it remains inconsistent, fragmented and lacks of clear research direction (Khan et al, 2023). Researchers, marketers and policymakers are actively seeking a comprehensive knowledge and strategies to combat this issue (Samaddar & Gandhi, 2022).

Previous studies have explored several factors influencing consumer behaviour towards counterfeit, including self-enhancement (Shan et al., 2021), the discrepancy between an individual's actual and ideal self (Ngo et al., 2020) and social functioning adaptations (Marticotte & Arcand, 2017).

One interesting aspect of research is the investigation of the psychological and evolutionary factors which lead consumer behaviour towards counterfeit luxury goods. Evolutionary psychology supports that some fundamental motives, such as the desire for social status and mate attraction, could influence consumer preferences (Griskevicius & Kenrick, 2013). Previous research of Miller (2009) have supported that conspicuous consumption serves as a signal of social status and attraction of potential mates. However, the role of counterfeit luxury brand have not been adequately explores.

According to Saad (2011), the consumption of counterfeit luxury brands may have evolutionary roots, but there is not enough empirical evidence linking counterfeit luxury consumption and evolutionary motives. On the other hand, Griskevicius and Kenrick (2013) have studied consumer behaviour from an evolutionary perspective, suggesting that individuals' preference for luxury brands are related to costly signalling as luxury brands signal desirable traits to others (Saad & Vongas, 2009). Based on costly signalling theory, signals communicate underlying traits of an organism that cannot easily be perceived and these characteristic are linked to fitness qualities. Based on research, men purchase luxury brands as a signal to attract a romantic partner or to compete with other males (Hennighausen, 2016). Women flaunt luxury brands to signal to other women that their partner is devoted to them (Wang & Griskevicius, 2014) as well as to deter female rivals in intrasexual competition context (Hudders et al., 2014).

However, how these motives can trigger men's and women's counterfeiting luxury consumption is underexplored. Khan et al. (202) have highlighted the need for a holistic framework to address the increasing spread of counterfeiting and emphasized the fact that few studies have theorized the consumption of luxury brands.

As a result, this thesis investigates the consumption of luxury brands from an evolutionary perspective as there is not adequate empirical research studying counterfeit luxury consumption as a deceptive strategy into an evolutionary angle. Rooted in deceptive signalling and the sexual selection (Darwin, 1871), this thesis explores the nature of this system and the impact of different evolutionary motives on the consumption of counterfeit luxury brands vs. low status brand among men and women, considering loneliness as a moderator of the relationship.

Loneliness was chosen to be explored as in contemporary society people are at least as lonely as in the past, if not even lonelier (Manchester Institute of Education, 2018). As a result loneliness is a psychological state that is rising around the world and can be converted into a public health issue. Researches have examined the role of loneliness in conspicuous consumption. For instance, Wang et al. (2012) suggested that loneliness shapes the effectiveness of consensus-related information in consumer decisions. Moreover, as mentioned before, mating motives affect conspicuous consumption (Sundie et al. 2011). Based on this result, the study of Liu et al. (2020) suggested that loneliness is another factor that could induce people's mating motives.

Considering the above, loneliness has emerged as a psychological state that can influence consumer behaviour (Pieters, 2013). Nevertheless, marketing studies have not specified the mating motives by corresponding consumption (Liu et al., 2020). For this reason, this research investigated the moderating role of this variable. More specifically, this thesis aims to:

- a) Empirically showcase that activating mating motives (intrasexual vs intersexual) influences men's and women's intention to purchase counterfeit luxury brands over low status
- b) Examine how loneliness can moderate the relationship between mating motives and purchase intention of counterfeiting luxury brands.

An experimental methodology was chosen for the above research. Experiments are ideal constructions to explain causation and are commonly used for research in sociology and psychology.

The findings revealed that men might use counterfeit luxury brands as a deceptive signal to attract a romantic partner or compete with a male rival. Conversely, women's flaunting of counterfeit consumption is a signal to other female rival that they can compete. Loneliness did not moderate the relationship between mating motives and purchase intention of counterfeiting luxury brands.

The above research fills an important gap in the evolutionary psychology and consumer behavior literature, contributing both theoretically and practically.

## **Literature Review**

### **Introduction**

Despite the global economy being characterized by a recession, the luxury brand sector is performing well (Park et al., 2023). In 2022, the global luxury market grew by 21% with 95% of all luxury brands showing positive growth (Park et al., 2023). Various disciplines such as economics (from classic to behavioral ones), sociology, anthropology or evolutionary psychology have examined luxury (Smith & Bird, 2005). This knowledge has traditionally associated luxury with wealth and social status (Y.Wang, 2022).

Luxury products are exclusive, signaling wealth, achievement and success (Y.Wang, 2022). However, this status-centric “wealth-related” perspective does not sufficiently explain the reality of contemporary luxury consumption (Y.Wang, 2022). Today, anyone can wear quality clothes or bags and consumers decide what to wear based on their respective profiles, resulting in the acquisition of products that reflect their identity or cultural capital (Park et al., 2023). For example, many consumers do not own luxury products but rent them or lease them at much lower cost (Y.Wang, 2022).

Moreover, luxury is not associated with a limited range of categories but comprises a wide range of goods and services, including elegant apparel and handbags, lifestyle sneakers, ripped jeans and backpacks, high-end watches and jewelry, expensive wines and spirits, high-tech cars and bicycles, high-prices coffee machines or blow-dryers, luxury hotels, spas and fine dining (Y.Wang, 2022).

Considering the above, the world of luxury is changing but the academic marketing research investigates the consumers of this industry using the same primary lens (Y.Wang, 2022). As luxury continues to expand in scope and complexity, this wealth-based perspective needs to be supplemented with other viewpoints. This paper presents a more complete view of luxury consumption.

### **From Luxury Consumption to Counterfeiting**

Luxury consumption is closely associated with the phenomenon of counterfeiting. Luxury products are accessible to everyone and as result everyone desires them. As the desire for these items grows, the demand for counterfeit goods also increases (Kahn et al., 2021). Counterfeit goods are products which mimic the appearance and branding of genuine luxury products, allowing consumers to signal wealth and status with the minimum cost (Kahn et al., 2021).

As a result, the demand for counterfeit goods is linked with the same motivations which drive genuine luxury purchases such as social approval, status signaling and identity expression (Kahn et al., 2021). Although global institutions have made many attempts to combat counterfeiting, the strong consumer demand persists (Khan et al., 2020). Understanding the motivations behind luxury consumption both genuine and counterfeit, is essential for developing effective strategies to address the challenges posed by counterfeiting in the luxury market (Shan et al., 2021).

### **Conspicuous Consumption**

Conspicuous consumption is one of the oldest ideas in consumer behavior (Berger & Ward, 2020). Different theories attempt to investigate the reasons behind individual conspicuous consumption (Hamdani et al., 2023). Many marketing studies have specifically addresses the conspicuous consumption of luxury goods (Yuan & Zhang, 2019). Conspicuous goods refer to highly visible and noticeable items that attract attention and signal status, wealth, or prestige (Hamdani et al., 2023). The main goal of these goods is to gain respect, admiration and build relationships (Hamdani et al., 2023).

Techniques like observable logos or explicit patterns are employed by brands to signal their products (Beger & Ward, 2010). For example, Burberry's plaid or the Apple logo helps others form an opinion about the wearer. Consumers have the urge to showcase that their t-shirt is Armani but not feel the same need when their t-shirt is from Wal-Mart (Beger & Ward, 2010). As a result, it can be inferred that there is a relationship between brand signal explicitness and price: low price goods have fewer brand markers, while high-price goods are more explicit (Berger & Ward, 2010). This approach stems from Veblen's theory which emerged as a critique of the neoclassical theory of consumption (Verdugo & Ponce, 2020). Veblen argued that consumers use

their choices to express their desired identities and characteristics (Berger & Ward, 2010).

The findings of Shamu et al. (2024) reveal a significant relationship between social media use and the social visibility of respondents' consumption. Furthermore, the continued increase in the social visibility of respondents' consumption is associated with increased conspicuous consumption behavior and appearance (Shamu et al., 2024).

### **Conspicuous Motivation**

There are two types of conspicuous motivation: the bandwagon effect and the snob effect (Verdugo & Ponce, 2020). The bandwagon effect occurs when the consumers use brands to be accepted by prestigious social groups, while the snob effect involves the rejection of specific goods perceived as less prestigious (Verdugo & Ponce, 2020).

Several studies have examined conspicuous motivation in relation to socio-demographic variables (Such as age and gender) and psychological conditions (Such as self-concept and tendency to materialism). These studies have revealed that men show a greater tendency than woman to luxury consumption due to conspicuous motivation, as they seek social acceptance through it. Furthermore, men use social acceptance and status to validate themselves in their work environment (Verdugo & Ponce, 2020).

To better categorize the conspicuous motivation, it is separated into two categories: external and internal motivation.

#### ***External Motivation of Conspicuous Consumption***

Power is considered the ability to control resources and outcomes and is a mental state that varies from person to person (Rucker & Galinsky, 2008). A typical example is bosses who, on one hand, have power over employees but may feel powerless when an employee leaves for a better job. Generally, people consider low power to be an aversive state because it evokes feelings of powerlessness. A person with low power tends to acquire conspicuous products as means of restoring their power (Rucker & Galinsky, 2008). On the other hand, strong individuals, being sure

of them, do not feel the need for external demonstrations of their strength (Rucker et al., 2014). Research shows that people feeling powerless may use luxury products to elevate their status (Koo & Im, 2019). Koo and Im (2019) found that those in low-power conditions tend to prefer larger sizes and more prominent logos to assert their status. Consequently, powerless individuals tend to consume conspicuously more than powerful ones (Rucker & Galinsky, 2008).

Another external motivation is social class. Consumers in lower social class tend to spend more on distinctive products to reduce the gap between what they have and what others have (Ordabayeva & Chandon, 2011). Additionally, when equality increases, the conspicuous consumption of low-class consumers who are not interested in status decreases, while the conspicuous consumption of low-status consumers who are interested in the social status increases. Research by Han et al. (2010) argues that consumers of different social classes have different preferences in luxury products depending on whether they wish to connect or disconnect with another social group. For example, upper-class consumers prefer products with large and conspicuous logos to show the lower class that they are not one of them. Conversely, low-class consumers, in their attempt to catch up with the upper class, prefer to buy imitations due to their financial inability to buy authentic luxury brands.

Age is another external motivation. The majority of literature on conspicuous consumption argues that it is young people who enhance conspicuous consumption. For example, teenagers in order to protect their identity and gain impressions prefer to wear branded clothes (Piacentini & Mailer, 2004). Data show that the millennial generation is an important market segment for luxury goods, predicted to account for half of global spending on personal luxury goods by 2025 (Khan et al., 2023). According to O’Cass and Frost (2002), younger consumers are more prone to conspicuous purchases to gain status and social prestige. On the other hand, adults are more confident in them and are less inclined to signal through consumption (Sherman et al., 2001).

Additionally, during economic crises, consumers have less money available for luxuries and prefer basic product categories (Kamakura & Du, 2012). For example, consumers in a crisis will not buy highly visible goods that signal status. Nevertheless, research by Nunes et al. (2011) suggests that even during crises,

consumers buy luxury brands with prominent logos. During the 2008 financial crisis, Louis Vuitton and Gucci displayed more prominent logos on new products than older ones and manufacturers generally did not cut back.

Furthermore, integration into a social group is a fundamental need. When a person feels socially excluded the fundamental needs of belonging, control, self-esteem and meaningful existences are threatened (Williams, 2001). Lee and Shrum (2012) claimed that a person who is a social outcast conspicuously consumes to regain power and gain the attention of others, trying to reconnect with society.

### ***Intrinsic Motivation of Conspicuous Consumption***

Materialism is defined as the set of values and beliefs of consumers regarding the accumulation of wealth as a source of happiness and success in life (Burroughs & Rindfleisch, 2002). Both values and beliefs, in turn, influence individuals' choices in different contexts (Richin & Dawson, 1992). Research connects materialism and insecurity, concluding that individuals seek material good to feel secure (Chang & Arkin, 2002). Highly materialistic people buy more conspicuous products compared to less materialistic people to arouse envy and receive admiration from others.

Moreover, religions often oppose the possession and display of wealth (Stillman et al., 2012). Both Eastern and Western religions state that to conquer spirituality, one must come into conflict with materialism. The most famous spiritual leaders, such as Jesus, Buddha and Gandhi openly resisted conspicuous consumption (McKibben, 1998). Therefore, highly religious people do not see conspicuous consumption as a way to gain fame and prestige and higher levels of spirituality are negatively associated with it (Stillman et al., 2012).

### **The Rise of Counterfeit Consumption**

The rise in conspicuous consumption and increased spending on luxury items has fueled demand for cheaper imitations of high-end brands (Samaddar & Gandhi, 2022). The production, distribution and consumption of counterfeit products are a rapidly growing global trend (Norum & Cuno, 2011). Research evident highlights that counterfeiting is a significant global economic issue (Eisend, 2016).



Counterfeiting has been a significant issue for over 2.000 years, with its volume and complexity increasing dramatically in recent times (Pittiglio, 2024). In 1996, losses due to counterfeit goods exceeded \$200 billion, rising to \$512 billion in 2004 and reaching \$600 billion by 2014 (Quach & Taichon, 2018). Four out of ten businesses face significant challenges due to counterfeiting and trademark infringement (Shan et al., 2021). The luxury fashion sector, in particular, accounts for 60 to 70% of all counterfeit trade (Shan et al., 2021). Luxury brands, like Louis Vuitton face challenges related to lost sales and shifting consumer perception of brand prestige (Quach & Thaichon, 2018).

According to a 2019 OECD report, approximately 2.5% of global trade consists of counterfeit goods, valued at around 412 billion euros, and this trend is expected to rise (Rasmus et al., 2024). This phenomenon has a significant impact on the EU market, where the value of imported counterfeits is estimated at US \$134 billion, accounting for 5.7% of the total value of EU imports (Rasmus et al., 2024). The main sources of counterfeit products are countries like China, Turkey, the United Arab Emirates and Singapore (Pittiglio, 2024).

This shift underscores the need for global efforts to understand and combat counterfeiting in both developed and developing markets (Samaddar & Gandhi, 2022). Consequently, the consumption of counterfeit products has become a prominent subject of study for many researchers (Rasmus et al., 2024).

### **Counterfeit Consumption**

Counterfeit luxury products are illegal imitations of genuine goods sold at lower prices (Quach & Thaichon, 2018). According to Samaddar and Gandhi (2022), it can be defined as the “manufacture or sale of a product that deliberately and calculatedly reproduces a genuine trademark”.

It is important to clarify the difference between counterfeit and pirated products. A counterfeit product is an unauthorized imitation of a branded product offered on the black market, while a pirated product is an unauthorized exact copy of a copyrighted product (Eisend, 2016). Typically, piracy involves categories like music, movies or software, whereas counterfeiting pertains to tangible goods such as clothing (Eisend, 2016).

The counterfeit market can be divided into two sub-markets: deceptive and non-deceptive (Quach & Thaichon, 2018). In the deceptive market, consumers unknowingly purchase fake products, whereas in the non-deceptive market, consumers knowingly seek bargains and accept counterfeit products as alternatives (Quach & Thaichon, 2018). The first category is common in medicine, auto-parts and currency (Khan et al., 2021). Non-deceptive counterfeit products include branded luxury goods such as clothing, shoes, watches, handbags, electronics and toys (Samaddar & Gandhi, 2022). Understanding these categories help researchers and markets explore the conditions under which consumers choose between genuine and counterfeit luxury products (Samaddar & Gandhi, 2022). Research on the ethics of counterfeiting focuses on non-deceptive counterfeiting, where consumers knowingly purchase counterfeit goods (Eisend, 2016).

### **Negative Effects of Counterfeiting**

Counterfeiting is a criminal activity with significant negative consequences for the law, product manufacturers, brand owners and society at large. Although some studies suggest that counterfeit products might benefit authentic brands (Bekir et al., 2013), the majority of research highlights severe social and economic impacts.

- Economic impact on legitimate businesses: Counterfeiting has several negative effects, primarily on legitimate businesses and the broader economy (Pittiglio, 2024). One major issue is illegal competition, which displaces legitimate business activities and negatively impacts employment, government revenues and overall economic growth (Pittiglio, 2024). As legal businesses face declining sales due to counterfeit competition, they may be forced to freeze new hiring, leading to increased unemployment in affected sectors (Pittiglio, 2024). The U.S. Chamber of Commerce (2006) stated that counterfeiting leads to the loss of thousands of jobs. Additionally, on one hand reduces business profitability results in lower government tax revenues, which in turn reduce the government's ability to fund essential services and public infrastructure (Pittiglio, 2024). On the other hand, counterfeiters do not pay taxes or wages to employees and issues such as

child labor are frequently reported (Thomas, 2007). Consequently, counterfeit activities have negative effects on businesses contribute to a slowdown in economic growth (Thomas, 2007).

- Funding of illegal activities and consumer safety risks: Counterfeiting also presents risk beyond immediate economic impacts. It is a criminal activity that can provide additional funds for other illegal activities, including drugs and arms trafficking, human trafficking and terrorist activities (Thomas, 2007). Furthermore, counterfeit products pose serious safety risks because they are not subject to the regulatory standards or production rules that apply to genuine products (Pittiglio, 2024). This situation can force government agencies to divert resources to address health and safety issues related to counterfeit goods, thereby increasing the burden on public budgets (Pittiglio, 2024). Recent research suggests that counterfeiting undermines companies' willingness to invest in innovation by shifting resources away from research and development towards addressing counterfeiting issues (Pittiglio, 2024).

According to the International Anti-Counterfeiting Coalition (IACC), counterfeit products endanger consumer health and safety because they are often made from cheap and dangerous components (IACC, 2023). Counterfeit goods lack the regulatory standards and quality controls applied to genuine products, which can lead to health hazards for consumers (IACC, 2023). As a result, counterfeiting damages company reputations and diminished consumer confidence in the global marketplace (Pittiglio, 2024).

- Impact on brand trust and consumer behavior: Counterfeiting undermines trust in legitimate products and can diminish brand reputation (Bian et al., 2016). A well know example of counterfeiting in the luxury market is Louis Vuitton. The brand's prominence makes it a frequent target for counterfeiter. The social fit function of luxury brands may lead to a loss of market share and damage to brand reputation, as potential buyers might hesitate to purchase a Louis Vuitton bag due to fears of it being fake (Olorenshaw,2011). As a result, legitimate manufacturers invest significant resources in research and development to build their brands and maintain their market position. However, the existence of counterfeit products can erode

consumer confidence and lead to a loss of revenue for these companies (Nia & Zaichkowsky, 2000).

The above issues are especially pronounced in developing economies where enforcement mechanisms are weaker (Pittiglio, 2024). Despite being aware of these, some consumers choose to buy counterfeit products which reflect unethical behavior (Bian et al., 2016). Counterfeiting affects a wide range of products, with traditional manufacturing goods being particularly vulnerable (Pittiglio, 2024). Among the most counterfeited items are footwear, followed by clothing and leather goods (Pittiglio, 2024). The presence of counterfeit products can significantly reduce the survival probability of businesses, especially those in lower technology and smaller size products (Pittiglio, 2024).

To reduce the demand for counterfeit goods, both government and business efforts are required (Norum & Cuno 2011). Addressing counterfeiting requires a multifaceted approach, including stronger intellectual property laws, consumer education and international cooperation (Pittiglio, 2024).

### **Motivations behind Counterfeit Consumption**

Research equates the consumption of fake luxuries with genuine luxury brand consumption, noting that counterfeit purchasing behavior is a brand decision rather than a product decision (Shan et al., 2021). Counterfeits offer social benefits such as symbolic value and status signaling (Shan et al., 2021). According to Wilcox et al. (2009), consumers' preferences for a counterfeit luxury brand increase when these serve socially adaptive behavior (Shan et al., 2021). Counterfeit consumers seek the symbolic importance of genuine brands to promote their social reputation at minimal cost (Shan et al., 2021). However, the effectiveness of status signaling varies by brand, situation and product (Shan et al., 2021). For example, even with the same brand, logo size can convey different status signals.

A key area of concerns for researchers is identifying the motivations behind the decision to purchase counterfeit products (Khan et al., 2023). First the imitation market is closely related to consumer demand (Bian & Veloutsou, 2007). Generally, the purchase of counterfeit luxury brands is tied to consumer's aspirations for authentic luxury brands (Hoe et al., 2003). Studies have explored several factors

influencing consumer behavior towards counterfeits, including self-enhancement (Shan et al., 2021), the discrepancy between an individual's actual and ideal self (Ngo et al., 2020) and social functioning adaptation (Marticotte & Arcand, 2017). Research by Wilcox et al. (2009) indicates that both genders consume counterfeit luxury brands to fulfill social goals.

Additionally, the research of Eisendand & Schuchert-Guler (2006) classifies the decision-making process regarding counterfeit products into four categories. The first includes demographic and psychographic variables, such as attitudes towards counterfeiting. The second encompasses aspects such as the price of the product, its uniqueness and its availability. The third and fourth categories relate to social and cultural context in which the decision-making process for counterfeit products occurs.

#### Demographic and Psychographic Variables:

Several attempts have been made to determine the profile of consumers who buy counterfeit luxury brands. However, there is no consistency in the research results regarding the demographic characteristics of these consumers. Some studies report that demographic variables do not significantly affect the purchase of counterfeits. For example, age and household income are not useful criteria for differentiating consumers who buy imitations from those who buy original brands (Bloch et al., 1993).

Conversely, other researches present different results. Phau et al. (2001) argued that those who spent little on counterfeit clothing tended to be young, have a low level of education and have no children. In contrast, those who spend more were aged 25-34, have good jobs, a high level of education and children. Swee et al. (2001) found that lower-income groups had more favorable attitudes toward pirated CDs, while Sims et al. (1996) identified a relationship between household income and software piracy. However, Wee et al. (1995) claimed that the income and education level influence consumer purchase intention but disagreed with the influence of the age. Historically, research has suggested that gender is unrelated to moral behavior, moral dilemmas and the rational alternatives. However, most recent studies have identified gender differences, revealing that female students tend to exhibit more ethical intentions compared to male students and less likely to accept questionable moral answers (Norum & Cuno, 2011). For instance, Kwong et al. (2003) found that age and gender influence the intention to purchase pirated CDs, with males being more likely than

female to make such purchases. Additionally, Chen and Tang (2006) found that male students perceived stealing, corruption and cheating as more ethical compared to their female counterparts.

Moreover, materialistic consumers may have a heightened desire to acquire counterfeit goods as a means of signaling wealth and power (Davidson et al., 2017). High levels of self-monitoring can lead consumers to prefer products that enhance their status and image over those that offer greater functionality (Davidson et al., 2017). If materialistic consumers are targeted with countermeasures focusing on materialistic appeal of products, these strategies might be ineffective or even counterproductive (Davidson et al., 2017).

#### Product characteristics:

Many studies identify price as the most determining factor in the intention to purchase counterfeit brands (Prendergast et al., 2002). There is a positive correlation between the low price of imitations and the decision to purchase them. Research by Staake and Fleish (2008) stated that the main motivation for buying non-deceptive fake products is their low price. Consequently, the intention to purchase a counterfeit product is inversely related to the price of the genuine brand (Albers-Miller, 1999). Additionally, Bryce and Rutter (2005) found that 60% of respondents reported that product quality is also an important motivation for purchasing counterfeit fashion products. However, attitudes and behaviors may vary depending on the perceived value behind each category of goods. While counterfeits may be perceived as having lower quality to genuine products, their low price makes consumers view them as good value. Consequently for counterfeits, value consciousness positively affects purchasing behavior (Ndereyimana et al., 2021).

According to Ndereyimana et al. (2021), product design and advertising can drive consumers to buy imitations against their preference for genuine products due to informational influence. Informational influence occurs when individuals accept information about luxury goods or imitations during their search for information or by observing other. Information influence is higher for goods that can be consumed publicly, as these products are used by consumers to match social expectations (Ndereyimana et al., 2021).

Consumers buy branded products both for their physical characteristics and the brand image associated with them. Branded products signal information related to one's self-image, thereby enhancing it (Onkvist & Saw, 1987). However, counterfeit luxury brands while not having the exact same physical characteristics, still sell the maintained brand image (Penz & Stottinger, 2005). In other words, buyers of counterfeit products acquire the prestige associated with the brand without paying for it (Cordell et al., 1996). According to Wilcox et al. (2009), consumers' desire for counterfeit luxury brands stems from social motivations. Specifically, they argue that consumers buy counterfeit products to serve a function of social adaptation rather than an expression of personal values. Leisen and Nill (2001) claim that the intention to purchase counterfeit brands is greater in more favorable shopping environments. Additionally, consumers' guilt when purchasing counterfeit products can stem both intrinsic and extrinsic characteristics (Chaudry & Zimmerman, 2009). Counterfeits can be categorized into functional and prestige counterfeits (Cordell et al., 1996). Functional counterfeits are those purchased for their utility, such as electronic items or software. In contrast, prestige counterfeits are bought for their ability to confer prestige on their owner, such as clothes and accessories.

Consumers who choose to buy imitations do not consider it harmful because they are attracted to luxury brands more than the average consumer (Norum & Cuno, 2011). They do not feel any inferiority about their purchase, believing it offers a positive image (Ndereyimana et al., 2021). According to Eisend (2016), there is a strong influence of context and morality in the decision to purchase counterfeit products. Moral considerations do not significantly influence low-income countries because consumers there are not accustomed to genuine brands and do not associate imitations as inferior (Nia & Zaichkowsky, 2000). Additionally, some consumers may believe that a fake product is genuine (Rath et al., 2015). Even a retailer may not be able to distinguish between genuine and counterfeit items if they have a corrupt supply chain (Quach & Park, 2018).

Moreover, people who grow up in economically disadvantaged countries often develop a subjective sense of economic insecurity (Ndereyimana et al., 2021). This insecurity leads them to overestimate happiness and associate it with symbols such as

luxury goods. However, due to their financial situation, they cannot afford to buy such goods and turn to counterfeiting goods, ignoring the negative social consequences and risks of these actions (Ndereyimana et al., 2021).

### **Counterfeiting and Need for Status**

General consumer status is affected by informational and normative effects, which come into play when considering purchasing luxury goods or their counterfeits (Ndereyimana et al., 2021). Luxury products offer prestige and status due to their higher prices and superior quality (Ngo et al., 2020). Consumers are willing to pay a premium for these products not only for their functionality but also for the status they represent – a phenomenon known as “status-consumption” (Truong & McColl, 2011). Consumers’ intention to purchase counterfeit luxury goods are influenced by both normative and informational influences. These attitudes encompass cognitive and affective orientations as well as subjective beliefs and evaluations regarding market stimuli. In traditional societies, such attitudes are likely transmitted between generations through consumer socialization, acting as determinants of consumers’ intention to purchase imitations to create a desirable image (Ndereyimana et al., 2021).

Driven by value consciousness and a willingness to pay low prices for good quality, consumers often engage in bargain-hunting and shopping for sale products (Ndereyimana et al., 2021). Participation in illegal behavior, such as purchasing counterfeit goods, intensifies under price pressure, as counterfeit products offer economic savings compared to genuine ones (Ndereyimana et al., 2021).

Functional attitude theory explains the continuum between attitudes and behaviors in the context of luxury goods (Hullet & Boster, 2001). Consumers may develop attitudes that either enhance their values or help them adapt to social norms. In the context of counterfeit luxury goods, this theory suggests that consumers may opt for counterfeit products as a cheaper alternative to achieve the status and image associated with genuine luxury brands (Ngo et al., 2020). A consumer might turn to counterfeit goods to acquire a desired identity or to conform to group expectations, thus using counterfeit products to achieve both expressive and social-adaptive functions (Hans et al., 2010b).



Consumers are motivated to buy counterfeit goods for both the cost advantage and the desire to bypass legitimate means of acquiring assets. The desire for status is a significant determining factor in the consumption of counterfeit goods (Ndereyimana et al., 2021). Consumers often seek to signal wealth and success through their possessions, making purchases of goods with visible logos to display their social status (Davidson et al., 2017). To achieve social success, they aim to match or surpass those they envy and fulfill social goals. Consequently, if they cannot afford a genuine luxury product, they may choose to purchase a counterfeit one, allowing hedonic impulses to outweigh moral concerns. Purchase intentions for counterfeit luxury goods are strongly influenced by personality factors such as value consciousness and the desire for status (Ndereyimana et al., 2021). Luxury seekers are often drawn to brand value for prestige and image. However, they may sometimes find themselves unable to afford the high prices of genuine luxury items. Consequently, when faced with a lower-priced counterfeit option, a consumer who is value-conscious might perceive it as offering a similar status advantage at a more affordable price.

Ndereyimana et al. (2021) found that normative and informational influences had a positive effect on Rwandan consumers' attitudes toward purchasing counterfeit luxury goods. Their attitudes were influenced directly and indirectly by the desire for status or value consciousness. A desire for status can lead individuals to seek luxury goods to enhance their social standing (Davidson et al., 2017).

### **Evolutionary Psychology**

One of the theoretical approaches, within the social and natural sciences is evolutionary psychology (Buss, 2016). Since its inception in 1980s, the field of evolutionary psychology has seen impressive growth (Saad, 2013). It is a combination of various applications of evolutionary theory to understand the human mind and behavior (Narvaez et al., 2022). For example, it encompasses human behavior ecology, cultural evolution theory, social constructivist approaches, evolutionary developmental psychology and developmental system approaches (Narvaez et al., 2022).

According to Ploeger et al. (2008a), evolutionary psychology is “more a collection of views, which are not consistent with each other, than a coherent theory”. For more than half a century, researchers have been studying human behavior from an

evolutionary biological perspective (Otterbring et al., 2020). This perspective emphasizes distal influences on behavior while also incorporating complementary theoretical perspectives (Otterbring et al., 2020).

This approach is rooted in Darwin's theory of natural selection (Forgas et al., 2011). According to this, a biologically influenced trait becomes more or less common in a population depending on how this trait affects the reproductive capacity of individuals (Forgas et al., 2011). Species that reproduce sexually pass on traits that aid survival (Forgas et al., 2011). Therefore, individuals with these traits survive and reproduce, while others do not, resulting in maintenance of particular trait due to their fitness benefits.

Through natural selection, traits that solved adaptive problems such as fear of poisonous snakes exist because they are loosely associated with adaptations such as fear of harmless snakes (Forgas et al., 2011). Although natural selection stems from evolutionary theory, it also encompasses other theories such as the theory of reciprocal altruism, the theory of parental investment and kin selection (Forgas et al., 2011). These theories advance specific hypotheses about the causal processes of behavior at the psychology level are advanced (Barrett et al., 2001). Therefore, studying these mechanisms offer insights into human behavior and mental processes (Confer et al., 2010).

### **Fundamental Motives**

The fundamental framework of motivation is based on biological perspective, understanding motivation as functionality specialized psychological systems that evolved to regulate responses to threats and opportunities in the environment (Shaller et al., 2017). As humans are social being, different motivational systems are adapted to the various threats and opportunities posed by other people (Shaller et al., 2017). A recent study identified seven fundamental drives: self-protection, disease avoidance, relationship building, belonging, mate-seeking, mate-keeping and kin care (Brown et al., 2015). These motivations encompass a wide variety of conceptual territory and are linked to specific emotions (Beall & Tracy, 2017).

These fundamentals motivations can be triggered by both external and internal cues that signal a threat or opportunity related to an evolutionary change. More

specifically, they can be activated by external cues such as interacting with a desired partner, being exposed to a sexy image of the opposite sex or reading a romantic story (Billet et al., 2022). Internal cues such as hormonal influences also play a role. For example, female mate acquisition motivation is strongest during the ovulatory phase of the menstrual cycle. During peak fertility, women tend to dress more attractively and purchase more appealing clothing and accessories (Durante et al., 2012).

The activation of a fundamental motivational system affects attention, memory, cognition, preferences and decision-making processes (Griskevicius & Kenrick, 2013). A person's choices can vary and sometimes be inconsistent depending on which fundamental motivation is active. For instance, the self-preservation motive may lead a person to conform and follow the crowd, while the mate acquisition motive might make the same person want to stand out.

### **Proximate and Ultimate Expectations**

Fundamental to the study of consumer behavior from an evolutionary angle is the distinction between proximate and ultimate expectation, which helps uncover the causes of consumer preferences and buying patterns (Otterbring et al., 2020). These two types of explanations are complementary: the former explains why a behavior exists and the latter explains how a behavior works (Scott-Phillips et al., 2011).

According to Darwin, over time, heritable traits associated with reproductive success will increase in a population, while those associated with decreased reproductive success will disappear (Scot-Phillips et al., 2011). This principle explains both how natural selection operates and what its consequences will be. This distinction between the process and its consequences aligns with the distinction between ultimate and proximate expectation (Otterbring et al., 2020).

More specifically, ultimate expectations relate to the consequences of the nature of a trait or behavior and whether or not is selected for, while proximate expectations relate to how it operates – the mechanisms that underpin the trait or behavior (Scott-Phillips et al., 2011). Therefore, ultimate expectations answer the question “why” while proximate expectations answer the question “how” (Scot – Phillips et al., 2011).

## **Evolution Psychology as a Framework to study Conspicuous Consumption**

Research has revealed that people buy luxury products and their counterfeit to show off wealth, status and uniqueness (Yuan & Zheng, 2019). Numerous theories attempt to explain why individual engage in conspicuous consumption (Hamdani et al., 2023). However, the evolutionary literature explains conspicuous consumption by applying sexual selection and costly signaling theory (Koliotofis, 2021). From this evolutionary perspective, the consumption of luxury goods help individuals fulfill their need to obtain a desirable mate, serving as a communication signal that advertises the consumer's quality as a mate (Yuan & Zheng, 2019).

Sexual selection results in adaptation related to reproductive advantage (Saad, 2013). Each reproducing species engage in specific-species forms of sexual signaling to indicate its value in the mating market (Saad, 2013). In humans, both sexes engage in such signaling, using specific cues that the opposite sex seeks (Saad, 2013). Male courtship is considered a sexual signal that conveys information about the motivation, condition and quality of displaying males, which both female and male competitors use to make decisions (Órfão et al., 2023).

### ***Intersexual and Intrasexual Competition***

Evolutionary psychology has traditionally viewed human mating psychology as interactions solely between members of different sexes, largely excluding same-sex interactions where reproduction is not possible (Semenyna et al., 2022). This perspective is understandable given that the majority of people are attracted to the opposite sex, making most human sexual behavior is heterosexual (Semenyna et al., 2022).

Sexual selection operates through two primary pathways that can increase an individual's reproductive success: intersexual courtship and intrasexual competition (Andersson, 1994). Intersexual courtship refers to behaviors that member of one sex engage in to directly attract members of the opposite sex. For example male are driven to consumer luxury goods and services to demonstrate their ability to acquire resources desired by females when given a mating-related incentive, such as the presence of an attractive female (Griskevicious et al., 2017).

Intrasexual competition involves individuals of the same sex competing to become more desirable to individuals of the opposite sex. Due to adaptation problems, such as caring for dependent offspring, women employ alternative modes of competition that minimize the risks of violent retaliation (Ayers & Goetz, 2022). Men, for instance, may engage in personal confrontations with other men to enhance their relative status or reputation, ultimately leading to greater access to desirable women (Griskevicius et al., 2009). Research shows that men use conspicuous luxury cars in male-male competition because they believe it enhances their social status (Henninghausen et al., 2016). This behavior is similar to salient displays in the animal kingdom (Berglund et al., 1996). A typical example is the complexity of the peacock's tail, which is linked to the number of competitive male-male interactions (Loyau et al., 2005). Therefore, peacocks use their tails in both inter- and intra- species competition.

Intraspecific selection has also been observed in homicidal violence displayed by male chimpanzees toward males in neighboring troops. By killing their same-sex rivals, chimpanzees effectively remove competitors from mating, thereby enhancing their own reproductive chances (Wrangham & Peterson, 1996). While male competition has received significant attention from evolutionary psychologists (e.g. Geary, 1998), both sexes engage in such behavior. Women, for example, use conspicuous luxury goods to ward off rivals and signal that their romantic partner is highly committed to them (Wang & Griskevicius, 2014). Generally, males compete with each other to obtain young and fertile female mates, while females compete to obtain high-status male mates (Buss, 1989).

At first glance, intersexual courtship and intrasexual competition seem quite similar since both motives are clearly linked to reproductive success (i.e. attracting high-quality mates). Activating a courtship or competition motive might produce similar behavioral displays. However, because competition and courtship may involve distinct strategies, each motive might trigger different behavioral tendencies.

Other research claims that conspicuous consumption is increased by intraspecific competition (Wang & Griskevicius, 2014). Specifically, women seek luxury items to improve their advantages over other women during competition (Hudders et al., 2014). They use conspicuous consumption as a means of repelling

potential rivals by signaling that their partner is committed to them (Wang & Griskevicius, 2014).

### ***Gender Differences and Mate Preferences***

A recurring human adaptation problem has been obtaining and keeping a mate (Semenyna et al., 2022). This challenge stems from differential parental investment, where women's obligate caregiving and men's greater variability in reproductive potential create distinct sex differences in mate preferences and competition tactics (Semenyna et al., 2022). While both sexes may use similar behaviors in mate competition, the frequency and nature of these tactics varies (Semenyna et al., 2022). Males advertise their status and resources while females rely on their youth and beauty (Semenyna et al., 2022).

Traditional models of mate competition and choice emphasize a framework where male competition precedes female choice (Semenyna et al., 2022). However, modern theories recognize that both males and females engage in various forms of intrasexual competition and that each sex exercises reciprocal mate choice (Semenyna et al., 2022). Female intrasexual competition refers to the strategies women use to compete with same-sex rivals for mates (Ayers & Goetz, 2022). For example, a target depicted as sexual rival is often rated as less desirable as a potential friend and viewed as more sexually permissible (Ayers & Goetz, 2022). Similarly, women are more likely to remember gossip about a rival's ability to attract mates compared to other types of information (Ayers & Goetz, 2022).

### ***Costly Signaling and Conspicuous Consumption***

Conspicuous consumption has developed as a sexually selected mating technique that benefits mate reproduction (Koliofotis, 2021). It serves as a means of competing in mate attraction (Zhao et al., 2017). Seemingly useless or inferior features such as a peacock's tail, attract the opposite sex, promoting reproductive success. They are known as conspicuous characteristics (Zhao et al., 2017). Conspicuous consumption is closely related to costly signaling theory (Zahavi, 1975). According to this theory, luxury items signal a person's social and economic status,

transmitting reliable signals that reveal information about the underlying qualities of the person displaying them. This theory, often referred to as the principle of handicap, is exemplified by the peacock's tail, which acts as a signal of a partner's value (Miller, 2009).

Similarly, luxury goods function as signs of wealth and status, producing multiple benefits (Nelissen & Meijers, 2011). For conspicuous consumption to qualify as a costly signal, several elements must be present. The signal must be: impossible to falsify, easily observable, related to a desired property, producing some benefit (Nelissen & Meijers, 2011). Conspicuous consumption can be considered a mating signal (Miller, 2009), as women are often attracted to economic power when choosing a mate, while men tend to select women based on physical attractiveness (Li et al., 2002). According to the theory of costly signaling, men use conspicuous consumption to demonstrate their characteristics as good partners when their partner attraction motivations are activated (Kolofotis, 2021).

### ***Evolutionary Psychology and Mating Strategies***

Mate preferences differ between men and women. For example, fertility-related characteristics such as age and physical condition matter more to men than wealth or status (Zhao et al., 2017). On the other hand, wealth and status are optimal attraction strategies for women (Zhao et al., 2017). Previous research demonstrated that conspicuous consumption is not associated with partner attraction among women (Zhao et al., 2017).

Previous research has shown that conspicuous consumption strongly promotes mate attraction among men, while women tend to favor wealthy, high-status men to maximize their future ability to raise children (Zhao et al., 2017). Therefore, conspicuous consumption helps men attract mates. To feel complete and attract a partner, men increase their consumption of luxury goods and status symbols (Zhao et al., 2017).

Men favor young and beautiful women, while women prefer men who possess both physical attractiveness and economic status (Lens et al., 2012). For this reason, men have an increased interest in status-signaling products (Lens et al., 2012). Although women may focus on various aspects of male partner's value, conspicuous

consumption can attract their attention. Previous studies have also focused on the effects of the menstrual cycle on mate attraction, providing that ovulating women tend to dress more provocatively (Lens et al., 2012).

Most products used as sexual signals in the mating market align with universal mating preferences (Saad, 2013). For example, men desire youth and beauty, while women prefer men with high social status (Saad, 2013). In the U.S., 90% of plastic surgery patients are women, while 9 out of 10 Ferrari owners in North America are men (Saad, 2013). These examples are extended phenotypes (Saad, 2013). The presence of appropriate sexual signals increases the desire of individuals for the sex that carries them (Saad, 2013). For instance, a more expensive car leads to higher physical attractiveness ratings (Dunn & Searle, 2010) and increases the likelihood that a woman will date that man (Guéguen & Lamy, 2012).

Hence, previous research suggests that when a man's romantic mating motive is activated, he will be motivated to display luxury goods to attract a potential romantic partner by signaling his social status (Chen et al., 2022). On the other hand, it is argued that luxury consumption is not particularly useful for women at the stage of forming a relationship, because men values qualities unrelated to status, such as sociability (Chen et al., 2021). Therefore, it is hypothesized that women do not use luxury items in their relationships pursuits and thus there is no effect of mating motivation on women's luxury consumption (Chen et al., 2021).

One of the most important influences on a woman's preferences, emotions and behaviors is the menstrual cycle (Saad, 2013). Evolutionary psychologists have recorded numerous phenomena influenced by the ovulation cycle, especially regarding mating, hypothesizing a link between the menstrual cycle and consumer behavior (Saad, 2013) For example, women's propensity to engage in sexual signaling through various grooming practices varies across the menstrual cycle in ways consistent with evolutionary predictions (Saad, 2013). At peak fertility, women are more likely to engage in sexual signaling (Durante et al., 2011). Both proximate and ultimate expectation must work in tandem to provide a complete description of a given phenotype (Saad, 2013).

Taken together, the above information highlights gender differences in the motives for conspicuous consumption. Men use conspicuous consumption to



demonstrate their status and access to resources. Regarding female conspicuous consumption, women believe that conspicuous consumption improves their attractiveness and is believed to be the reason women consume luxury brands conspicuously.

### ***The role of Conspicuous Consumption in Mating***

True love may be priceless, but finding it is hard and expensive (Chen et al., 2021). The average American spends 120.000 \$ over a lifetime on dating and personal grooming (Gervis et al., 2019). More than 1 in 4 Americans have been driven into debt by dating expenses (Chen et al., 2021). The dating industry in the US has grown over the last 5 years, at an annual rate of 10,7% (Chen et al., 2021). Therefore, consumption is an important tool for creating romantic relationships (Chen et al., 2021).

Forming a romantic relationship through consumption choices involves overcoming challenges, seizing opportunities and ensuring favorable outcomes in romantic pursuits by using strategically (Chen et al., 2022). One such strategy rooted in the mating unit is conspicuous consumption (Saad, 2013). Saad and Vongas (2009) investigated the effects of conspicuous consumption on male testosterone levels. According to their study, driving a Porsche increased levels of the hormone, as this act is associated with an endocrinologically intoxicating sexual signal, similar to an immediate infusion of social status (Saad, 2013). Moreover, there was an unexpected increase in male testosterone levels after interactions with women (Saad, 2013).

Earlier research by Townsend and Levy (1990) found that women's assessments of men's physical attractiveness were significantly influenced by the social status indicated by men's clothing. High-quality attire serves as ostentatious signal of a man's potential quality in the mating market, akin to peacock's (Saad, 2013).

Although many products have been researched from an evolutionary perspective, marketing researchers have not conducted much of this research (Saad, 2013). High heels (Smith, 1987) and cosmetics (Russell, 2009) serve to enhance desirable morphological features. Haircuts and hairstyles are used to reinforce attractive phenotypic cues, as hair quality degrades with age (Mesko & Bereczkei,

2004). In certain cases, the realities of life influence product use (grooming practices) and product form (Fashion style) in ways consistent with evolutionary theory (Saad, 2013). For example, macro-economic conditions, such as economic hardship, may increase intrasexual female competition, leading to a stronger tendency to groom, either in terms of the sexiness of clothing or the amount spent on grooming (Durante et al., 2012).

### **Evolution Psychology as a Framework to study Consumption of Counterfeit Luxury Brands**

This thesis investigates consumer preferences for counterfeit luxury brands based on evolutionary psychology. This field of psychology has proved to be a valid framework for exploring both consumer behavior (Saad, 2013) and consumer preferences (Saad, 2007). It is proposed that counterfeit luxury consumption is associated with mate acquisition motives and functions as a deceptive signal in an intrasexual and/or an intersexual context. It is supported that there is an empirical link in the relationship between mating motives and counterfeit luxury consumption that varies based on sex. Rooted in deceptive signaling and the sexual selection, this study explores the nature of this system. To our knowledge, this is one of the first studies to examine counterfeit consumption goods as a common deceptive strategy from an evolutionary perspective.

Therefore, based on evolutionary psychology, human preferences for luxury goods are associated with costly signaling, where the owner of a valuable good signals desirable characteristics to others (Miller, 2009). As mentioned, these signs are demonstrate subjective characteristics of the organism that are not easily perceived on and are related to the physical condition. One such signal is luxury consumption as it is an indication of fitness, showcasing an individual's ability to waste resources (Miller, 2009). According to Sundie et al. (2011), individuals use luxury brands to demonstrate their physical attractiveness, sophistication, social status and resources thereby enhancing their reproductive success. However, some consumers either cannot afford or unwilling to spend large amounts on a luxury brand and use counterfeit goods as substitutes. If this strategy is not perceived by observers, fake luxury brands provide all the benefits of authentic items without their true cost (Van Kempen, 2003). This process is called deceptive status signaling because it transmits

falsehoods. Various forms of deceptive signaling exist, including those evolved for survival purposes or to gain a mate acquisition advantage (Saad, 2011). According to Van Kempen (2003), some people use as misleading status signal, by filling their shopping trolleys with many and expensive items and then quietly abandoning them.

Taking the above into consideration, according to Darwin (1871) sexual selection creates adaptations that result in successful mating. The competition between people of the same sex aiming to gain access to individuals of the opposite sex is defined as intrasexual selection. Men's success in intrasexual competition is attributed to the demonstration of mate qualities that are not easy to fake (Zahavi, 1975) such as facial hair (Dixson & Brooks, 2013), voice pitch (Puts et al., 2007), body shape (Coy et al., 2014) and specific consumption practices (Saad, 2007).

Moreover, the research of Hennighausen et al. (2016) indicated that men use conspicuous luxury products in male-male competition to impress and deter rivals. Another study showed that men in bars were more likely to conspicuously display their mobile phones with an increasing male-to-female ratio (Lycett & Dunbar, 2000). They suggested that men conspicuously displayed their mobile phone to signal financial status and wealth, something that it is more likely to impress their rivals and distinguish from them. Similarly, another research highlighted that men's testosterone levels increased when they were exposed to other men who possessed luxury products, such as watches in the presence of a female confederate (Saad & Vongas, 2009). The findings suggest that male luxury spending is likely evolves in intrasexual mating competition processes.

On the other hand, in an intrasexual competition context women have a higher preference for luxury products comparing with women in noncompetitive contexts, only when there luxuries can promote women's attractiveness (Hudders et al., 2014). Research indicated that luxury handbags and shoes that effectively deterred potential relationship rivals (Wang & Griskevicius, 2014). Moreover, the study of Zhao et al. (2017) revealed that women had the belief that their attractiveness was maximized by conspicuous products while through them they were signalling their partner's loyalty, something that eased mate attraction or mate guarding, respectively. As a result, female intrasexual competition in a mate attraction context facilitates women spending on luxuries.

However, when luxury products are not affordable, priming male and female consumers with mate competition cues could increase their intention to purchase counterfeit luxury products. As a result the following hypotheses can be formulated:

H1: Activating mate competition motives triggers men's intention to buy counterfeit luxury brands over low-status brands

H2: Activating mate competition motives triggers women's intention to buy counterfeit luxury brands over low-status brands

Intrasexual selection refers to the real mate choice when someone is motivated to attract a romantic partner and is engaged in displays linked to intersexual selection. There are a number of studies which were examined men's conspicuous consumption and have revealed that men's displays of luxury products to showcase a signal to attract a romantic partner (Griskevicius et al., 2007), especially for men with an unrestricted sociosexual orientation. Moreover, more attention is attributed to luxury goods by men who are imbued with mating cues (Janssens et al., 2011), so when they are physically close to women they focus more on acquiring wealth (Roney, 2003). Research has also indicated that everything from seeing attractive women (Wilson & Daly, 2004) to the mere touch of a woman's bra (Van den Bergh et al., 2008) makes men more financially impulsive. As a result, conspicuous goods serve as a significant function in relationships for men as they help them to attract romantic partners and enhance their reproductive fitness (Miller, 2009). Similar are the results of Sundie et al. (2011) indicated that men who signal luxury goods are supposed to be more sexually attractive by women.

On the other hand, researchers support that considering the relationship between resources and a mate's attraction, men display stronger consumption motivations than women (Miller, 2009). Besides, the female gender values the wealth and status of its partner more than the male gender (Buss, 2003). Griskevicius et al. (2007) showed that eliciting mating goals led to an increase in willingness to spend on conspicuous luxuries for men but not for women. Thus, the mating motive does not lead women to consciously consumer, but to spend more on publicly useful reasons.

As a result, when they cannot afford for luxury goods, priming male and female consumers with mate attraction cues would increase men's intention to

purchase counterfeit luxury products but not women's. The following hypotheses can be formulated:

H3: Activating mate attraction motives triggers men's intention to buy counterfeit luxury brands

H4: Activating mate attraction motives do not influence women's intention to purchase counterfeit luxury brands over low-status brands.

### **Loneliness: A contemporary Public Health Issue**

Humans, as social beings, need a safe social environment to survive and thrive (Hawkey & Cacioppo, 2010). At some point in their lives, most people have experienced loneliness (Y.Wang et al., 2023). Research shows that among more than 20,000 Americans adults, nearly half felt lonely (Chen et al., 2021). Additionally, 61% of respondents under the age of 40 in China reported feeling lonely (Chen et al., 2021). Loneliness could be characterized as a growing public health issue because approximately 15-30% of the adult population suffers from chronic or severe loneliness (Preece et al., 2021).

According to the reconnection model, loneliness signals that something is wrong with one's relationships (Qualter et al., 2015). This leads individuals to withdraw and evaluate their social behaviors (Qualter et al., 2015). The healthy path out of loneliness involves first regulating behavior and then re-engaging with relationships (Qualter et al., 2015). However, the perception of prosocial behavior can sometimes lead to further negative emotions and withdrawal (Qualter et al., 2015). This negative pathway results in chronic loneliness putting many people at physical risk for poor cardiovascular health, sleep problems, and increased risk of injury (MacDonald & Schermer, 2023), as well as poor mental health outcomes such as social anxiety, depression and suicidal ideation (Conde-Sala et al., 2019).

Loneliness is defined as the discrepancy between actual and desire social relationships, negatively impacting well-being, underutilizing health services and reducing employee health (Barreto et al., 2021). Loneliness costs UK employers around £2.5 billion a year. Understanding what may lead people to feel lonely is

important in order to develop well-targeted interventions to prevent and mitigate its effects (Qualter et al., 2015). Loneliness arises from the discrepancy between actual and desired social relationships, but it is a subjective experience with cognitive, emotional and behavioral dimensions (Qualter et al., 2015). For example, two people may have the same objective number of close relationships but feel different degrees of loneliness depending on whether their desired relationships differ (Barreto et al., 2021). Conversely, two people may have the same number of desired relationships but feel different degrees of loneliness if they perceive their actual relationships as unfulfilling (Barreto et al., 2021).

### **Types of Loneliness**

Loneliness is assessed using two different approaches: unidimensional and multidimensional (Spithoven et al., 2019). In the unidimensional approach, loneliness is seen as a construct that primarily varies in intensity, presenting common themes across different contexts (Spithoven et al., 2019). In the multidimensional approach, different types of loneliness are distinguished based on the type of relationship the person experiences (Spithoven et al., 2019). Each type of relationship (e.g. parents vs. peers) fulfills a different social need (e.g. care and guidance vs integration) (Spithoven et al., 2019).

According to Weiss (1974), there are two types of loneliness: social loneliness, which occurs when a social network is absent and emotional loneliness which occurs when a person is not closely to another. Research studies the importance of loneliness as experienced in different social relationships are rare (Lasgaard et al., 2011). Several researchers argue that different relationships are potential sources of loneliness (Lasgaard et al., 2011). For example, Weiss (1974) claimed that different types of social relationships offer different benefit or fulfill different interpersonal needs. Friends provide benefits related to a sense of social integration, family provides benefits related to a sense of guidance and relationships with romantic partners provide a sense of reliable attachment (DiTommaso & Spinner, 1997).

When a required relational provision is absent, a form of distress is signaled by the individual as loneliness (Lasgaard et al., 2011). Additionally, social needs have different values at different phases of life (Weiss, 1974). Therefore the risk of loneliness may increase or decrease depending on the type of relationship over time

(Lasgaard et al., 2011). Generally, in loneliness what matters is the quality not the frequency or number of social interactions (N.Chen et al., 2021). A person may have different types of relationships at any given time and thus may exhibit different patterns of loneliness (Nombro et al., 2022). For example, a person could experience high levels of romantic and family loneliness without experiencing social loneliness.

### **Evolutionary Psychology and Loneliness**

According to evolutionary psychology, the perception of social isolation, even when in the presence of others, serves as a useful biological warning system in every social species. This system signals potential dangers or benefits within a given social relationship (Spithoven et al., 2019). This negative nature of loneliness prompts individuals to repair or replace inadequate bonds, thus alleviating and satisfying the feeling of loneliness (Spithoven et al., 2019). Beneficial social interactions are experienced as positive and rewarding (Cacioppo et al., 2014). Therefore, the aversive nature of loneliness, combined with the positive reward value of social cues, created a dual motivation to resolve loneliness (Spithoven et al., 2019). From an evolutionary perspective, it is argued that neurocognitive and adaptive behavioral effects of loneliness extend beyond this dual motivation (Spithoven et al., 2019). For instance, intraspecific aggression is a major threat to reproductive success among humans, so an unlimited drive to create unlimited trusting relationships can be detrimental. According to this view, loneliness not only increases the motivation to care for and reach out to others but also emphasizes short-term self-preservation, including vigilance for social threats and increased egocentrism (Spithoven et al., 2019). Nikitin and Freund (2008) suggest that the coexistence of increased approach motivation with increased avoidance motivation creates a behavioral strategy that reduces the likelihood of negative social events and increases the likelihood of positive ones.

Everyone can experience loneliness, making it an equal opportunity condition (Hawkey & Cacioppo, 2010). ). Loneliness activates the instinct to seek belongingness and attachment (Hamdani et al., 2023). Attachment can be defined as an emotional bond that fosters a sense of closeness and well-being (Liu et al., 2020). This is why lonely people participate in activities to fulfill their attachment needs, such as reinforcing old friendships, seeking romantic partners, attending social events, or engaging in community activities (Liu et al., 2020).

## **Loneliness and Social Reconnection**

Feelings of loneliness often motivate individuals to connect or reconnect with others after events such as geographic relocation or bereavement, thereby reducing or even eliminating the sense of social isolation (Hawkey & Cacioppo, 2010). Generally, all theories of loneliness argue that loneliness triggers the motivation for social reconnection (Fumagalli et al., 2022). It creates a deficit in the need to belong, a fundamental human need with evolutionary roots in self-preservation (Fumanagali et al., 2022). A process of social reconnection is that of consumption (Fumagalli et al., 2022). When the consumer seeks direct interpersonal reconnection they adjust their consumption choices to align with interaction partners (Fumanagali et al., 2022).

## **Characteristics of Loneliness**

Levels of loneliness gradually decline in middle adulthood but increase again in old age (i.e. over 70 years) (Hawkey & Cacioppo, 2010). Millennials, in particular, are often surrounded by this feeling, which is why they frequently use their smartphones, believing it helps combat their loneliness. This notion is supported by the BBC Loneliness Experiment, which found that younger people are more likely to feel lonely compared to older individuals (Liu et al., 2020). Evidence shows that women feel lonelier than men (Barreto et al., 2021). Women socialize more, developing larger and more active social networks, which can potentially protect them from loneliness (Barreto et al., 2021). However, women tend to live longer than men and are likely to take care of their spouse or become widows, making them more susceptible to loneliness, especially in old age (Barreto et al., 2021). Additionally, gender differences in loneliness may also be due to men being less willing to admit they feel lonely because of the associated stigma (Barreto et al., 2021). However, the study of Cooney and Dunne (2004) argues that males spend more time alone during adolescence. As a result, negative life events in late adulthood, such as the loss of a loved one, have a more damaging effect, increasing loneliness. The BBC Loneliness Experiment provided a unique opportunity to examine differences in the experience of loneliness across cultures, age groups, and genders. Using data from this experiment, Barreto et al. (2021) conducted a study, revealing that loneliness increases with individualism, decreases with age and is greater in men than in women.



One personality model that attempts to explain the causes of loneliness is the Big 5 personality model, which includes traits such as Machiavellianism, Psychotism and Narcissism (MacDonald & Schermer, 2023). In the big 5 model, strong predictors of loneliness are high neuroticism and low extraversion (MacDonald & Schermer, 2023). Neuroticism is associated with mood swings and anxiety (Bowen et al., 2012), while both low and high needs for social recognition have been shown to be related to loneliness (MacDonald & Schermer, 2023). More generally, extraversion is the tendency to engage with and enjoy social attention (MacDonald & Schermer, 2023).

### **Sociosexuality, Relationship satisfaction and Loneliness**

Research has shown that some individuals seek extradyadic relationships, or romantic relationships outside their primary partnership (Liu et al., 2020). Sociosexuality is a concept that can interpret this behavior (Liu et al., 2020). Sociosexuality refers to individual differences in the tendency to seek sex without commitment versus preferring monogamous relationships (Liu et al., 2020). The term was introduced by Kinsey to describe the differences in people's preferences for engaging in casual sexual relationships (Penke & Asendorpf, 2008). It is related to partner selection preferences, courtship behaviors, romantic stability and relationship quality (Penke & Asendorpf, 2008).

Individuals with a restricted sociosexual orientation require a high degree of closeness and commitment before engaging in sex with a romantic partner (Liu et al., 2020). Conversely, those with an unrestricted sociosexual orientation engage in sexual relationships without requiring commitment and closeness (Liu et al., 2020). Research has shown that sociosexually unrestricted partnered individuals are more likely to engage in extradyadic involvement than those with a restricted orientation (Liu et al., 2020).

Loneliness may cause sociosexually unrestricted individuals in romantic relationships to seek new relationships (Liu et al., 2020). More generally, individuals with a sociosexually unrestricted orientation are more likely to engage in conspicuous consumption to find alternative partner when they feel lonely in their current relationship (Liu et al., 2020). The same is not true for sociosexually restricted partners who are committed to their current relationships, in them, loneliness prompts

them to turn more towards their partners, thereby shielding their relationship (Liu et al., 2020).

The degrees of satisfaction and attachment from current relationships vary (Liu et al., 2020). Relationship satisfaction refers to the positive and negative effects experienced within the relationship (Liu et al., 2020). Based on the interdependence theory, the higher the satisfaction an individual experiences in their relationship, the greater their dependence on it (Liu et al., 2020). As dependence increases, commitment also increases, as suggested by the investment model (Liu et al., 2020).

If the current relationship is satisfying, a partner is more likely to engage in attachment-seeking behavior when feeling lonely (Liu et al., 2020). When individuals believe their current relationship can meet their romantic attachment needs, they ignore alternatives, even when single (Liu et al., 2020). Consequently, when they feel lonely, the mental representation of their romantic relationship becomes more accessible and they seek to engage with and maintain their current relationship (Liu et al., 2020).

Conversely, when someone experiences an unsatisfying relationship, they may believe that their current relationship will not meet their attachment needs and they do not turn to it to alleviate their loneliness (Liu et al., 2020). As a result, loneliness may lead them to have an increased interest in other partners, pursuing alternatives and potentially resulting in the failure of their current relationship (Liu et al., 2020).

### **Loneliness and Consumption**

Recent studies have shown that loneliness motivates individuals to pursue romantic relationships and seek sexual partners (Koliototis, 2021). Additionally, research supports that consumption is a tactic used to cope with loneliness (Liu et al., 2020). Loneliness influences both consumption preferences and behaviors. For instance, loneliness makes people more likely to prefer majority-endorsed products to fit in with society and avoid negative critiques (Hamdani et al., 2023).

Lonely consumers tend to be more materialistic and more prone to impulsive consumption (N.Chen et al., 2021). Hence, they are more likely to use in-store sales

staff for social interaction and to become quite attached to use but not useful materials (Hu et al., 2019).

### **Loneliness, Mate-Seeking and Conspicuous Consumption**

Different attachments have different traits. A romantic relationship is more passionate, close and dependable than a friendship (Liu et al., 2020). Romantic attachments are so important for adults that they use specific strategies to fulfill their mating-related goals, such as attracting and competing for a mate (Zhao et al., 2017).

It has been proven that when a man is in a romantic mindset, he can more easily detect a status product, prefer a prestigious brand and spend more on public-wealth-displaying items (Lens et al., 2012). Similarly, during an economic crisis the desire for mates with resources increases, and women choose to buy more luxury products research has shown that luxury consumption serves as a means to outdo attractive rival women (Koliofotis, 2021).

Based on the above, both genders will consume conspicuously when they desire a romantic partner (Liu et al., 2020). Considering the activation of the mate-seeking goal and the role of luxury goods in this context, it can be reasonably predicted that lonely singles are more likely to engage in conspicuous consumption than non-lonely individuals (Liu et al., 2020). This is because loneliness does not trigger the mating activation of non-singles and therefore does not affect their conspicuous consumption (Liu et al., 2020). Consequently, it can be argued that loneliness and romantic relationship status interactively affect conspicuous consumption, with this effect being mediated by partner-seeking motivation.

H5: Loneliness moderates the interaction effect of intrasexual competition on the consumption of luxury counterfeit brands among men

H6: Loneliness moderates the interaction effect on intrasexual competition on the consumption of luxury counterfeit brands among women

H7: Loneliness moderates the interaction effect on intersexual attraction on the consumption of luxury counterfeit brands among men

## **Methodology and Results**

This paper examines how the activation of mating motives can influence men's and women's intention to buy counterfeit luxury products over low status ones. It tests whether male or female consumers increase their intention to purchase counterfeit goods versus low-status brands when primed with either intrasexual competition or intersexual goals. Both motivations can increase reproduction (Andersson, 1994). However, these mating motivations are tested separately to better understand the proximate-level cues that drive consumer behavior. Moreover, loneliness is a public health issue that influences conspicuous consumption. According to Liu et al. (2020) mating motives have a mediating role in this context. Consequently, loneliness is assumed to moderate both mating motives. More specifically, this study tests the following hypotheses:

H1: Activating mate competition motives triggers men's intention to buy counterfeit luxury brands over low-status brands

H2: Activating mate competition motives triggers women's intention to buy counterfeit luxury brands over low-status brands

H3: Activating mate attraction motives triggers men's intention to buy counterfeit luxury brands

H4: Activating mate attraction motives do not influence women's intention to purchase counterfeit luxury brands over low-status brands.

H5: Loneliness moderates the interaction effect of intrasexual competition on the consumption of luxury counterfeit brands among men

H6: Loneliness moderates the interaction effect on intrasexual competition on the consumption of luxury counterfeit brands among women

H7: Loneliness moderates the interaction effect on intersexual attraction on the consumption of luxury counterfeit brands among men

## **Method**

## Participants and design

In this study, the population corresponded to the general population. Participants were located in different geographical areas in Greece, providing a broad spectrum of perspectives and mitigating geographic biases. The sample comprised 198 participants, including both genders, with 99 men and 99 women. The sampling method was opportunistic as the aim was to collect as extensive as sample as possible.

A 2 (participant sex: men/women) x 3 (motive: intrasexual competition vs. intersexual courtship vs. control) x 2 (product type: counterfeit luxury vs. original low status) mixed-factorial design was employed. Participant sex and motivational state were between-subjects factors, while product type was a within-subjects factor. To participate in the research, participants were given a consent form.

The following graphs illustrate the demographics of the participants:

Figure 1: Sex distribution

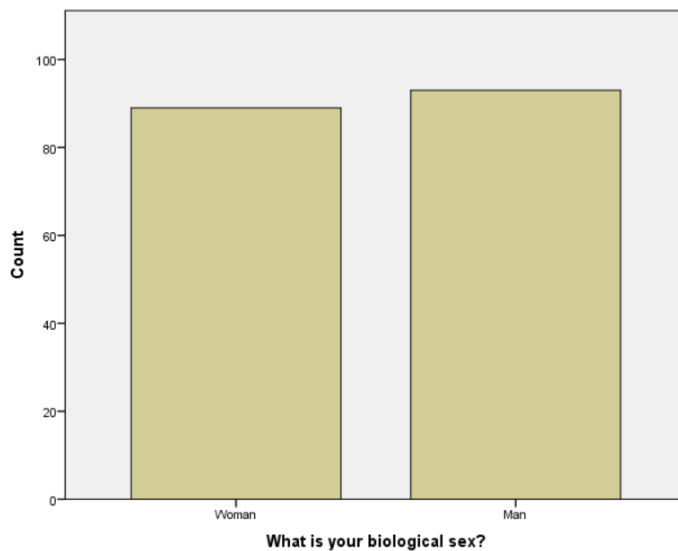


Figure 2: Age distribution

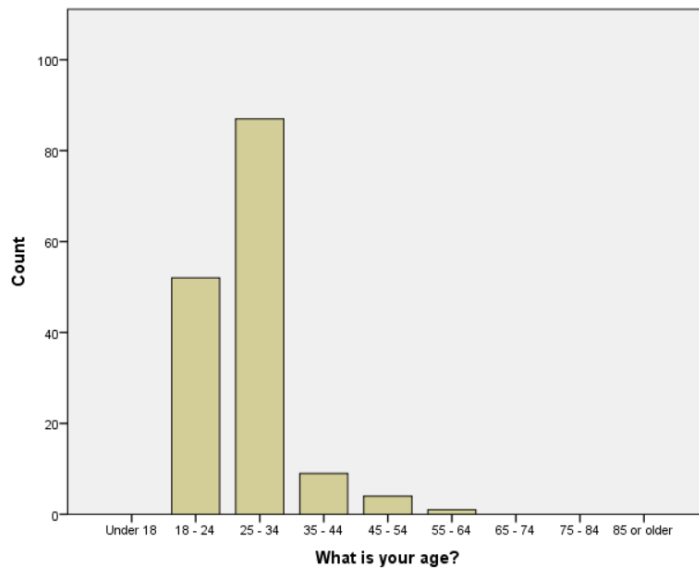


Figure 3: Education distribution

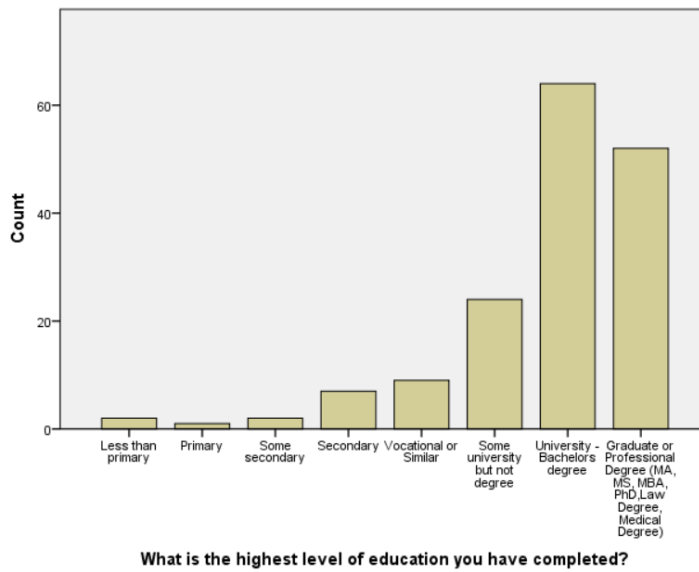


Figure 4: Relationship Status Distribution

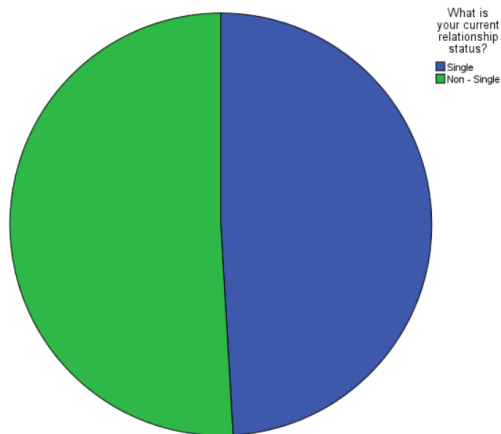
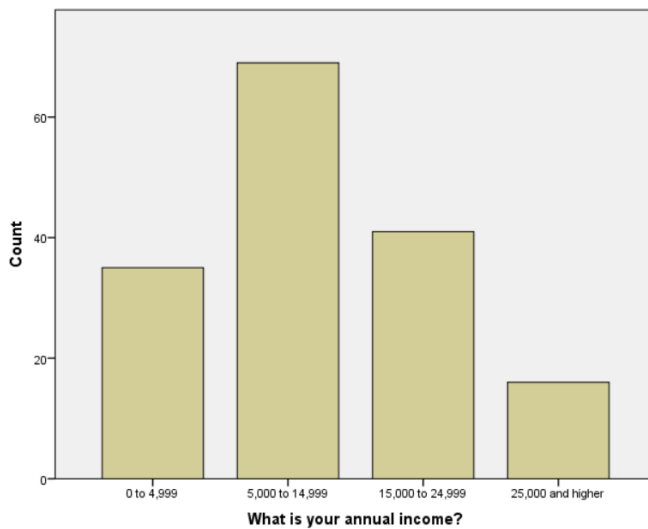


Figure 5: Annual Income Distribution

Figure 5: Annual Income



## Procedure

To begin the procedures, each participant, based on their sex, was randomly assigned to one of the three conditions: activating courtship motivation, activating competition motivation or control. The courtship motivation condition was designed to manipulate the attractiveness perception of opposite-sex individuals, while the competition motivation condition was designed to manipulate the attractiveness perception of same-sex individuals who they would compete against for mates. The

control condition had no specific manipulation. All participants were informed, as a cover story, that the survey aimed to learn about several different topics, including people's ability to judge attractiveness.

After completing the motive induction, participants were asked to rate one set of products: two different t-shirts. The specific product categories were chosen because clothing is the main category subject to counterfeiting. Participants were asked to imagine that they were in the market to acquire a new t-shirt. They were then presented with products they liked, which were similar in style and price but different in the perceived status they would convey to others.

The first product was from a large, low-cost retailer's store (MANGO); it was described as nearly identical in appearance to a prestigious brand product (DIOR), but it had the low-status retailer's brand (MANGO) on the front. The second product was available online from a retailer that specializes in designing replicas and knockoffs. It was described as nearly identical in appearance to a prestigious brand product (DIOR) and displayed the prestige brand name on the front. There were no other differences in the products, as they made from same materials and photographed from the same angle. The price for the two t-shirts was the same.

### **Manipulations**

Before participants began the shopping task, they viewed and rated a series of photographs used to establish the priming methodology. Men and women saw targets that subliminally activated intrasexual competition or intersexual courtship or control (see Durante et al., 2010, Gkriskevicius et al., 2007).

Specifically, participants viewed 10 individuals (male or female depending on the condition) or 10 forests and rated each one on attractiveness. For example, the male participants viewed 10 photographs of attractive women, men or forests. All photographs were collected from public online domains. A separated sample of 20 individuals, who were not aware of the purpose of the research, pre-rated these photos based on their physical attractiveness.

### **Pretest**



For the purpose of the research, only photos from highly attractive males and females were used. This happened as the induction of competition and courtship mindset should be strongly activated. This happened when potential mates and same-sex competitors believe that the other person is highly attractive (Durant et al., 2003). To ensure that the photos were attractive, 20 students (both sexes) rated the attractiveness of each of the 20 photos (10 of each sex) to be used in the study, using a 9-point scale (1=not at all to 9=extremely attractive). Both male and female rated significantly above average: female photographs ( $M=6.9$ ,  $SD=0.92$ ,  $p=0.003$ ) and male photographs ( $M=6.53$ ,  $SD=1.06$ ,  $p<0.001$ ).

### **Dependent measure**

The dependent measure in the study was purchase intention. Men and women participants rated how likely it was that they would purchase each t-shirt respectively (1=Not at all to 9=Very much)

### **Other measures**

In order to test the moderating effect of loneliness, participants completed the following measures. The measures and scales used in this research were taken from previously developed and validated scales and were adapted for the need of this specific topic.

To measure loneliness, a ten-item four-point Likert scale (1=never to 4=often) from Russell et al. (1980) was used. After reverse coding the positively worded items, the alpha reliability found to be 0.704 which is the minimum acceptable. After deleting the items "I do not feel alone" and "I am an outgoing person" deleted, the alpha reliability increased to 0.827, which is considered good.

Table 1: Reliability of Loneliness Scale

Reliability Statistics	
Cronbach's Alpha	N of Items
.827	8

Item Statistics			
	Mean	Std. Deviation	N
There is no one I can turn to	1,8953	,87230	172
I feel left out	2,2384	,74624	172
I feel isolated from others	2,1047	,90520	172
I am unhappy being so withdrawn	2,0988	,92818	172
People are around me but not with me	2,3081	,90052	172
RECLoneliness8	1,7093	,77786	172
RECLoneliness1	1,9593	,78254	172
RECLoneliness5	1,7500	,78080	172

For measuring materialism, a fifteen-item five-point Likert scale (1=strongly disagree to 5=strongly agree) from Richins (2004) was used. After reversed 6 negative worded items of the scale, the alpha reliability found to be 0.840 which is good.

Table 2: Reliability of Materialism

Reliability Statistics	
Cronbach's Alpha	N of Items
.840	15

Item Statistics			
	Mean	Std. Deviation	N
I admire people who own expensive homes, cars, and clothes.	2,8395	1,19997	162
Some of the most important achievements in life include acquiring material possessions.	2,7222	1,11037	162
The things I own say a lot about how well I'm doing in life.	2,8148	1,08761	162
I like to own things that impress people.	2,5988	1,19242	162
Buying things gives me a lot of pleasure.	3,5741	1,03243	162
I like a lot of luxury in my life.	3,0247	1,15264	162
My life would be better if I owned certain things I don't have.	3,2407	1,14102	162
It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like.	3,5679	1,10266	162
RECMaterial3R	2,6173	1,11531	162
RECMaterial6R	2,7222	1,15425	162
RECMaterial7R	2,9815	1,12273	162
RECMaterial8R	2,8580	1,05658	162
RECMaterial9R	2,7407	1,01880	162
RECMaterial13R	3,0679	1,14819	162
I'd be happier if I could afford to buy more things.	3,3765	1,05156	162

To assess receptivity to uncommitted sexual encounters, the Sociosexual Orientation Inventory Scale from Simpson and Gangestad (1991) was used. However, since we wanted to measure mating investment intentions, we used only the

attitudinal items (items 5-7 from the original scale). The respondents completed a 5-point scale (1=totally disagree to 5=totally agree). After reversing one negatively worded item of the scale, the alpha reliability found to be 0.766, which is acceptable.

Table 3: Reliability of SOI

Reliability Statistics	
Cronbach's Alpha	N of Items
,766	3

Item Statistics			
	Mean	Std. Deviation	N
SO1:Sex without love is ok	3,4970	1,30021	165
SO2:I can imagine myself being comfortable and enjoying "casual" sex with different partners.	2,9030	1,32621	165
RECSO13	3,6364	1,25470	165

To identify the source of loneliness the Social and Emotional Loneliness Scale from DiTommaso et al. (2004) was used. This scale is a five-point Likert scale (1=strongly disagree to 5=strongly agree) and has 3 subscales: social, family and romantic loneliness. After reverse coding two positively worded items, the alpha reliability for social subscale was found to be 0.807, which was considered good.

Table 4: Reliability of Social Subscale of Loneliness

Reliability Statistics	
Cronbach's Alpha	N of Items
,808	5

Item Statistics			
	Mean	Std. Deviation	N
SocialSubscale1	4,1716	,97597	169
SocialSubscale2	3,9527	,98688	169
SocialSubscale4	4,1006	,99788	169
RECSocialSubscale3	3,8994	1,11614	169
RECSocialSubscale5	4,0237	1,15960	169

After reserving two negatively positive worded items, the alpha reliability for family subscale was found to be 0.832, which was considered good.

Table 5: Reliability of Family Subscale of Loneliness

Cronbach's Alpha	N of Items
,832	5

	Mean	Std. Deviation	N
Family4	4,2781	,97568	169
Family3	4,0296	1,08795	169
Family5	4,6331	,70396	169
RECFamily1	3,8225	1,21173	169
RECFamily2	4,0473	1,24791	169

After recoding item 5 and deleting item 3 (“I wish I had a more satisfying romantic relationship”), the alpha reliability test was found to be 0.914, an excellent result.

Table 6: Reliability test of Romantic Subscale of Loneliness

Cronbach's Alpha	N of Items
,914	4

	Mean	Std. Deviation	N
Romantic1	3,1479	1,71009	169
Romantic2	3,0828	1,70929	169
Romantic4	3,1361	1,66524	169
RECRomantic5	3,1598	1,52106	169

## Data Collection

For data collection, as the primary research tool for this experiment, a questionnaire was employed. The questionnaire comprised four main sections and was designed to assess in how the activation of mating motives can influence men’s and women’s intention to buy counterfeit luxury products over low status ones. Each respondent was assigned to one out of 3 possible conditions based on their sex (intrasexual competition, intersexual courtship or control). Participants first viewed 10 pictures and judged the attractiveness of each, followed by answering two questions

to ensure the prime was activated. They then responded to two questions regarding their purchase intention for two different t-shirts: one from a low-cost retailer and one a counterfeit luxury product. The third section included questions regarding loneliness, materialism and other variables that could act as moderators in counterfeiting consumption and mating motive. The final section collected demographic information such as relationship status, income, age and educational level. The experiment was conducted online through an established platform called Qualtrics, ensuring better accessibility, distribution and convenience for participants.

## **Results**

*H1: Activating mate competition motives triggers men's intention to buy counterfeit luxury brands over low-status brands*

A repeated measures ANOVA was conducted to determine the effect of mate competition motives on men's intention to buy counterfeit luxury brands vs. low-status brands. It was compared the effect of intrasexual competition manipulation (intrasexual competition vs. control) on men's purchase intention of counterfeit luxury brands vs. low – status brands. The results showed a significant interaction effect between intrasexual competition motive and product type for men ( $F=8.603$ ,  $p=0.005$ ), accepting H1. This finding suggests that there is influence of mate competition context on the consumption of counterfeit luxury brands vs. low status brands for men.

More specifically, as depicted in Figure 6 and Figure 7, the mean purchase intention of counterfeit luxury brands and low-status brands differed significantly across conditions. Men with a competitive mating state had a significantly higher intention to purchase counterfeit luxury brands ( $M=5.66$ ) than men in control ( $M=4.03$ ) condition, in support of H1.

Figure 6: Men's intention to purchase counterfeit luxury brands vs. low-status brands as a function of motive manipulation (intrasexual competition)

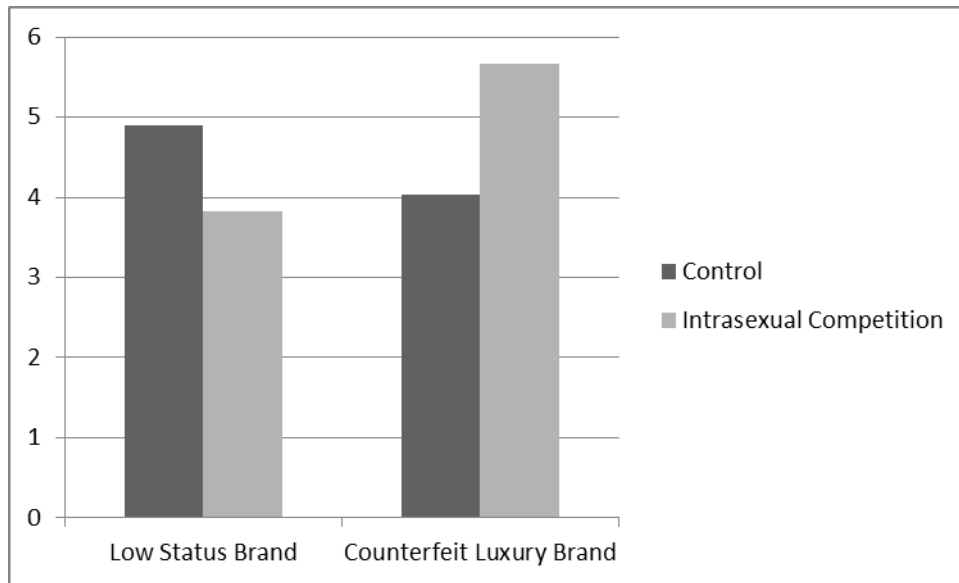
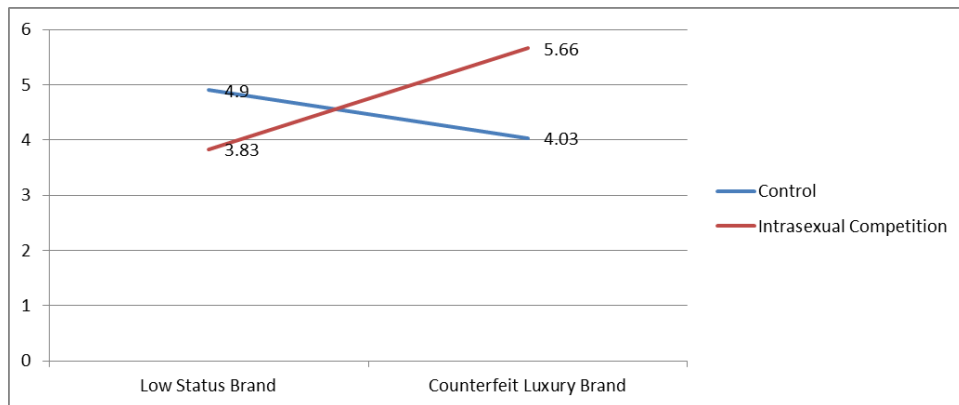


Figure 7: Men's intention to purchase counterfeit luxury brands vs. low-status brands as a function of motive manipulation



*H2: Activating mate competition motives triggers women's intention to buy counterfeit luxury brands over low-status brands*

A repeated measures ANOVA was conducted to determine the effect of mate competition motives on women's intention to buy counterfeit luxury brands vs. low-status brands. It compared the effect of intrasexual competition manipulation (intrasexual competition vs. control) on women's purchase intention of counterfeit luxury brands vs. low-status brands. The results showed a significant interaction effect between intrasexual competition motive and product type for women ( $F=50.77$ ,  $p < <0,001$ ), accepting H2. This finding suggests there is influence of mate competition context on the consumption of counterfeit luxury brands vs. low status

brands for women. More specifically, as depicted in Figure 8 and Figure 9, the mean purchase intention of counterfeit luxury brands and low-status brands differed significantly across conditions. Women with a competitive mating state had a significantly higher intention to purchase counterfeit luxury brands ( $M=7.87$ ) than women in the control ( $M=3.82$ ) condition, in support of H2.

Figure 8: Women's intention to purchase counterfeit luxury brands vs. low-status brand as a function of motive manipulation (intrasexual competition)

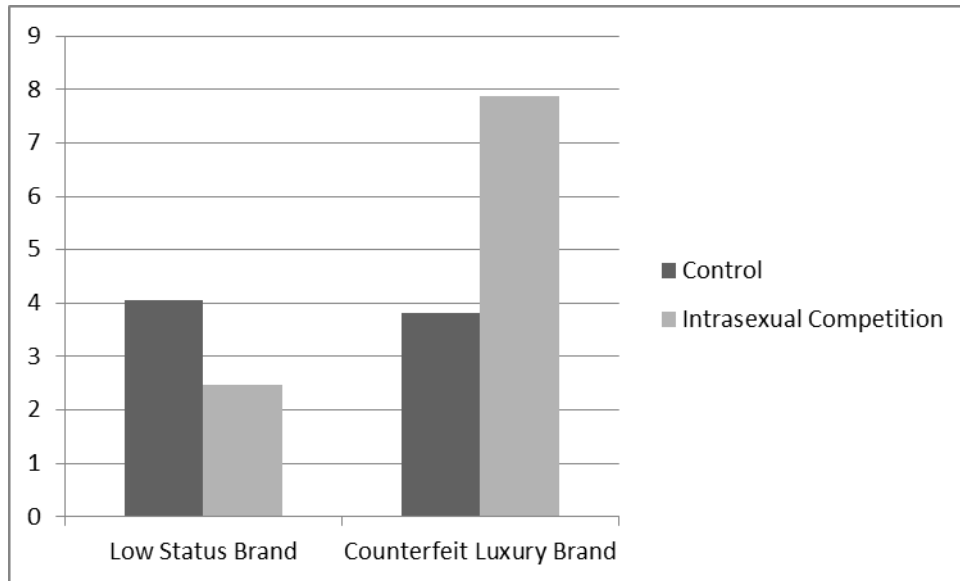


Figure 9: Women's intention to purchase counterfeit luxury brands vs. low-status brand as a function of motive manipulation



*H3: Activating mate attraction motives triggers men's intention to buy counterfeit luxury brands*

A repeated measures ANOVA was conducted to determine the effect of mate attraction motives on men's intention to buy counterfeit luxury brands vs. low-status brands. It compared the effect of mate attraction manipulation (intersexual courtship vs. control) on men's purchase intention of counterfeit luxury brands vs. low-status brands. The results reveals that there is a significant interaction effect between mate attraction motive and product type ( $F=72,679$ ,  $p<0,001$ ), in support of H3. More specifically, as depicted in Figure 10 and Figure 11, the mean purchase intention of counterfeit luxury brands and low-status brands differed significantly across conditions. Men with a mate attraction mindset had a significantly higher intention to purchase counterfeit luxury brands ( $M=7.3$ ) than men in the control ( $M=4.03$ ) condition, in support of H3.

Figure 10: Men's intention to purchase counterfeit luxury brands vs. low-status brand as a function of motive manipulation (intersexual attraction)

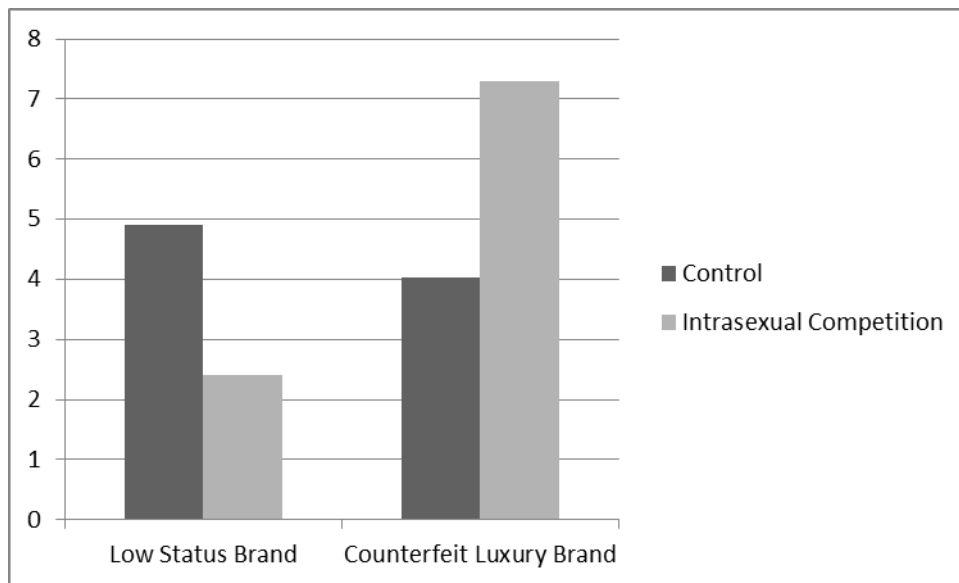
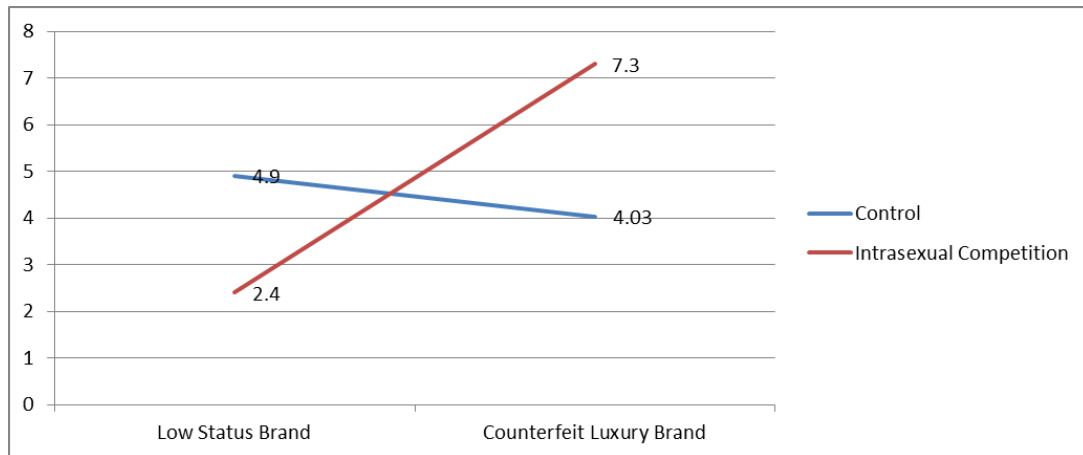




Figure 11: Men's intention to purchase counterfeit luxury brands vs. low-status brand as a function of motive manipulation



*H4: Activating mate attraction motives do not influence women's intention to purchase counterfeit luxury brands over low-status brands.*

A repeated measures ANOVA was conducted to determine the effect of mate attraction motives on women's intention to buy counterfeit luxury brands vs. low-status brands. It compared the effect of mate attraction manipulation (intersexual courtship vs. control) on women's purchase intention of counterfeit luxury brands vs. low-status brands. The results revealed that there is no significant interaction effect between motive and product type ( $F=0.030$ ,  $p=0.862$ ), in support of H4. Consequently, women's consumption of counterfeit luxury brands does not serve as a mating-relevant signal directed at opposite-sex others.

*H5: Loneliness moderates the interaction effect of intrasexual competition on the consumption of luxury counterfeit brands among men*

As it mentioned above, there is a significant main effect of intrasexual competition ( $F=8.603$ ,  $p=0.005$ ) on purchase intention of counterfeit luxury brands vs. low status brands such that purchase intention of counterfeit luxury brands increase with the activation of intrasexual competition motive among men. Moreover, in order to test whether loneliness moderated the relationship between intention to purchase counterfeit luxury brands vs. low status brands and motive manipulation, a moderation analysis using PROCESS Model 1 was conducted. These variables accounted for a significant account of variance in intention to purchase counterfeit luxury brands,  $R^2 = 0.4289$ ,  $F(3,24)=6.0073$ ,  $p=0.0033$ . To avoid potentially

problematic high multicollinearity with the interaction term, the variables were centered and an interaction term between the motive manipulation and materialism was created. The overall model was significant, indicating that 42.89% of the variance in the intention to purchase counterfeit luxury brands was explained by the predictors. However, the interaction term between intrasexual competition and loneliness was not statistically significant ( $b=-0.5750$ ,  $t(24)= -1.2721$ ,  $p=0.2155$ ), rejected H5. This finding indicates that loneliness did not significantly moderate the relationship between intrasexual competition and the intention to purchase counterfeit luxury brands.

*H6: Loneliness moderates the interaction effect of intrasexual competition on the consumption of luxury counterfeit brands among women*

As it mentioned above, there is a significant main effect of intrasexual competition ( $F=50.77$ ,  $p < 0,001$ ) on purchase intention of counterfeit luxury brands vs. low status brands such that purchase intention of counterfeit luxury brands increase with the activation of intrasexual competition motive among women. Moreover, in order to test whether loneliness moderated the relationship between intention to purchase counterfeit luxury brands vs. low status brands and motive manipulation, a moderation analysis using PROCESS Model 1 was conducted. The overall model was not significant,  $R^2 = 0.0472$ ,  $F(3,18)=0.2970$ ,  $p=0.8270$ , indicating that 4.72% of the variance in the intention to purchase counterfeit luxury brands was explained by the predictors. To avoid potentially problematic high multicollinearity with the interaction term, the variables were centered and an interaction term between the motive manipulation and materialism was created. The overall model was significant, indicating that 42.89% of the variance in the intention to purchase counterfeit luxury brands was explained by the predictors. The main effect of loneliness on the intention to purchase counterfeit brands was not statistically significant ( $b=0.0266$ ,  $t(18)=0.0558$ ,  $p=0.9561$ ), rejected H6. The findings suggest that loneliness do not moderate the effect of intrasexual competition on counterfeit luxury brand purchase intention in women.

*H7: Loneliness moderates the interaction effect of intersexual attraction on the consumption of luxury counterfeit brands among men*

As it mentioned above, there is a significant main effect of intersexual attraction ( $F=72,679$ ,  $p<0,001$ ), on purchase intention of counterfeit luxury brands vs. low status brands such that purchase intention of counterfeit luxury brands increase with the activation of intrasexual competition motive among women. Moreover, in order to test whether loneliness moderated the relationship between intention to purchase counterfeit luxury brands vs. low status brands and motive manipulation, a moderation analysis using PROCESS Model 1 was conducted. To avoid potentially problematic high multicollinearity with the interaction term, the variables were centered and an interaction term between the motive manipulation and materialism was created. The overall model was not significant,  $R^2 = 0.1037$ ,  $F(3,26)=1.0030$ ,  $p=0.4072$ , indicating that 10.37% of the variance in the intention to purchase counterfeit luxury brands was explained by the predictors. The main effect of loneliness on the intention to purchase counterfeit brands was not statistically significant ( $b=-0.1376$ ,  $t(26)=-0.4435$ ,  $p=0.6611$ ), rejected H7. The findings suggest that loneliness do not moderate the effect of intersexual attraction on counterfeit luxury brand purchase intention in men.

Table 7: Summary of Empirical Support for Study Hypotheses

Hypothesis	Result
H1: Activating mate competition motives triggers men's intention to buy counterfeit luxury brands over low-status brands.	Supported
H2: Activating mate competition motives triggers women's intention to buy counterfeit luxury brands over low-status brands.	Supported
H3: Activating mate attraction motives triggers men's intention to buy counterfeit luxury brands.	Supported
H4: Activating mate attraction motives do not influence women's intention to purchase counterfeit luxury brands over low-status brands.	Supported
H5: Loneliness moderates the interaction effect of	Not Supported

intrasexual competition on the consumption of luxury counterfeit brands among men	
H6: Loneliness moderates the interaction effect on intrasexual competition on the consumption of luxury counterfeit brands among women	Not Supported
H7: Loneliness moderates the interaction effect on intersexual attraction on the consumption of luxury counterfeit brands among men	Not Supported

## General Discussion

This thesis, through an experimental study based on evolutionary psychology, investigated whether fundamental mating motives increase the preference for counterfeiting consumption among both women and men consumers. Additionally, it examined the role of loneliness as a potential moderator of this relationship.

The findings of this study reveal that counterfeit consumption serves different functions for men and women in the context of mating motives. For men, a counterfeit luxury product functions as a misleading signal of the subjective value of the partner, intended to display wealth to potential romantic partners. This result aligns with Wilcox et al. (2009), who identified status signaling as a main motive for counterfeit consumption. Griskevicius et al. (2007), similarly, suggested that both mate attraction and competition motives increase men's intention to purchase counterfeit goods. Sundie et al. (2011) supported that men use costly signals such as counterfeiting consumption to attract a romantic partner.

On the other hand, for women, the consumption of counterfeit luxury goods mainly serves as a signal to other women rather than to potential partners. This behavior acts as a strategy to enhance their ability to compete with female rivals. This is also supporting from the research of Durante et al. (2011), which suggests that women engage in conspicuous consumption to compete other women for keep their mate. Additionally, Wang and Griskevicius (2014), as well as Hudders et al. (2014) have shown that conspicuous consumption serves either as a direct signal to other women who consists a threat to their relationship status or as a strategy to promote themselves and gain advantages over same-sex competitors.

The study further revealed that mating attraction motives significantly influenced men's consumption for counterfeit luxury brand vs. low status brands. This finding aligns with the research of Bjorklund and Shackelford (1999), who suggested that men utilize costly signaling, such as purchasing counterfeit goods, to attract romantic partners because of sex differences in parental investment. Buss (2004) also supported the previous opinion by indicating that women's higher investment in offspring and their shorter reproductive lifespan made them be more selective, preferring partners who display high social and financial status. So it was

indicated that women use counterfeit luxury goods as a signal to deter female rivals. Based on evolutionary psychology, flaunting designer counterfeit t-shirts could help women signal their ability to compete with other women.

The study did find any mating attraction motive which influence purchase intention of women on counterfeit luxury consumption.

In contrast to the expectations, the study did not find loneliness to be a significant moderator of the relationship between mating motives and counterfeit consumption. This result is contradictory with the main literature. Liu et al. (2020), suggested that mating motives mediate conspicuous consumption amongst singles. Additionally, previous research revealed that loneliness can drive material consumption as a means of coping with social isolation (Gentina et al., 2018; Pieters, 2013; Rippé et al., 2018).

Wang (2012) also supported that psychological factors, such as loneliness, can influence conspicuous consumption. Hence, it was found that loneliness can have a complicated relationship with consumption patterns (Twenge et al., 2022). General, there are data that lonely individuals use conspicuous consumption as a mean of finding a social connection (Lau & Tsepeng, 2016).

Despite the findings of these researchers, this study did not identify loneliness as a significant moderator in the relationship of mating motives and counterfeit consumption. This indicated that while loneliness influences conspicuous consumption, it may not affect counterfeit conspicuous consumption. This difference highlights the need for further research. Overall, the findings of this study contribute to the existing literature on counterfeit luxury brands by showing how these products can serve as a deceptive signal in the context mating motives.

## Contributions of the Thesis

The findings of this thesis offer several important theoretical contributions. First, it advances the literature on mating motives and conspicuous consumption by investigating consumer behavior through an evolutionary psychology perspective, particularly focusing on counterfeit luxury brands. While previous research has mainly examined conspicuous consumption as a means of signaling status, this study specifically explore how mating motives influence the purchase intention for counterfeiting consumption. By revealing that mating motives influence consumer behavior differently for men and women, this thesis enhances the understanding of how evolutionary motives shape contemporary consumer consumption practices (Wang & Griskevicius, 2014).

Moreover, this study extends theories on loneliness and conspicuous consumption Although the results did not find loneliness as a significant moderator in the relationship between mating motives and counterfeit luxury consumption,, it encourages further research into how psychological states impact different types of consumption behaviors. Subsequently, it challenges existing theories which have linked loneliness with conspicuous consumption (Liu et al. 2020), it may not necessarily influence counterfeit consumption

Lastly, this thesis offers valuable insights into the field of evolutionary psychology by providing empirical evidence that counterfeit consumption can function as an evolutionary-based signal. It is demonstrated, based on evolutionary psychology, that counterfeit goods can be a deceptive signal in a mating context.

In addition, the results of this study have also important practical implications, especially for brand management and advertising professionals. First of all, marketing campaigns of luxury products could be more effective, as marketers will be better understand the positioning of counterfeit luxury brands into the market. If they will understand the motives behinds the consumption, they could shape tailored strategies. For example, marketers could create campaign which appeal to men's desire to signal status and also campaign which appeal women's competitive nature, highlight exclusivity and high status (Wilcox et al., 2009).

Moreover, its result can be used to create educational content to inform consumers about the risks of counterfeit goods.



## **Limitations and Future Research**

The main limitation of this study is the narrowed sample. This study has specific demographics like university students from a specific geographic area. This choice of sample maximizes internal validity and affects external validity as well as the generalizability of the results. Consequently, it may not be representative of the broader population's consumer behavior. Future studies should include more diverse demographics such as different ages or locations.

Another limitation of the study is that participants had only photos of the products. Maybe if they had the real one, their responses could change. The study used mating motives which were primed via a story. Future studies could incorporate laboratory settings with "real" rivals acting, instead of photos. Past research found that women reacted cruel when an attractive female rival was dresses provocatively instead of conservatively (Vaillancourt & Sharm, 2011). Saad and Vongas (2009) also used a male to disply conspicuous goods to examine how conspicuous consumption influence testosterone levels of men. If these experimental setting would applied, the priming method, as well ass the feelings of mating motives could be enhanced.

Moreover, this study measures some psychological constructs such as loneliness or mating motives. These constructions are based on self-reported data, which may include biases. As a result future research should find a more objective assessment of these measure, which will combine self-report and behavioral ones. Additionally, in this approach the loneliness was assessed with the UCLA Loneliness Scale based on the prior consumer research (Wang et al., 2012). In future research, an experimental manipulation would be useful as it may better clarify the causal relationship between loneliness and mating motive.

Future research may investigate also other traits such as the Dark Triad Personality traits and the Big Five personality dimensions, which may moderate the relationship between counterfeit luxury consumption and mating motives.

Moreover, research could examine these cultural differences in counterfeit consumption (Liu et al., 2020).

## References

- An Exploratory Study in Hong Kong's Clothing Industry. *Journal of Fashion Marketing and Management*, 5(1), 45-55.
- Andersson, M. (1994). *Sexual selection*. Princeton, NJ: Princeton University Press.
- Ayers, J. D., & Goetz, A. T. (2022). Coordinated condemnation in women's intrasexual competition. *Personality and Individual Differences*, 185, 111294. <https://doi.org/10.1016/j.paid.2021.111294>
- Barreto, M., Victor, C., Hammond, C., Eccles, A., Richins, M. T., & Qualter, P. (2021). Loneliness around the world: Age, gender, and cultural differences in loneliness. *Personality and Individual Differences*, 169, 110066. <https://doi.org/10.1016/j.paid.2020.110066>
- Barrett, L., Dunbar, R., & Lycett, J. (2001). Human Evolutionary Psychology. In *Bloomsbury Academic eBooks*. <https://doi.org/10.1007/978-1-137-23550-3>
- Beall, A. T., & Tracy, J. L. (2017). Emotivational psychology: How distinct emotions facilitate fundamental motives. *Social and Personality Psychology Compass*, 11(2). <https://doi.org/10.1111/spc3.12303>
- Bekir, I., El Harbi, S., & Grolleau, G. (2011). (Deceptive) Status Seeking Strategies in France and Tunisia. *Journal of Economic Issues*, 45(3), p. 717-732.
- Berger, J., & Ward, M. (2010). Subtle signals of inconspicuous consumption. *the Journal of Consumer Research/Journal of Consumer Research*, 37(4), 555–569. <https://doi.org/10.1086/655445>
- Bian, X., & Veloutsou, C. (2007). Consumers' attitudes regarding non-deceptive counterfeit brands in the UK and China. *Journal of Brand Management*, 14, 211–222.

- Bian, X., Wang, K-Y, Smith, A., & Yannopoulou, N. (2016). New insights into unethical counterfeit consumption. *Journal of Business Research*, 69(10), 4249-4258
- Billet, M. I., McCall, H. C., & Schaller, M. (2022). What motives do people most want to know about when meeting another person? An investigation into prioritization of information about seven fundamental motives. *Personality & Social Psychology Bulletin*, 49(4), 495–509.  
<https://doi.org/10.1177/01461672211069468>
- Bjorklund, D. F., & Shackelford, T. K. (1999). Differences in parental investment contribute to important differences between men and women. *Current Directions in Psychological Science*, 8 (3), 86-89.
- Bloch, P., Bush, R., & Campbell, L. (1993). Consumer Accomplices in Product Counterfeiting: A Demand-Side Investigation. *Journal of Consumer Marketing*, 10(4), 27-36.
- Bowen, R., Balbuena, L., Leuschen, C., & Baetz, M. (2012). Mood instability is the distinctive feature of neuroticism. Results from the British Health and Lifestyle Study (HALS). *Personality and Individual Differences*, 53(7), 896–900. <https://doi.org/10.1016/j.paid.2012.07.003>
- Brown, N. A., Neel, R., & Sherman, R. A. (2015). Measuring the evolutionarily important goals of situations. *Evolutionary Psychology*, 13(3), 147470491559366. <https://doi.org/10.1177/1474704915593662>
- Bryce, J., & Rutter, J. (2005). Fake nation? Retrieved from <http://www.allianceagainstiptheft.co.uk>.
- Burroughs, J. E., & Rindfleisch, A. (2002). Materialism and well-being: A conflicting value perspective. *Journal of Consumer Research*, 29 (3), 348-370.

- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, 12, 1-49.
- Buss, D. M. (2003). *The evolution of desire: Strategies of human mating* (rev. ed.) New York: Basic Books.
- Buss, D. M. (2016). Evolutionary Psychology, The Handbook of. In *Springer eBooks* (pp. 1–3). [https://doi.org/10.1007/978-3-319-16999-6\\_1860-1](https://doi.org/10.1007/978-3-319-16999-6_1860-1)
- Chang, L., & Arkin, R. M. (2002). Materialism as an attempt to cope with uncertainty. *Psychology & Marketing*, 19 (5), 389-406.
- Chaudhry, P., & Zimmerman, A. (2009). *The economics of counterfeit trade*. Heidelberg, Germany: Springer.
- Chen, N., Jiao, J., Fan, X., & Li, S. (2021). The shape of loneliness: The relationship between loneliness and consumer preference for angular versus circular shapes. *Journal of Business Research*, 136, 612–629. <https://doi.org/10.1016/j.jbusres.2021.07.046>
- Chen, Y., & Tang, T. L. (2006). Attitude Toward and Propensity to Engage in Unethical Behavior: Measurement Invariance across Major among University Students. *Journal of Business Ethics*, 69(1), 77–93. <https://doi.org/10.1007/s10551-006-9069-6>
- Conde-Sala, J. L., Garre-Olmo, J., Calvó-Perxas, L., Turró-Garriga, O., & Vilalta-Franch, J. (2019). Course of depressive symptoms and associated factors in people aged 65+ in Europe: A two-year follow-up. *Journal of Affective Disorders*, 245, 440–450. <https://doi.org/10.1016/j.jad.2018.10.358>
- Cooney, T. M., & Dunne, K. (2004). Intimate relationships in later life: current realities, future prospects. In *SAGE Publications, Inc. eBooks* (pp. 136–152). <https://doi.org/10.4135/9781412976022.n8>

- Cordell, V., Wongtada, N., & Dieschnick, R. L. (1996). Counterfeit purchase intentions: the role of lawfulness attitudes and product traits as determinants. *Journal of Business Research*
- Coy, A. E., Green, J. D., & Price, M. E. (2014). Why is low waist-to-chest ratio attractive in males? The mediating roles of perceived dominance, fitness, and protection ability. *Body Image, 11*, 282-289.
- Darwin, C. (1871). *The descent of man and selection in relation to sex*. London, UK: Murray.
- Darwin, C. (1871). *The descent of man and selection in relation to sex*. London, UK: Murray.
- Davidson, A., Nepomuceno, M. V., & Laroche, M. (2017). Shame on you: when materialism leads to purchase intentions toward counterfeit products. *Journal of Business Ethics, 155*(2), 479–494. <https://doi.org/10.1007/s10551-017-3479-5>
- DiTommaso, E., & Spinner, B. (1997). Social and emotional loneliness: A re-examination of weiss' typology of loneliness. *Personality and Individual Differences, 22*(3), 417–427. [https://doi.org/10.1016/s0191-8869\(96\)00204-8](https://doi.org/10.1016/s0191-8869(96)00204-8)
- DiTommaso, E., Brannen, C., & Best, L. A. (2004). Measurement and validity characteristics of the short version of the Social and Emotional Loneliness Scale for adults. *Educational and Psychological Measurement, 64*(1), 99–119. <https://doi.org/10.1177/0013164403258450>
- Dixson, B. J., & Brooks, R. C. (2013). The role of facial hair in women's perceptions of men's attractiveness, health, masculinity and parenting abilities. *Evolution and Human Behavior, 34*, 236-241.

- Dunn, M. J., & Searle, R. (2010). Effect of manipulated prestige-car ownership on both sex attractiveness ratings. *British Journal of Psychology*, *101*(1), 69–80. <https://doi.org/10.1348/000712609x417319>
- Durant, D., Fritz, H., Blais, S., & Duncan, P. (2003). The functional response in three species of herbivorous Anatidae: effects of sward height, body mass and bill size. *Journal of Animal Ecology*, *72*(2), 220–231. <https://doi.org/10.1046/j.1365-2656.2003.00689.x>
- Durante, K., M., Griskevicius, V., Hill, S., E., Perilloux, C., & Li, N., P. (2011). Ovulation, Female Competition, and Product Choice: Hormonal Influences on Consumer Behaviour. *Journal of Consumer Research*, *37* (6), 921–34.
- Eisend, M. & Schuchert-Guler, P. (2006). Explaining Counterfeit Purchases: A Review and Preview. *Academy of Marketing Science Review*, *10* (10).
- Eisend, M. (2016). Morality Effects and Consumer Responses to Counterfeit and Pirated Products: A Meta-analysis. *Journal of Business Ethics*, *154*(2), 301–323. <https://doi.org/10.1007/s10551-016-3406-1>
- Forgas, J. P., Haselton, M. G., & Von Hippel, W. (2011). Evolution and the social mind : Evolutionary Psychology and Social Cognition. In *Psychology Press eBooks* (pp. 179–194). <http://ci.nii.ac.jp/ncid/BA82704563>
- Fumagalli, E., Shrum, L., & Lowrey, T. M. (2022). Consuming in response to loneliness: Bright side and dark side effects. *Current Opinion in Psychology*, *46*, 101329. <https://doi.org/10.1016/j.copsyc.2022.101329>
- Gardner, W. L., Pickett, C. L., Jefferis, V., & Knowles, M. (2005). On the Outside Looking In: Loneliness and Social Monitoring. *Personality & Social Psychology Bulletin*, *31*(11), 1549–1560. <https://doi.org/10.1177/0146167205277208>

- Geary, D. C. (1998). *Male, female: The evolution of human sex differences*.  
Washington, DC: American Psychological Association.
- Gervis, M., Pickford, H., & Hau, T. (2019). Professional Footballers' Association Counselors' perceptions of the role Long-Term injury plays in mental health issues presented by current and former players. *Journal of Clinical Sport Psychology, 13*(3), 451–468. <https://doi.org/10.1123/jcsp.2018-0049>
- Griskevicius, V., Tybur, J. M., Sundie, J. M., Cialdini, R.B., Miller, G. F., & Kenrick, D.T. (2007). Blatant benevolence and conspicuous consumption: When romantic motives elicit strategic costly signals. *Journal of Personality and Social Psychology, 93*(1), 85-102.
- Griskevicius, V., & Kenrick, D.T. (2013). Fundamental motives: How evolutionary needs influence consumer behavior. *Journal of Consumer Psychology, 23*(3), 372-386.
- Griskevicius, V., Tybur, J. M., Gangestad, S. W., Perea, E. F., Shapiro, J. R., & Kenrick, D. T. (2009). Aggress to impress: Hostility as an evolved context-dependent strategy. *Journal of Personality and Social Psychology, 96*, 980-994.
- Guéguen, N., & Lamy, L. (2012). Men's Social Status and Attractiveness. *Swiss Journal of Psychology, 71*(3), 157–160. <https://doi.org/10.1024/1421-0185/a000083>
- Hamdani, A., So, I. G., Maulana, A. E., & Furinto, A. (2023). How can conspicuous Omni-Signaling fulfil social needs and induce Re-Consumption? *Sustainability, 15*(11), 9015. <https://doi.org/10.3390/su15119015>

- Han, Y. J., Nunes, J. C., & Drèze, X. (2010b). Signaling Status with Luxury Goods: The Role of Brand Prominence. *Journal of Marketing*, 74(4), 15–30.  
<https://doi.org/10.1509/jmkg.74.4.015>
- Hans, R. H., Guantai, E. M., Lategan, C., Smith, P. J., Wan, B., Franzblau, S. G., Gut, J., Rosenthal, P. J., & Chibale, K. (2010). Synthesis, antimalarial and antitubercular activity of acetylenic chalcones. *Bioorganic & Medicinal Chemistry Letters*, 20(3), 942–944.  
<https://doi.org/10.1016/j.bmcl.2009.12.062>
- Hawley, L. C., & Cacioppo, J. T. (2010). Loneliness Matters: A theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine*, 40(2), 218–227. <https://doi.org/10.1007/s12160-010-9210-8>
- Hennighausen, C., Hudders, L., Lange, B. P., & Fink, H. (2016). What if the rival drives a Porsche? Luxury car spending as a costly signal in male intrasexual competition. *Evolutionary Psychology*, 1-13.
- Hoe, L., Hogg G., & Hart S. (2003). Fakin' It: Counterfeiting and Consumer Contradictions. In *European Advances in Consumer Research*, 6, Darach Turley and Stephen Brown, eds. Provo, UT: Association for Consumer Research, 60–67.  
<https://doi.org/10.1016/j.ecosys.2023.101175>
- Hudders, L., Lensa, I., Mandel, N., Nairn, A., Samper, A., Soscia, I., & Steinfield, L. (2014). Materialism: the good, the bad, and the ugly. *MM. Journal Of Marketing Management/Journal Of Marketing Management*, 30(17–18), 1858–1881. <https://doi.org/10.1080/0267257x.2014.959985>
- Hullett, C., & Boster, F. (2001). Matching messages to the values underlying value-expressive and social-adjustive attitudes: reconciling an old theory with a



- contemporary measurement approach. *Communication Monographs*, 68(2), 133–153. <https://doi.org/10.1080/03637750128057>
- Janssens, K., Pandelaere, M., Van den Bergh, B., Millet, K., Lens, I., & Roe, K. (2011). Can buy me love: Mate attraction goals lead to perceptual readiness for status products. *Journal of Experimental Social Psychology*, 47(1), 254–258.
- Kamakura, W. A., & Du, R. Y. (2012). How economic contradiction and expansions affect expenditure patterns. *Journal of Consumer Research*, 39(2), 229 – 247.
- Khan, S., Fazili, A. I., & Bashir, I. (2021). Constructing generational identity through counterfeit luxury consumption. *the Journal of Product & Brand Management/Journal of Product & Brand Management*, 31(3), 415–437. <https://doi.org/10.1108/jpbm-09-2020-3071>
- Khan, S., Fazili, A. I., & Bashir, I. (2023). Signaling norm salience through perceived peer counterfeit consumption. *the Journal of Product & Brand Management/Journal of Product & Brand Management*, 32(6), 812–827. <https://doi.org/10.1108/jpbm-02-2022-3859>
- Kolliofotis, V. (2021). Sexual selection of conspicuous consumption. *Journal of Evolutionary Economics*, 32(2), 531–552. <https://doi.org/10.1007/s00191-021-00753-4>
- Koo, J., & Im, H. (2019). Going up or down? Effects of power deprivation on luxury consumption. *Journal of Retailing and Consumer Services*, 51, 443–449. <https://doi.org/10.1016/j.jretconser.2017.10.017>
- Kwong, K. K., Yau, O. H. M., Lee, J. S. Y., Sin, L. Y. M., & Tse, A. C. B. (2003). The Effects of Attitudinal and Demographic Factors on Intention to Buy

- Pirated CDs: The Case of Chinese Consumers. *Journal of Business Ethics*, 47(3), 223–235. <https://doi.org/10.1023/A:1026269003472>
- Lasgaard, M., Goossens, L., Bramsen, R. H., Trillingsgaard, T., & Elklit, A. (2011). Different sources of loneliness are associated with different forms of psychopathology in adolescence. *Journal of Research in Personality*, 45(2), 233–237. <https://doi.org/10.1016/j.jrp.2010.12.005>
- Ibers-Miller, N. D. (1999). Consumer misbehavior: Why people buy illicit goods. *Journal of Consumer Marketing*, 16(3), 273-87.
- Lee, J., & Shrum, L., J. (2012). Conspicuous Consumption versus Charitable Behavior in Responses to Social Exclusion: A Differential Needs Explanation. *Journal of Consumer Research*, 39 (October), 1-17.
- Leisen, B., & Nill, A. (2001). Combating Product Counterfeiting: An Investigation into the Likely Effectiveness of a Demand-Oriented Approach, in *AMA Winter Educators' Conference Proceedings*, Vol. 12, R. Krishnan and M. Viswanathan, eds. Chicago: American Marketing Association, 271–77.
- Lens, I., Driesmans, K., Pandelaere, M., & Janssens, K. (2012). Would male conspicuous consumption capture the female eye? Menstrual cycle effects on women's attention to status products. *Journal of Experimental Social Psychology*, 48(1), 346–349. <https://doi.org/10.1016/j.jesp.2011.06.004>
- Lens, W., Paixão, M. P., Herrera, D., & Grobler, A. (2012). Future time perspective as a motivational variable: Content and extension of future goals affect the quantity and quality of motivation. *Japanese Psychological Research*, 54(3), 321–333. <https://doi.org/10.1111/j.1468-5884.2012.00520.x>
- Liu, W., Guo, Z., & Chen, R. (2020). Lonely heart? Warm it up with love: the effect of loneliness on singles' and non-singles' conspicuous consumption.

European Journal of Marketing, 54(7), 1523–1548.

<https://doi.org/10.1108/ejm-01-2018-0054>

Loyau, A., Saint Jalme, M., & Sorci, G. (2005). Intra- and inter- sexual selection for multiple traits in the peacock (*Pavo cristatus*). *Ethology*, 111, 810-820.

Lycett, J. E., & Dunbar, R. I. M. (2000). Mobile phones as lekking devices among human males. *Human Nature*, 11, 93-104.

MacDonald, K. B., & Schermer, J. A. (2023). Loneliness and narcissism. *Current Research in Behavioral Sciences*, 5, 100127.

<https://doi.org/10.1016/j.crbeha.2023.100127>

Marticotte, F., & Arcand, M. (2017). Schadenfreude, attitude and the purchase intentions of a counterfeit luxury brand. *Journal of Business Research*, 77, 175–183. <https://doi.org/10.1016/j.jbusres.2016.12.010>

Mckibben, B. (1998). Returning God to the center: Consumerism & the environmental threat. In R. Clapp (Ed.), *The consuming passion* (pp. 40–50). Downers Grove, IL: Intervarsity Press.

Mesko, N., & Bereczkei, T. (2004). Hairstyle as an adaptive means of displaying phenotypic quality. *Human Nature*, 15(3), 251–270.

<https://doi.org/10.1007/s12110-004-1008-6>

Miller, G. (2009). *Spent. Sex, Evolution, and Consumer Behavior*. New York: Viking Penguin.

Narvaez, D., Moore, D. S., Witherington, D. C., Vandiver, T. I., & Lickliter, R. (2022). Evolving evolutionary psychology. *American Psychologist/the American Psychologist*, 77(3), 424–438.

<https://doi.org/10.1037/amp0000849>

- Ndereyimana, C. S., Lau, A. K., Lascu, D., & Manrai, A. K. (2021). Luxury goods and their counterfeits in Sub-Saharan Africa: a conceptual model of counterfeit luxury purchase intentions and empirical test. *Asia Pacific Journal of Marketing and Logistics*, 34(6), 1222–1244. <https://doi.org/10.1108/apjml-03-2021-0184>
- Nelissen, R. M. A., & Meijers, M. H. C. (2011). Social benefits of luxury brands as costly signals of wealth and status. *Evolution and Human Behavior*, 32, 343–355.
- Ngo, L. V., Northey, G., Tran, Q., & Septianto, F. (2020). The Devil might wear Prada, but Narcissus wears counterfeit Gucci! How social adjustive functions influence counterfeit luxury purchases. *Journal of Retailing and Consumer Services*, 52, 101671. <https://doi.org/10.1016/j.jretconser.2018.09.003>
- Nia, A., & Zaichkowsky, J. L. (2000). Do counterfeits devalue the ownership of luxury brands? *the Journal of Product & Brand Management/Journal of Product & Brand Management*, 9(7), 485–497.  
<https://doi.org/10.1108/10610420010351402>
- Nikitin, J., & Freund, A. M. (2008). The role of social approach and avoidance motives for Subjective Well-Being and the successful transition to adulthood. *Applied Psychology*, 57(s1), 90–111. <https://doi.org/10.1111/j.1464-0597.2008.00356.x>
- Nombro, E., MacNeill, A. L., & DiTommaso, E. (2022). Interpreting ambiguous situations: The role of loneliness. *Personality and Individual Differences*, 199, 111862. <https://doi.org/10.1016/j.paid.2022.111862>

- Norum, P. S., & Cuno, A. (2011). Analysis of the demand for counterfeit goods. *Journal of Fashion Marketing and Management*, 15(1), 27–40.  
<https://doi.org/10.1108/13612021111112322>
- Nunes, J. C., Dreze, X., & Han, Y. J. (2011). Conspicuous consumption in a recession: Toning it down or turning it up? *Journal of Consumer Psychology*, 21(2), 199 – 205.
- O’Cass, A., & McEwen, H. (2004). Exploring consumer status and conspicuous consumption. *Journal of Consumer Behaviour*, 4(1), 25–39.  
<https://doi.org/10.1002/cb.155>
- Olorenshaw, R. (2011). Luxury and the recent economic crisis. *Vie & Sciences De L’entreprise*, N° 188(2), 72–90. <https://doi.org/10.3917/vse.188.0072>
- Onkvist, S., & Shaw, J. J. (1987). Self-Concept and Image Congruence: Some Research and Managerial Implications. *The Journal of Consumer Marketing*, (Winter), 13-24.
- Ordabayeva, N., & Chandon, P. (2011). Getting Ahead of the Joneses: When Equality Increases Conspicuous Consumption Among Bottom-Tier Consumers. *Journal of Consumer Research*, 38 (1), 27–41.
- Órfão, I., Carvalho, C., Rodrigues, I., Ascensão, L., Pedaccini, M., Vicente, L., Barbosa, M., & Varela, S. a. M. (2023). The role of intrasexual competition on the evolution of male-male courtship display: a systematic review. *PeerJ*, 10, e14638. <https://doi.org/10.7717/peerj.14638>
- Otterbring, T., Sundie, J., Li, Y. J., & Hill, S. (2020). Evolutionary psychological consumer research: Bold, bright, but better with behavior. *Journal of Business Research*, 120, 473–484. <https://doi.org/10.1016/j.jbusres.2020.07.010>

- Park, S., Kim, C., & Park, J. (2023b). How power distance belief, self-construal, and relationship norms impact conspicuous consumption. *Journal of Retailing and Consumer Services*, 75, 103518.  
<https://doi.org/10.1016/j.jretconser.2023.103518>
- Penke, L., & Asendorpf, J. B. (2008). Beyond global sociosexual orientations: A more differentiated look at sociosexuality and its effects on courtship and romantic relationships. *Journal of Personality and Social Psychology*, 95(5), 1113–1135. <https://doi.org/10.1037/0022-3514.95.5.1113>
- Penz, E., & Stottinger, B. (2005). Forget the “Real” Thing-Take the Copy! An Exploratory Model for the Volitional Purchase of Counterfeit Products. *Advances in Consumer Research*, 32, 568-575.
- Phau, I., Prendergast, G., & Chuen, L. H. (2001). Profiling Brand-Piracy-Prone Consumers:
- Piacentini, M., & Mailler, G. (2004). Symbolic consumption In teenagers’ clothing choices. *Journal of Consumer Behaviour*, 3(3), 251-262.
- Pieters, R. (2013). Bidirectional dynamics of materialism and loneliness: not just a vicious cycle. *the Journal of Consumer Research/Journal of Consumer Research*, 40(4), 615–631. <https://doi.org/10.1086/671564>
- Pittiglio, R. (2024). Counterfeiting and Firm Survival. Evidence from the Italian manufacturing industry. *Economic Systems*, 48(2), 101175.
- Ploeger, A., Van Der Maas, H. L. J., & Raijmakers, M. E. J. (2008). Is Evolutionary Psychology a metatheory for Psychology? A discussion of four major issues in psychology from an evolutionary developmental perspective. *Psychological Inquiry*, 19(1), 1–18.  
<https://doi.org/10.1080/10478400701774006>

- Preece, D. A., Goldenberg, A., Becerra, R., Boyes, M., Hasking, P., & Gross, J. J. (2021). Loneliness and emotion regulation. *Personality and Individual Differences, 180*, 110974. <https://doi.org/10.1016/j.paid.2021.110974>
- Puts, D. A., Hodges, C. R., Cardenas, R. A., & Gaulin, S. J. C. (2007). Men's voices as dominance signals: Vocal fundamental and formant frequencies influence dominance attributions among men. *Evolution and Human Behavior, 28*, 340-344.
- Quach, S., & Thaichon, P. (2018). Dark motives-counterfeit selling framework. *Marketing Intelligence & Planning, 36*(2), 245–259. <https://doi.org/10.1108/mip-04-2017-0069>
- Qualter, P., Vanhalst, J., Harris, R., Van Roekel, E., Lodder, G., Bangee, M., Maes, M., & Verhagen, M. (2015). Loneliness across the life span. *Perspectives on Psychological Science, 10*(2), 250–264. <https://doi.org/10.1177/1745691615568999>
- Rath, P. M., Bay, S., Petrizzi, R., & Gill, P. (2015). *The why of the buy : consumer behavior and fashion marketing* (Second edition). Fairchild Books, Inc. <http://site.ebrary.com/id/10925632>
- Razmus, W., Grabner-Kräuter, S., & Adamczyk, G. (2024). Counterfeit brands and Machiavellianism: Consequences of counterfeit use for social perception. *Journal of Retailing and Consumer Services, 76*, 103579. <https://doi.org/10.1016/j.jretconser.2023.103579>
- Richins, M. L. (2004). Material Values Scale Short Form. *Journal of Consumer Research, 31*(June), 209-219.

- Richins, M. L., & Dawson, S. (1992). A consumer values orientation for materialism and its measurement: Scale development and validation. *Journal of Consumer Research*, 19 (3), 303-316.
- Rippé, C. B., Smith, B., & Dubinsky, A. J. (2018). Lonely consumers and their friend the retail salesperson. *Journal of Business Research*, 92, 131–141.  
<https://doi.org/10.1016/j.jbusres.2018.07.013>
- Roney, J. R. (2003). Effects of visual exposure to the opposite sex: Cognitive aspects of mate attraction in human males. *Personality and Social Psychology Bulletin*, 29, 393-404.
- Rucker, D. D., & Galinsky, A. D. (2008). Desire to acquire: Powerlessness and conspicuous consumption. *Journal of Consumer Research*, 35, 257–267.
- Rucker, D. D., Hu, M., & Galinsky, A. D. (2014). The experience versus the expectations of power: A recipe for altering the effects of power on behavior. *Journal of Consumer Research*, 41(2), 381–396.
- Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, 39(3), 472–480. <https://doi.org/10.1037/0022-3514.39.3.472>
- Saad, G. (2011). *Evolutionary psychology in the business sciences*. Springer.
- Saad, G. (2013). Evolutionary consumption. *Journal of Consumer Psychology*, 23(3), 351–371.
- Saad, G., & Vongas, J. (2009). The effect of conspicuous consumption on men's testosterone levels. *Organizational Behavior and Human Decision Processes*, 110, 80-92



- Samaddar, K., & Gandhi, A. (2022). Exploring Customer Perceived Value towards non-deceptive counterfeiting: a grounded theory approach. *South Asian Journal of Business Studies*. <https://doi.org/10.1108/sajbs-07-2021-0259>
- Schaller, M., Kenrick, D. T., Neel, R., & Neuberg, S. L. (2017). Evolution and human motivation: A fundamental motives framework. *Social and Personality Psychology Compass*, 11(6). <https://doi.org/10.1111/spc3.12319>
- Scott-Phillips, T. C., Dickins, T. E., & West, S. A. (2011). Evolutionary Theory and the Ultimate–Proximate distinction in the human Behavioral Sciences. *Perspectives on Psychological Science*, 6(1), 38–47.  
<https://doi.org/10.1177/1745691610393528>
- Semenyna, S. W., Jiménez, F. R. G., & Vasey, P. L. (2022). Intra- and intersexual mate competition in two cultures. *Human Nature*, 33(2), 145–171.  
<https://doi.org/10.1007/s12110-022-09424-0>
- Shamu, Y., You, Z., & Wang, M. (2024). Social visibility of consumption and conspicuous consumption: An empirical analysis of Chinese wedding ceremonies. *Heliyon*, 10(3), e25854.  
<https://doi.org/10.1016/j.heliyon.2024.e25854>
- Shan, J., Jiang, L., Cui, A. P., Wang, Y., & Ivzhenko, Y. (2021). How and when actual-ideal self-discrepancy leads to counterfeit luxury purchase intention: A moderated mediation model. *International Journal of Consumer Studies*, 46(3), 818–830. <https://doi.org/10.1111/ijcs.12730>
- Sherman, E., Schiffman, L.G., & Anil, M. (2001). The Influence of Gender on the New Age Elderly's Consumption Orientation. *Psychology and Marketing*, 18(10), 1073-84.

- Simpson, J. A., & Gangestad, S. W. (1991). Individual differences in sociosexuality: Evidence for convergent and discriminant validity. *Journal of Personality and Social Psychology*, 60(6), 870–883. <https://doi.org/10.1037/0022-3514.60.6.870>
- Sims, R., Cheng, H. K., & Teegan, H. (1996). Toward a profile of student software pirates. *Journal of Business Ethics*, 15, 839-49.
- Smith, E. A., & Bird, R. B. (2005). Costly signaling and cooperative behavior. In *The MIT Press eBooks* (pp. 115–148).  
<https://doi.org/10.7551/mitpress/4771.003.0008>
- Smith, M., Kish, B., & Crawford, C. (1987). Inheritance of wealth as human kin investment. *Ethology and Sociobiology*, 8, 171–182.
- Spithoven, A. W. M., Cacioppo, S., Goossens, L., & Cacioppo, J. T. (2019). Genetic contributions to loneliness and their relevance to the evolutionary theory of loneliness. *Perspectives on Psychological Science*, 14(3), 376–396.  
<https://doi.org/10.1177/1745691618812684>
- Staake, T., & Fleisch, E. (2008). *Countering counterfeit trade: Illicit market insights, best-practice strategies, and management toolbox*. Berlin: Springer.
- Stillman, T. F., Fincham, F. D., Vohs, K. D., Lambert, N. M., & Phillips, C. A. (2012). The material and immaterial in conflict: Spirituality reduces conspicuous consumption. *Journal of Economic Psychology*, 33, 1-7.
- Sundie, J. M., Kenrick, D. T., Griskevicius, V., Tybur, J. M., Vohs, K. D., & Beal, D. J. (2011). Peacocks, Porsches, and Thorsten Veblen: Conspicuous consumption as a sexual signalling system. *Journal of Personality and Social Psychology*, 100(4), 664-680.

- Swee, H.A., Peng, S.M., Elison, A.C., & Siok, K.T. (2001). Spot the Difference: Consumer Responses Towards Counterfeits. *Journal of Consumer Marketing*, 18(3), 219 – 235.
- The BBC Loneliness Experiment - School of Environment, Education and Development - the University of Manchester.* (2024).  
<http://www.seed.manchester.ac.uk/education/research/bbc-loneliness-experiment/>
- Thomas, D. (2007). Terror's Purse Strings. *The New York Times*, (August 30), A23–A23.
- Townsend, J. M., & Levy, G. D. (1990). Effects of potential partners' physical attractiveness and socioeconomic status on sexuality and partner selection. *Archives of Sexual Behavior*, 19(2), 149–164.  
<https://doi.org/10.1007/bf01542229>
- Truong, Y., & McColl, R. (2011). Intrinsic motivations, self-esteem, and luxury goods consumption. *Journal of Retailing and Consumer Services*, 18(6), 555–561. <https://doi.org/10.1016/j.jretconser.2011.08.004>
- Twenge, J. M., Spitzberg, B. H., & Campbell, W. K. (2019). Less in-person social interaction with peers among U.S. adolescents in the 21st century and links to loneliness. *Journal of Social and Personal Relationships*, 36(6), 1892–1913.  
<https://doi.org/10.1177/0265407519836170>
- U.S. Chamber of Commerce (2006). Counterfeiting and Piracy: Threats to Consumers and Jobs. Retrieved from <http://www.thetruecosts.org>
- Vaillancourt, T., & Sharma, A. (2011). Intolerance of sexy peers: Intrasexual competition among women. *Aggressive Behavior*, 37, 569-577.

- Van den Bergh, B., Dewitte, S., & Warlop, L. (2008). Bikinis Instigate Generalized Impatience in Intertemporal Choice. *Journal of Consumer Research*, 35 (June), 85–97.
- Van Kempen, L. (2003). Fooling the eye of the beholder: Deceptive status signaling among the poor in developing countries. *Journal of International Development*, 15, 157-177.
- Van Kempen, L. (2004). Are the poor willing to pay a premium for designer labels? A field experiment in Bolivia. *Oxford Developmental Studies*, 32, 205–224.
- Verdugo, G. B., & Ponce, H. R. (2020). Gender Differences in Millennial Consumers of Latin America Associated with Conspicuous Consumption of New Luxury Goods. *Global Business Review*, 24(2), 229–242.  
<https://doi.org/10.1177/0972150920909002>
- Wang, J., Zhu, R., & Shiv, B. (2012). The lonely consumer: loner or conformer? *the Journal of Consumer Research*, 38(6), 1116–1128. <https://doi.org/10.1086/661552>
- Wang, Y. (2022). A conceptual framework of contemporary luxury consumption. *International Journal of Research in Marketing*, 39(3), 788–803.  
<https://doi.org/10.1016/j.ijresmar.2021.10.010>
- Wang, Y., & Griskevicius, V. (2014). Conspicuous Consumption, Relationships, and Rivals: Women’s Luxury Products as Signals to Other Women. *Journal of Consumer Research*, 40(5), 834-854.
- Wee, C.H., Tan, S.J., & Cheok, K.H. (1995). Non-price determinants of intention to purchase counterfeit goods: an exploratory study. *International Marketing Review*, 12(6), 19-46.

- Weiss, R. S. (1974). *Loneliness: the experience of emotional and social isolation*.  
<http://psycnet.apa.org/record/1974-22306-000>
- Wilcox, K., Kim, H., & Sen, S. (2009). Why do consumers buy counterfeit luxury brands? *Journal of Marketing Research*, 46, 247–259.
- Williams, K. D. (2001). *Ostracism: The Power of Silence*, New York: Guilford.
- Wilson, M., & Daly, M. (2004). Do pretty women inspire men to discount the future? *Proceedings of the Royal Society of London, Series B: Biological Sciences*, 271 (4), 177-179.
- Wrangham, R. W., & Peterson, D. (1996). *Demonic males: Apes and the origins of human violence*. Boston: Houghton Mifflin.
- Yuan, S., & Zheng, Y. (2019). Impacts of mate attraction goal on young women's interests in conspicuous consumption. *Journal of Contemporary Marketing Science*, 2(1), 83–98. <https://doi.org/10.1108/jcmars-01-2019-0001>
- Yuan, S., & Zheng, Y. (2019). Impacts of mate attraction goal on young women's interests in conspicuous consumption. *Journal of Contemporary Marketing Science*, 2(1), 83–98. <https://doi.org/10.1108/jcmars-01-2019-0001>
- Zahavi, A. (1975). Mate selection – A selection for a handicap. *Journal of Theoretical Biology*, 53, 205-214.
- Zhao, T., Jin, X., Xu, W., Zuo, X., & Cui, H. (2017). Mating goals moderate power's effect on conspicuous consumption among women. *Evolutionary Psychology*, 15(3), 147470491772391. <https://doi.org/10.1177/1474704917723912>

## APPENDIX

### Appendix 1: Sample Stimuli and Measurements of Experiment

#### **Intersexual Competition Manipulation (Men)**

***Intrasexual competition condition*** (In the female participants conditions, the photos were changed to attractive women and the rest was kept same)


***Instructions:*** The first task has to do with your ability to judge attractiveness. You will see 10 male photos and you have to rate each one on attractiveness.

#### **Intrasexual Competition Manipulation**

This task has to do with your ability to judge attractiveness.  
From not at all to very much, how attractive are the following men?

	1	2	3	4	5	6	7	8	9
	Not at all	Very little	Little	Somewhat	Moderately	Fairly	Quite a bit	Very	Very much
<b>Man 1</b> 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all	Very little	Little	Somewhat	Moderately	Fairly	Quite a bit	Very	Very much
<b>Man 2</b> 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all	Very little	Little	Somewhat	Moderately	Fairly	Quite a bit	Very	Very much
<b>Man 3</b> 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Man 4

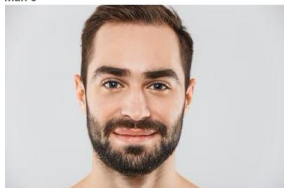


Man 5



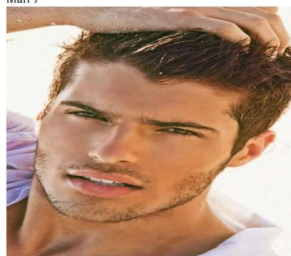
Not at all   Very little   Little   Somewhat   Moderately   Fairly   Quite a bit   Very   Very much

Man 6



Not at all   Very little   Little   Somewhat   Moderately   Fairly   Quite a bit   Very   Very much

Man 7



Not at all   Very little   Little   Somewhat   Moderately   Fairly   Quite a bit   Very   Very much

Man 8



Not at all   Very little   Little   Somewhat   Moderately   Fairly   Quite a bit   Very   Very much

○   ○   ○   ○   ○   ○   ○   ○   ○

Man 9



Not at all   Very little   Little   Somewhat   Moderately   Fairly   Quite a bit   Very   Very much

○   ○   ○   ○   ○   ○   ○   ○   ○

Man 10



Not at all   Very little   Little   Somewhat   Moderately   Fairly   Quite a bit   Very   Very much

○   ○   ○   ○   ○   ○   ○   ○   ○

### **Intersexual Courtship Manipulation (Men)**

***Intersexual courtship condition*** (In the female participants conditions, the photos were changed to attractive women and the rest was kept same)

***Instructions:*** The first task has to do with your ability to judge attractiveness. You will see 10 female photos and you have to rate each one on attractiveness.

This task has to do with your ability to judge attractiveness.  
From not at all to very much, how attractive are the following women?

Woman 1



1   2   3   4   5   6   7   8   9  
Not at all   Very little   Little   Somewhat   Moderately   Fairly   Quite a bit   Very   Very much

○   ○   ○   ○   ○   ○   ○   ○   ○



Woman 2



Not at all    Very little    Little    Somewhat    Moderately    Fairly    Quite a bit    Very    Very much

Woman 3



Not at all    Very little    Little    Somewhat    Moderately    Fairly    Quite a bit    Very    Very much

Woman 4



Not at all    Very little    Little    Somewhat    Moderately    Fairly    Quite a bit    Very    Very much

Woman 5



Not at all    Very little    Little    Somewhat    Moderately    Fairly    Quite a bit    Very    Very much

Woman 6



Not at all    Very little    Little    Somewhat    Moderately    Fairly    Quite a bit    Very    Very much

Woman 7



Not at all    Very little    Little    Somewhat    Moderately    Fairly    Quite a bit    Very    Very much

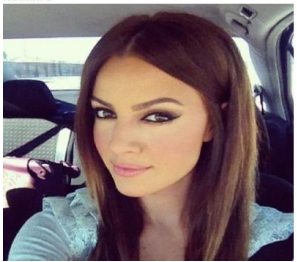
Woman 8



Not at all    Very little    Little    Somewhat    Moderately    Fairly    Quite a bit    Very    Very much

Woman 9



Not at all    Very little    Little    Somewhat    Moderately    Fairly    Quite a bit    Very    Very much

Woman 10



Not at all    Very little    Little    Somewhat    Moderately    Fairly    Quite a bit    Very    Very much







## Control Manipulation

**Control Condition** (Both sexes viewed and rated the same photos)

**Instructions:** The first task has to do with your ability to judge attractiveness. You will see 10 different forests all around the world and you have to rate each one on attractiveness.

### Control manipulation

This task has to do with your ability to judge attractiveness.  
From not at all to very much, how attractive are the following forests?

	1	2	3	4	5	6	7	8	9
	Not at all	Very little	Little	Somewhat	Moderately	Fairly	Quite a bit	Very	Very much
<b>Forest 1</b> 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Forest 2</b> 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Forest 3</b> 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Forest 4</b> 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Forest 5</b> 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Forest 6</b> 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Forest 7



Not at all	Very little	Little	Somewhat	Moderately	Fairly	Quite a bit	Very	Very much
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Forest 8



Not at all	Very little	Little	Somewhat	Moderately	Fairly	Quite a bit	Very	Very much
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Forest 9



Not at all	Very little	Little	Somewhat	Moderately	Fairly	Quite a bit	Very	Very much
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Forest 10



Not at all	Very little	Little	Somewhat	Moderately	Fairly	Quite a bit	Very	Very much
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### **Purchase Intention Measures**

#### ***Product set for Men***

Imagine you are in the market for a new t-shirt. You consider two t-shirts you like, which are similar in style and price. The first t-shirt is from a large, low-cost retailer's website (Pull & Bear); it is as nearly identical in appearance to a prestigious t-shirt (Burberry), but it has the low-status retailer's brand (Pull & Bear) on the front. The other t-shirt is available from an Internet retailer that specializes in designer replicas, or knockoffs. It is as nearly identical in appearance to a prestigious Burberry t-shirt and as displaying the prestige brand name on the front. Because the t-shirt is not exact copy of Burberry (although for the vast majority of people, it appears to be Burberry), purchasing it is completely legal. The price for the two t-shirts is the same. How likely is it to purchase each t-shirt?

How likely is to purchase T-shirt A?



- Not at all
- Very little
- Little
- Somewhat
- Moderately
- Fairly
- Quite a bit
- Very
- Very much

How likely is to purchase T-shirt B?



- Not at all
- Very little
- Little
- Somewhat
- Moderately
- Fairly
- Quite a bit
- Very
- Very much

**Product set for Women**

Imagine you are in the market for a new t-shirt. You consider two t-shirts you like, which are similar in style and price. The first t-shirt is from a large, low-cost retailer's website (Mango); it is as nearly identical in appearance to a prestigious t-shirt of Dior, but it has the low-status retailer's brand (Mango) on the front. The other t-shirt is available from an Internet retailer that specializes in designer replicas, or knockoffs. It is as nearly identical in appearance to a

prestigious Dior t-shirt and as displaying the prestige brand name on the front. Because the t-shirt is not exact copy of Dior (although for the vast majority of people, it appears to be Dior), purchasing it is completely legal. The price for the two t-shirts is the same. How likely is it to purchase each t-shirt?

Imagine you are in the market for a new t-shirt. You consider two t-shirts you like, which are similar in style and price. The first t-shirt is from a large, low-cost retailer's website (Mango); it is as nearly identical in appearance to a prestigious t-shirt of Dior, but it has the low-status retailer's brand (Mango) on the front. The other t-shirt is available from an Internet retailer that specializes in designer replicas, or knockoffs. It is as nearly identical in appearance to a prestigious Dior t-shirt and as displaying the prestige brand name on the front. Because the t-shirt is not exact copy of Dior (although for the vast majority of people, it appears to be Dior), purchasing it is completely legal. The price for the two t-shirts is the same. How likely is it to purchase each t-shirt?

How likely is it to purchase t-shirt A?



▼

- Not at all
- Very little
- Little
- Somewhat
- Moderately
- Fairly
- Quite a bit
- Very
- Very much

How likely is it to purchase t-shirt B?



▼

## Loneliness Scale

Please indicate the extent to which you agree or disagree with each statement:

	Never	Rarely	Sometimes	Often
I feel in tune with the people around me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I lack companionship	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one I can turn to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not feel alone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am an outgoing person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel left out	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel isolated from others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can find companionship when I want to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am unhappy being so withdrawn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People are around me but not with me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Materialism Scale

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I admire people who own expensive homes, cars, and clothes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Some of the most important achievements in life include acquiring material possessions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't place much emphasis on the amount of material objects people own as a sign of success.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The things I own say a lot about how well I'm doing in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to own things that impress people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't pay much attention to the material objects other people own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually buy only the things I need.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to keep my life simple, as far as possessions are concerned.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The things I own aren't all that important to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying things gives me a lot of pleasure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like a lot of luxury in my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My life would be better if I owned certain things I don't have.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wouldn't be any happier if I owned nicer things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'd be happier if I could afford to buy more things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## SOI Scale

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Sex without love is OK.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can imagine myself being comfortable and enjoying "casual" sex with different partners.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not want to have sex with a person until I am sure that we will have a long-term, serious relationship.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>