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Two Essays on Consumer Envy

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TWO ESSAYS ON CONSUMER ENVY

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ABSTRACT

TWO ESSAYS ON CONSUMER ENVY

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Consumer envy, which is a two-faceted emotion (benign versus malicious), could change consumer behavior in different ways. Although research on envy is abundant in the psychology field, little attention has been paid to envy in marketing research. This dissertation composes of two essays. Based on Social Comparison Theory (SCT), these two essays examine the envy mechanism in driving consumer behavior using different contexts (social media behavior and counterfeit luxury consumption).

Essay one examines the relationship between envy and consumer's intention to conduct different social networking sites (SNSs) activities. To test the hypothesized relationships, four experiments were conducted. Experiments 1, 2, and 3 together find that while benign envious consumers are more likely to conduct positive interactive SNSs activities, malicious envious consumers are more likely to conduct negative interactive SNSs activities. Also, benign envious consumers are more likely to conduct self-improvement SNSs activities (competition and evaluation) than malicious envious consumers. Moreover, Experiment 2 finds that the self-efficacy motive fully mediates the relationship between benign envy and consumers' intentions to conduct competitive SNSs activities. Experiment 4 explores the relationship between the envier's status and different types of envy and the moderating effect of envied person's status. It finds that high-power member is more likely to generate envy and the relationships are weakened when the envied person is a high-power member.

Essay two explores why consumers turn to purchase counterfeits instead of authentic luxury products. Using three different types of luxury products and different samples in three experiments, a series of eight hypotheses are tested. Using limited-edition Nike shoes as the research context, Experiment 1 shows that malicious envious people have a higher intention to buy authentic luxury products than benign enviers. Using Louis Vuitton bag as the research context, Experiment 2 demonstrates that malicious enviers have a higher intention to buy counterfeits than benign enviers. Also, when counterfeit is popular in real life, malicious enviers have a higher intention to buy counterfeits than benign enviers. Last, Experiment 3 uses "ROLEX watch" as the research context and demonstrates that benign enviers have a higher intention to buy counterfeits than malicious enviers.

DEDICATION

The author wishes to dedicate this dissertation to the many people who contributed to this dissertation and to this degree either directly or indirectly. Most of all, I want to thank my parents for bringing me up and making me who I am today. Thank you for their unconditional love, support and encouragement. It's been incredible that they have accompanied me every step of my life, in good times and bad times.

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NOMENCLATURE

A Amplitude Ratio, (No Units)

C Centroid of pipe, inches

Do Outside Diameter of Pipe, inches

E Modulus of Elasticity, lb/in2

EH Elastic Modulus at Operating Temperature, lb/in2

f Stress-Range Reduction Factor, (No Units)

F Force, lbs

I Moment of Inertia of Pipe, in4

N Number of Cycles, cycles

P Pressure, lb/in2

R Stress Ratio, (No Units)

Sa Sh = Allowable Static Stress, lb/in2

Sc Allowable stress at Minimum Temperature (70°), lb/in2

Se Endurance Limit, lb/in2

SY Yield Strength, lb/in2

V Shear, lbs

$ZNom$ Section Modulus, in3

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ABSTRACT

Social media has increasingly become an important venue for marketing. Social networking sites (SNSs) play a critical role in stimulating individuals' consumption desires because SNSs facilitate users to post pictures and share opinions with others. Since consumers can easily access other people's posts, consumer envy generated from a social comparison among social media users becomes inevitable and prevalent. This study examines how different types of envy (malicious envy versus benign envy) are related to consumers' activities on social networking sites. Moreover, we examined the moderating effect of the envier's status and the mediating effect of self-motives on this relationship. In addition, we also explored the relationship between the envier's status and different types of envy. To test the hypotheses, a series of four experiments were conducted. A new scale to measure SNSs activities were developed in Experiment 1 and four dimensions of SNSs activities under two categories: "self-improvement SNSs activity" ("competition" and "evaluation") and "interaction SNSs activity" ("positive interaction" and "negative interaction") were identified. By using a scenario-based survey, Experiment 1 found that while benign envious consumers are more likely to conduct positive interactive SNSs activities, malicious envious consumers are more likely to conduct negative interactive SNSs activities. By using an experimental design, Experiment 2 largely confirmed the findings in Experiment 1. Moreover, it found that benign envious consumers are more likely to conduct evaluative SNSs activities than malicious envious consumers. Also, the self-efficacy motive fully mediates the relationship between benign envy and consumers' intentions to conduct competitive SNSs activities. Experiment 3 not only further confirmed the findings of

Experiment 1 and 2, but also found that benign envious consumers are more likely to conduct competitive SNSs activities. This experiment also found that the moderating effects of the envier's status (high vs. low) on the relationship between envy and SNSs activities were not significant. Finally, by using a combination of a scenario-based survey and a scenario-based experiment, Experiment 4 examined the moderating effects of the envier's status. Results were consistent with those of Experiment 3 except that the moderating effect was significant for the relationship between envy and consumer's intention to conduct evaluative SNSs activities. Experiment 4 also investigated how different types of envy were generated on SNSs and the results showed that high-power member is more likely to generate envy (both benign envy and malicious envy) and the relationships are weakened when the envied person is a high-power member.

Keywords: envy, benign envy, malicious envy, self-efficacy motive, social networking sites (SNSs)

INTRODUCTION

Social media is defined as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (Kaplan and Haenlein, 2010). In the past decade, social networking sites (SNSs, such as Instagram, Facebook, LinkedIn, and Twitter) has become very popular as it dramatically changed consumers' lives and their consumption behaviors. The social networking site is the product of the development of social media and is defined as the specialized virtual environment where members communicate with others through the Internet (Füller, 2007). For example, as of June 2018, there are about 500 million daily active users on Instagram (Instagram, 2018). The popularization of Internet development, resource sharing, and online communication make online users more willing to engage in SNSs. The like button is hit an average of 4.2 billion times per day on Instagram (Carroll, 2007).

Numerous online users have joined social networking sites (SNSs), uploading pictures and videos, posting exciting life moments and sharing product reviews. Consumers can obtain information about their favorite brands easily through social media, and they can also communicate with other consumers via social media platforms. Social media marketing is also changing the way companies communicate with their customers (Straker and Wrigley, 2016). For example, targeting consumers who are not regular luxury buyers, companies are developing targeted social media marketing campaigns to influence their purchase intentions.

Due to the importance of social media in consumption, many marketing scholars have started to examine the dynamic relationships between consumers and brands in the social media setting (Bolton and Saxena-Iyer, 2009; Malthouse and Hofacker, 2010). For example, researchers show that consumers' motives to participate in an online brand community are

"information, self-discovery, social integration, social enhancement, and entertainment" (Madupu and Cooley, 2010). Researchers also demonstrated that the five dimensions of luxury brands' social media marketing are "entertainment, interaction, trendiness, customization, and word of mouth (WOM)" (Kim and Ko, 2012).

Although consumer behavior in the social media setting has been examined from different perspectives, there is a lack of research on the role of envy in consumers' social media behaviors. Envy is defined as a negative emotion that "arises when a person lacks another's superior quality, achievement, or possession and either desires it or wishes that the other lacked it" (Parrott and Smith, 1993, p. 906). Previous studies have consistently shown that envy is closely related to a variety of consumer behaviors such as product evaluation (Van de Ven et al., 2010) and purchase intention (Lin, 2017). Particularly, as an important motivational driver, envy is closely associated with conspicuous consumption (Taylor and Strutton, 2015). For example, the advertising agency Young and Rubicam (2009) promises to boost the "envy potential" of their client's products, claiming that this would increase their sales. As indicated by Schoeck (1996, P.218), "to indulge in luxury is to provoke envy."

In nature, envy is the product of upward social comparison (Crusius and Lange, 2014). By conducting an upward social comparison, people are comparing themselves with the superior others who have higher status or abilities (Van de Ven et al., 2011). Since social media make consumers' social comparison easier and less costly, envy is likely to become more prominent and prevalent in the social media setting. For example, because social media members can easily access other people's profiles and posts, they are likely to either consciously or unconsciously compare themselves with others (Krasnova et al., 2015), in which the feeling of envy might be

elicited. Thus, envy may play a more important role in consumer behaviors in the social media setting than in the daily offline setting.

Focusing on social comparison in the social media setting, this study sets to examine the relationships between different types of envy and SNSs activities. Moreover, we hypothesize the envier's status moderate the relationship between envy and SNSs activities and self-motives are the underlying drivers of consumer copying behavior after they experience envy. In addition, this study also examines the relationship between the envier' status and different types of envy.

This study contributes to the literature in several important ways. First, this study examined the influence of envy on consumers' SNSs activities. Although envy is prevailing in social media, limited research has been conducted to examine the role of envy in social media. The findings of this study will shed new light on the underlying motivations of consumers' social media behaviors. Second, this study links self-motives (i.e., belonging motive and self-efficacy motive) to envy research. Previous research (Salovey and Rodin, 1991; Lange and Crusius, 2015; Duffy et al. 2012) identified self-esteem as the underlying motive for envy. This study furthers the findings by suggesting that beyond self-esteem, the belonging motive and self-efficacy motive also important self-motives of envy, especially for malicious envy. Third, this study extends our understanding of under which conditions, different types of envy are generated among different consumer groups. Previous research largely focuses on the influence of envy on individuals in different settings. For instance, Vecchio (2010) studied the influence of envy on employees' workplace performance and Kirchsteiger (1994) explored the roles of envy in ultimatum gaming behaviors. In contrast, our research provides new insights into how and which condition either malicious or benign envy is generated. Moreover, we propose that which type of envy will be generated depends on which consumer groups the envier compare with. Lastly, we

also examined the pivotal role of both the envier's and the envied person's status in generating envy and moderating the relationship between envy and SNSs activities. This finding will shed new light on the social comparison mechanism underlying envy. Moreover, from a practical perspective, our findings will provide important implications for social media marketing. In the social media setting, benign enviers and malicious enviers take different approaches to enhance their positive mood and reduce their negative feelings. The envious people's SNSs activities resulting from different types of envy could significantly affect other social media users' decisions and behaviors. Therefore, understanding under which condition each type of envy is generated and how the envier adopts different SNSs behaviors to cope with envy could help marketers better design their social media marketing strategies.

LITERATURE REVIEW

Since this study focuses on the relationships between envy and SNSs activities, we will first review the existing research on SNSs, and then the research on envy. Finally, the research gaps will be identified.

Research on SNSs Activities

Nowadays, our lives are surrounded by various social networking sites (such as Instagram, Facebook, LinkedIn, and Twitter). A commonly used definition of social networking sites (SNSs) is the "Web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system" (Boyd and Ellison, 2007, p. 210).

With the advance of social media, companies have developed a new way to communicate with customers (Balakrishnan et al., 2014). The active engagement of customers plays the most

crucial role in each social networking site (McWilliam, 2000). This inevitable trend makes more and more scholars come to realize that SNSs have become increasingly important in developing marketing strategies (Bressler and Grantham, 2000; Horrigan, 2001). The SNS presents a four-relationship structure, including the relationships between a customer and the product, the brand, the company, and other customers/owners (McAlexander et al., 2002). The SNS is particularly crucial for luxury brands. Fashion blogs serve as luxury brand evaluation forums for consumers to evaluate the function, quality, and appearance of luxury products. Specifically, social media increase the luxury brand perception on various dimensions (e.g., extended self, conspicuousness, quality).

Characteristics of SNSs activities

Most users on previous online communities tended to communicate with other users they did not know well, and then they had to create new relationships with other strangers in the community. Even though users on social networking sites (SNSs) today are able to form new relationships with other online users, SNSs are largely based on an individuals' existing social network connections in real life (Liu et al., 2010). Moreover, SNSs are unique from previous online communities in that each online user can initiate conversations with other users (Dolan et al., 2016).

On social networking sites (SNSs), people can do many different things. With the development of technology and the increase of consumer demand, more and more different SNSs activities are available for online users to choose from. First, online users can upload images and photos on personal profiles (Kaplan and Haenlein, 2010). Second, individuals are increasingly becoming more and more active by conducting SNSs activities. In other words, individuals are increasingly participating in SNSs through interactive processes that involve multiple feedback

loops and high levels of instant messaging (Brodie et al., 2013). The interactive nature of SNSs transforms online users from passive observers to active participants, making SNSs an ideal forum for product and brand promotion (Riegner, 2007). Before making a real purchase decision, many consumers read online product reviews (Erdogmus and Çiçek, 2012; Kim and Ko, 2012). Online textual descriptions, photos, or videos generated by bloggers provide consumers with opportunities to reduce their uncertainties about the brand. Social networking sites create an interactive environment that is utilized by customers not only to solve puzzles about the brand but also to get suggestions from other members through communication (Kim and Ko 2012; Kretz and Voyer 2013). Notably, the interaction among online members is highly structured and hierarchical (Muniz and O'Guinn, 2001). Thus, through SNSs, users can comment, view, and share information online, which provides a great deal of social and network value to users and organizations.

Research on envy

Envy is a type of emotion that is closely associated with conspicuous consumption (Belk, 2011) and is affected by social comparison which is a basic constituent of human cognition (Lange and Crusius, 2015). People in any society will compare themselves with each other habitually and automatically, which explains why envy is such a culturally universal experience (Foster, 1972).

"Envy is the great leveler: if it cannot level things up, it will level them down" (Sayers, 1949, p. 771). Envy can be separated into two categories, benign envy and malicious envy, depending on different motivational dynamics (Van de Ven et al., 2009). As a distinct and unfavorable emotion, envy has been treated as a factor that can influence human relationships (Thompson et al., 2016). The magnitude of consumer behaviors is directly linked to the

magnitude of envy. From a functionalist perspective, the two types of envy should lead to different behaviors. Specifically, experiencing benign envy leads the benign envier to improve their current position because they set a proper goal to catch up with the envied (Van de Ven et al., 2009; Lange and Crusius, 2014). On the contrary, experiencing malicious envy leads the malicious envier to decrease or denigrate the advantage of the envied person to bring life into balance (Van de Ven et al., 2009). This dark side of envy can increase schadenfreude (Van de Ven et al., 2014), leading to devastating and hostile behavior (Duffy et al., 2012). Therefore, hostility could be considered a factor to distinguish malicious envy from benign envy, because benign envy is free of hostility (Smith and Kim, 2007).

Envy includes both the envier, the individual who envies the other, and the envied person, the individual whom the envier compares him or herself with (D'Arms, 2009). As to the cause of envy, the Social Comparison Theory (SCT) suggests that the feeling of envy is the result of social comparison (Festinger, 1954). The upward social comparison can threaten to self and result in negative emotions such as envy (Salovey and Rodin, 1984). Barth (1988) proposes that damaged self-esteem leads to envy, which could cause further damage to self-esteem, leading to more envy, and so on. Damaged self-esteem also links to a set of behavioral responses (such as avoidance, self-improvement), which could help the envier to reduce the threat to self (Thompson et al., 2016).

Individual difference attributes (e.g., status, possession) are variables associated with envy (Thompson et al., 2016). It is also necessary to understand the antecedents of envy based on envy type. Envy results from perceived inequality and involves wanting to possess something that one lacks, but another person has (Smith et al., 1988; Parrott and Smith, 1993). How the envier evaluates the possession of the envied that they do not have will result in different types of envy.

In detail, a benign envier claims the possession of the superior to be deserved. In contrast, a subjective feeling of undeserved leads to malicious envy (Ben-Ze'ev, 2001; Van de Ven et al., 2011).

Research gaps

Upon reviewing the literature on envy and social media, this study identifies two major research gaps in the literature. First, although numerous studies have been conducted to examine consumer behaviors in social networking sites (SNSs), little attention has been paid to consumers' emotional states and the resulting behaviors in this context. Particularly, the role of envy as an important motivational driver of social media behavior has been largely ignored. In the SNSs, the role of envy could be more predominant since SNSs make the comparison among consumers easier and at a larger scale. Second, in the envy literature, previous studies have examined how the emotion of envy is generated (Van de Ven et al., 2009; Lange and Crusius, 2014), but few empirical studies have been conducted to understand under what condition either malicious or benign envy can be generated. To fill out the above gaps, this study sets out to examine the role of envy in driving SNSs activities. In addition, we also examine the role of both the envier's and the envied person's status in envy generation and the relationship between envy and SNSs activities.

HYPOTHESIS DEVELOPMENT

The relationships between envy and different SNSs activities

As a painful emotion, envy has been treated as a strong motivator for human behaviors (Smith and Kim, 2007; Crusius and Lange, 2017). Here, we set out to examine the influence of envy on social networking sites (SNSs) activities. According to Social Comparison Theory

(Fastinger, 1954), people intend to evaluate their behaviors regarding those of others. Research on social networking sites demonstrates that envy is a result of social comparison with online users (Chou and Edge, 2012). When an online member pays lots of attention to others' posts, envy occurs because of the heightened potential of desiring others' possessions (Krasnova et al., 2015).

Envy researchers widely adopt the view that benign envy and malicious envy have different intentions and behavioral outcomes (Lange and Crusius, 2015). Malicious envy may drive the envier to compete with the superior envied person and benign envy could encourage the benign envier to set higher goals to improve their future outcomes (Van de Ven et al., 2009, 2011). We propose that due to the different intentions associated with different types of envy, the benign envier and the malicious envier are likely to engage in distinct SNSs activities. Specifically, we compare the outcomes of different types of envy based on the work of Yang (2016). Yang (2016) introduced three divergent SNSs activities that have meaningful implications for the company, including passive activities, interactive usage, and active usage. In general, interactive usage is defined as using SNSs to interact and socialize with others (e.g., commenting, sending an SNS message). Passive activities mean that users simply consume or browse SNS content. Active usage involves actively producing content on SNSs, but the content is not directed to specific individuals (e.g., updating status or broadcasting information on SNSs without tagging specific viewers) (Yang, 2016). In this study, we mainly focus on interactive and active activities since they are more related to individuals' reactions to envy than passive activities. On social media networks, online users engage in self-presentation to convey information and to meet followers' expectations (Chua and Chang, 2016). "The evaluative

presence of other people and by others' knowledge of one's behavior" is the motivation of self-representation (Baumeister and Hutton, 1987, p. 71).

On social media platforms, interaction with online users is an important way to get involved in the environment. However, interactive activity can be either positive or negative. Online users conduct positive interaction activities to interact and socialize with others (such as "Like" another online user's posts or comments), and they conduct negative interaction activities to diminish others and disrupt their relationships with others (such as laugh at another online user). In this study, we hypothesis that the benign envier and the malicious envier will conduct different types of interaction activities. For malicious envier, the objective is to lower the status of the envied person (Lange and Crusius, 2015). They may work to decrease or denigrate the possessions of the envied person (Lange and Cruise, 2015). Envy literatures support the notion that this dark side of envy leads to schadenfreude (Van de Ven et al., 2014; Lange and Crusius, 2015) and hostile behavior (Duffy et al., 2012). On social media platforms, online users can easily take some negative actions, such as sharing the negative feeling about the envied person with their friends. Thus, malicious envy is associated with negative interaction. In contrast, the benign envier admires the envied person and hope to be affiliated with them. They are likely to engage in positive interactive activities toward the envied person, such as follow the envied person and initiate an online conversation with the envied person. By conducting the positive interactive activities, the benign envier may feel that they are a member of the desired group.

H1a. Benign enviers are more likely to engage in positive interactive SNSs activities than malicious enviers.

H1b. Malicious enviers are more likely to engage in negative interactive SNSs activities than

benign enviers.

In contrast to the malicious envier who pursue an outcome-focused self-improvement goal, the benign envier pursues a process-focused self-improvement goal (Salerno et al., 2018). Thus, the benign envier tends to improve his/her status step by step. For the followers, the likability of the followed person is based on whether the posted content is valuable for them (De Veirman et al., 2017). To improve their own status, benign enviers need to prove their superiority by uploading high-quality posts and providing valuable information to attract more followers. Practically, social media users could be attracted by the products that are not easy to obtain or products they plan to buy (Steinhart et al., 2014). These contents will draw attention from the audience. In this case, uploading high-quality images/videos could help the benign envier to compete with the envied people. Therefore, for benign enviers, the way to improve their status is to conduct self-improvement activities to prove their superiority on social networking sites.

H2. Comparing with malicious enviers, benign enviers are more likely to engage in self-improvement SNSs activities.

The mediating effects of self-motives

Social media provides a platform for online users to present their self-images. Through appearance and behavior, people require the desirable self-images to comprise their self-identities (Schlenker and Leary, 1982). The identity motive is the driving force for achieving certain identity states and is the guidance of identity construction processes (Vignoles et al., 2006). Individuals are working hard to minimize the risk of losing identity consciously or

unconsciously when constructing their identity. The current research focuses on the mediating role of self-motives (self-efficacy vs. belonging) between envy and social networking sites (SNSs) activities.

As suggested by Tajfel (1982), identity motives, which include self-efficacy and belonging, are essential to intergroup relations. In this research, we focus on self-efficacy motive and belonging motive, which are activated when people experience malicious envy or benign envy. Specifically, we propose that self-motives (self-efficacy versus belonging) will mediate the relationship between envy and SNSs activities.

"A 'self-motive' is an inclination focusing on establishing or maintaining a particular state of self-awareness" (Leary, 2007, p.319). A person's self-awareness arrives from the cognition that s/he belongs to a certain group (Tajfel and Turner, 1979). The belonging motive is defined as the desire to sustain or improve the perception of affiliation with other people (Vignoles et al., 2006). Benign enviers want to prove that they are a member of the comparison target. It underlying psychological driver is a sense of belonging. When the person achieves a sense of belonging, s/he will feel included in the community (Rosen et al., 2011). We propose that for benign enviers, the sense of belonging is likely to be the driver of their interactive SNSs activities.

In the context of social media, interactive SNSs behaviors help consumers build up a sense of belonging. In a dyadic relationship, belonging motive drives people to gain social acceptance from others. The belonging motive drives the benign envier to increase their exposure rate in the community. Therefore, they are likely to participate in the envied person's activities. Engaging in interactive SNSs activities provides them opportunities to join the desired group (e.g., sending an SNS message). By conducting interactive SNSs activities, benign enviers will obtain a sense of

belonging and decrease the feeling of envy. Above all, belonging motive mediates the relationship between envy and corresponding interactive SNSs activities

H3a: Belonging motive mediates the relationship between envy and interactive SNSs activities.

Processing efficacy has been treated as a defining feature of identity (Codol, 1981). Breakwell (1993, p. 205) considers efficacy motive as a motivation to sustain and improve the feeling of "competence and control." Self-efficacy motive is usually related to personal well-being improvement and the reduction of risky behavior (Bandura et al., 1997). Also, self-efficacy is related to goal setting. People are more likely to set higher goal challenges and devote to achieve the goal when they perceive stronger self-efficacy motive (Bandura, 1991). On social media networks, some competitive SNSs activities, such as creating posts that cannot be easily duplicated, are more ambitious. When people have a higher-level goal, they are more likely to take competitive activities. Therefore, self-efficacy can affect people's coping behaviors (Bandura, 1997). In the context of social media, since self-improvement SNSs activities help individuals improve their self-image and obtain the feeling of "competence and control", we expect the self-efficacy motive mediates the relationship between benign envy and active SNS activities.

H3b: Self-efficacy motive mediates the relationship between envy and self-improvement SNSs activities.

The moderating effect of the envier' Status

Whether an online user has a high status or low status is determined by a set of implicit rules, and members who post more posts generally enjoy higher status (Muniz and O'Guinn 2001). Based on Muniz and O'Guinn (2001), Leban and Voyer (2015) further discusses online user's status on social media setting and used high-power member and low-power member to indicate their status. Based on the concept of social media engagement, Leban and Voyer (2015) categorized online luxury community members into two groups: high-power members and low-power members. They define high-power members as active online users who are followed by at least 500 people and frequently upload luxury product posts. On the other hand, low-power members only upload luxury product posts occasionally and are followed by less than 500 (Table 1).

Insert Table 1 about here

The purpose of envy is to regulate status (Crusius and Lange, 2017). Individuals who possess envy should have a fundamental motive of status attainment (Anderson et al., 2015), which could be the envier's driver to conduct SNSs activities. However, as discussed in Lin (1999), status attainment is closely related to embedded resources in social networks: the strength of embedded resources enhances the possibility of achieving a higher status. Online members present themselves to the audience with social media content (such as photographs, comments, and feedback). Envier's status can be assessed by the number of followers and posts on the SNSs. If the envier's status is high, the envier has relatively more followers, which reflects the popularity of the user. In contrast, if the envier's status is low, the envier does not

have as many followers as high-power members. Thus, high-power members in social networks have relatively more embedded resources than those of low-power members.

Our study examines the relationship between envy and SNSs activities, taking into account the moderating effect of the envier' status (high-power versus low-power). Specifically, we propose that the envier's status moderates the relationships between envy (benign envy versus malicious envy) and different SNSs activities (interactive/self-improvement).

As discussed above, the benign envier is more likely to conduct self-improvement SNSs activities and positive interactive SNSs activities. Malicious enviers are more likely to conduct negative interactive SNSs activities. Next, we will discuss how the strength of the relationships is affected by the envier' status on SNSs. High-power members have relatively more embedded resources. They have more experience of uploading attractive posters, communicating with followers, and becoming opinion leaders (De Veirman et al., 2017). Because most community members do not have enough resources to be actively involved in self-improvement SNSs activities, involving in active SNSs activities may help high-power members to distinguish themselves from other community members and cope with the envy feeling. Therefore, when experiencing benign envy, high-power members are more likely to engage in self-improvement SNSs activities than low-power members because they have more resources. In contrast, limited embedded resources might lower the possibility for low-power members to set higher goals. Interactive SNSs activities help individuals enhance pleasure feelings and their social inclusion. At the same time, interactive SNSs activities do not need many resources since they do not require the envier to be creative. Since low-power member does not have the resources to engage in self-improvement activities, when they are experiencing envy, they are more likely to choose

to engage in interactive SNSs activities than high-power members to cope with the envy emotions.

H4a. The relationship between envy and self-improvement SNSs activities is stronger when the envier is a high-power member than a low-power member.

H4b. The relationship between envy and interactive SNSs activities is stronger when the envier is a low-power member than a high-power member.

The relationships between the envier's status and different types of envy

The Social Comparison Theory (SCT) has been employed to develop our hypotheses (Festinger, 1954). The Social Comparison Theory (SCT) states that individuals intend to determine their positions based on how they compare themselves with others (Festinger, 1954). SCT also proposes that personal relationships are categorized into two types: in-group or out-group. In the social media community, whether the benign or the malicious envy is generated is largely determined by which group a consumer identifies with and which group the consumer compares with. By comparing with the target, individuals are able to detect their capacities and limitations. Perceived inferiority will threat to the self, and result in behavioral outcomes (Argo et al., 2006).

Malicious envy is linked to low control and fear of failure (Van de Ven et al., 2011). Malicious envy is typically elicited when an individual found that another member in the society owns a product or an object that s/he wants but does not possess. To prove his/her superiority and competency, the person may degrade the others' possessions or level the difference by

pulling others down. Thus, fear of lost competency and status is related to malicious envy and leads to hostile motivation toward the envied person (Smith and Kim, 2007).

In the social media context, high-power members perceive themselves as the center of the community. They intend to impress others and maintain their superiority and exclusivity of the high-power status. When their superiority being threatened, high-power members tend to feel anxious and lose control, which may lead the envier to level down the success of the envied person. Compared to high-power members, low-power members are less active in the luxury community. Because of their low participation rate and less contribution, low-power members do not possess the superiority and high status in the community. As a result, they are not likely to compare themselves with other community members. Thus, compare with low-power members, high-power members are more likely to have malicious envy than low-power members.

In contrast, low-power members do not possess the same superiority as the high-power members in the community. They generally behave as information seekers on social networking sites. Also, they show admiration to others and want to be closer to the envied high-power members (Van de Ven et al., 2009). Since low-power members tend to look up to other community members, they are more likely to generate benign envy to other community members than the high-power members. Different from malicious envy, the nature of benign envy is to improve the position by leveling themselves up when envious individuals perceive the difference between them and the people they envied (Crusius and Mussweiler, 2012).

H5a: Comparing with low-power members, high-power members are more likely to have malicious envy toward other social media community members.

H5b: Comparing to high-power members, low-power members are more likely to have benign

envy toward other social media community members.

The moderating effect of the envied person' status

On social media platforms, users are categorized as high-power members and low-power members based on the number of followers and posts (Leban and Voyer, 2015). We propose that the relationships between the envier's status and the types of envy elicited are moderated by the envied person's status.

We propose that when online users compare themselves with other users on the social media platforms, the higher the status of the comparison others, the lower the level of malicious envy will be elicited. Malicious envy is one type of hostile affective reactions (Crusius and Lange, 2014). According to the Social Comparison Theory (SCT) (Festinger, 1954), hostile affective reactions are indeed more likely when the comparison other's possession is unalterable or uncontrollable (Smith et al., 1999). When the comparison subject is a low-power member who suddenly achieves great success on social networking sites, the level of uncontrollable emotion becomes higher. In other words, the relationship between the envier's status and malicious envy is weakened when the envied person has a high status rather than a low status on the social media platform.

However, since benign envy is associated with admiration (Van de Ven et al., 2009), the higher the status of the comparison other, the more likely a person will admire the envied person. In the social media platform, high-power members are the individuals who have many followers and upload large amounts of posts. The envier may desire their ability and status that the high-power group has and strive toward them. In contrast, other low-power members do not have the superiority or status that the envious people desire. Thus, they are not likely to generate benign

envy toward them. In other words, when online users compare themselves with the other online user on the social media platform, the relationship between the envier's status and benign envy is strengthened when the envied person's status becomes higher.

H6a: Envied person's status moderates the relationship between the envier's status and malicious envy.

H6b: Envied person's status moderates the relationship between the envier's status and benign envy.

METHODOLOGY

Existing research on social media marketing shows that luxury brands are increasingly using social media to build up customer-brand relationships (Vigneron and Johnson, 2004). We chose Instagram as the research context because Instagram is one of the most widely used social media platforms in luxury brand engagement research (Pentina et al., 2018). We investigated the hypothesized relationships by using a series of four experiments. In all of the experiments, participants who have an Instagram account are eligible to attend the research. In experiment 1, we first developed a new scale of SNSs activities scale that can be used in all the experiments. Then, we used the newly developed Instagram activity scale to test the main effect (H1a, H1b, and H2). In this experiment, we did not manipulate envy. Instead, we employed a scenario-based survey to elicit participants' real envy emotions. To test the causal relationship between envy and SNSs activities, we manipulated envy by following the procedure developed by Van de Ven et al. (2009, 2011) in Experiment 2. The purpose of Experiment 2 is to verify Experiment 1's findings on both the main effect (H1a, H1b, and H2) with a different method. Moreover, we also tested the mediating effect of self-motives on the relationships between envy

and SNSs activities (H3a and H3b). In experiment 3, we aimed at testing the moderating effect of the envier's status on the relationship between envy and SNS activities (H4a and H4b). In this experiment, both envy and envier's status were manipulated. In experiment 4, we used a scenario to elicit participants' real envy emotions and asked them to report their real status on Instagram. Then we tested the relationship between envier's status and different types of envy along with the moderating effects of the envied person's status (H5a, H5b, H6a, and H6b).

Permission to conduct the study was granted by the Old Dominion University Business Human Subjects Review Committee. Data were collected in accordance with the standards of the institutional review board (IRB). The description of the survey informed the participants of the purpose of the study, the nature of the study, the name of the school, the name of the study, the email, the estimated time of completion of the survey, the degree of risk if any, and any obligations associated with the study. We also informed participants that no sensitive or confidential information is required, and participation is voluntary. Moreover, confidentiality and anonymity of participants were guaranteed.

EXPERIMENT 1

Experiment 1 has two purposes. First, since there is a lack of a well-established scale to measure SNS activities in the Instagram context, we develop a consumers' Instagram activity scale that can be used in all our experiments. Second, we aim at testing the relationships between different types of envy and customers' intentions to conduct different Instagram activities. In this study, we employed a scenario-based survey to test the hypothesized relationships.

Participants and Procedures

Three hundred and twenty-four participants who have an Instagram account were recruited on an online panel (Amazon Mechanical Turk). Seventeen participants who failed the attention

check questions were removed from the data set. Thus, the final data set has three hundred and seven participants. Among the participants, 57% are male, 46% aged 25-34 years old, 67% are Caucasian, and 60% have a bachelor's degree.

All participants were told that this experiment is to examine the influence of emotions on social network sites (SNSs) activities. Then they were asked to imagine that his/her friend Taylor is an Instagram user and read the information that "most of the images or videos that Taylor has posted on Instagram are luxury brand-related (e.g., luxury bag, luxury watch, luxury shoes, luxury travel, luxury hotel, luxury restaurant, etc.). Last week, Taylor posted several luxury brand-related posts and the number of followers suddenly increased a lot." After reading the scenario, participants were asked to answer the questions regarding their emotions toward Taylor, SNSs activities, and control variables.

Measures

Dependent variable: *Instagram activates*

Because we used Instagram as the research context, we used Instagram activities to capture SNSs activities. Since the existing scales for Instagram activities are not suitable for our research purpose, we needed to develop an Instagram activity scale first. We followed the procedure recommended by Churchill (1979) in developing the scale.

Item generation. The initial items were generated from a comprehensive literature review and three focus group interviews. Based on Yang (2016) and Schivinski et al. (2016), we conducted three focus group interviews with 30 students (10 students per group) from a mid-sized university in the Eastern United States. We generated an initial pool of 21 items to capture consumers' Instagram activities. We then invited

three marketing scholars who are familiar with this research topic to evaluate the content and face validities of the items.

Item purification. We used the data collected from this study to purify the items and assess the reliability and validity of the construct. In the survey, participants were asked to rate on a 7-point scale to report how likely they are to conduct each of the Instagram activities. After data collection, we randomly divided the data into two halves to run exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) separately.

Exploratory factor analysis (EFA) was conducted using the first half of the data (n=159) to identify the underlying dimensions and purify the items. From this analysis, items that had high cross-loadings above 0.40 on another dimension and items that loaded below 0.40 on their own dimensions were removed from the scale (Peterson, 2000). Four factors emerged from the analysis (Table 2). The 4-factor solution accounted for 75% of the total variance. The four factors were labeled as "Competition", "Evaluation", "Positive interaction" and "Negative interaction." Specifically, "Competition" includes the activities that help Instagram users produce more content on Instagram to outperform other Instagram users. "Evaluation" includes the activities that Instagram users use to examine other users' performance. "Positive interaction" includes the activities that Instagram users use to interact and socialize with others. "Negative interaction" includes the activities that Instagram users use to diminish others and disrupt their relationships with others. According to the nature of the factors, we categorized the four factors into two categories, which are consistent with our hypotheses. Because "competition" and "evaluation" are two types of activities that help Instagram users to learn about others and

improve themselves on the social media platform, these two factors are categorized into "Self-improvement activity". Both "positive interaction" and "negative interaction" are activities that capture how Instagram users interact with others. Therefore, they are categorized into "Interactive activity."

To validate the underlying structure obtained from the EFA, we use the rest of the sample (n=148) from the survey to conduct a confirmatory factor analysis (CFA) by using AMOS. A measurement model was set to have four factors with 16 indicators. The goodness-of-fit indices suggest acceptable results for the survey data: $\chi^2 = 209.2$, d.f = 98, RMSEA = 0.08, NFI = 0.91, CFI = 0.95. The results of this confirmatory factor analysis are reported in Table 2.

Validity and reliability. We further evaluated the scale's convergent validity by examining the average variance extracted (AVE) for each dimension. All items loaded significantly on their expected constructs. The average variances extracted (AVEs) ranged from 0.59 to 0.73. Moreover, both Cronbach's alphas and composite reliability measures were well above the recommended 0.70 level, demonstrating internal reliability (Bagozzi and Yi, 1988). The discriminant validities for the constructs were assessed by comparing the squared estimated correlation between two constructs with the VE of any pair of latent constructs. Results show that for each pair of constructs, the squared correlation between the two constructs is smaller than VE (Fornell and Larcker, 1981). Collectively, the discriminant validities of the constructs were supported.

Insert Table 2 about here

<u>Independent variable</u>

Envy (malicious envy versus benign envy). Envy was measured using a scale developed by Lange and Crusius (2015). Respondents were required to select which types of emotion they have toward Taylor on Instagram ("I have benign envy toward Taylor about the achievement" or "I have malicious envy toward Taylor about the achievement"). Therefore, envy was treated as a dummy variable.

<u>Control variables</u>

Social comparison orientation. The social comparison orientation scale was developed by Gibbons and Buunk (1999). This scale has been widely used in envy research to assess people's propensity to compare with others (e.g.., "I always pay a lot of attention to how I do things compared with how others do things"; "I often try to find out what others think who face similar problems as I face"). Participants rated the extent to which they agree with the items on a 7-point Likert scale anchored at 1(Strongly disagree) to 7 (Strongly agree).

Social desirability scale. The social desirability scale was assessed by using a scale developed in Bearden et al. (1989). Participants rated the extent to which they agree with the items on a 7-point Likert scale anchored at 1(Strongly disagree) to 7 (Strongly agree). The current research used 12 items, such as "I often consult other people to help choose the best alternative available from a product class" and "To make sure I buy the right product or brand, I often observe what others are buying and using."

Social media involvement. We used two questions ("*How often do you use social media (e.g., Facebook, Instagram, Twitter, etc.)?*" and "*How often do you look for fashion inspiration and/or information on social media?*") to measure social media involvement

(Chou, 2017). These two questions were measured by using a 5-point scale anchored at 1 (Never) to 5 (Always).

Instagram usage. Following Chou (2017), we used three questions to measure Instagram usage. First, respondents were asked to answer the question, "*Do you have an Instagram account?*" (Yes/No). If they selected yes, respondents were exposed to the questions that "*If so, how often do you view on Instagram?*" and "*If so, how often do you post on Instagram?*" These two questions were measured using a 5-point scale anchored at 1 (Never) to 5 (Always).

Demographic variables. Demographic variables, including age, gender, educational level, income range, and ethnicity were assessed at the end of the questionnaire.

Results

Main effects. A multivariate analysis of covariance (MANCOVA) was used to test the relationship between envy and Instagram activities. The categorical variable of envy (n_{benign} = 279 vs. $n_{malicious}$ = 27) was used as the independent variable. The dependent variables were four types of Instagram activities (Self-improvement SNSs activities: competition and evaluation; Interactive SNSs activities: positive interaction and negative interaction). Social desirability, social comparison, dispositional envy, and other demographic variables were also included as control variables. For the multi-item variables, the average of all items was used in the analysis. The MANCOVA result showed that the dependent variables together ("competition", "evaluation", "positive interaction" and "negative interaction) are significantly different between two types of envy ($F(4, 302) = 3.62$, $p < 0.05$). Then, we used ANCOVA to make a comparison between the two groups on each individual activity (Table 3). Results show that benign

enviers were more likely to conduct positive interaction SNSs activities (M $_{benign}$ = 4.57, M $_{malicious}$ = 4.16, F (1, 306) = 4.88, p < 0.05) and less likely to conduct negative interactive SNSs activities (M $_{benign}$ = 3.30, M $_{malicious}$ = 4.47, F (1, 306) =9.04, p < 0.001) than malicious enviers. We can conclude that malicious enviers are more likely to engage in negative interactive SNSs activities and less likely to engage in positive interactive SNSs activities than benign envious people. Thus, H1a and H1b were supported. Because there were no significant envy effects found for the two types of self-improvement SNSs activities (competition and evaluation) (p $_{competition}$ > 0.2, p $_{evaluation}$ > 0.2). Thus, H2 was not supported.

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Insert Table 3 about here

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Discussion

In experiment 1, we developed a new scale to measure Instagram activities and employed the new scale in our research. We identified four groups of Instagram activities including competition, evaluation, positive interaction, and negative interaction. These activities capture how Instagram users react to other users. We further divided them into two categories: self-improvement SNSs activities and interactive SNSs activities. Specifically, self-improvement SNSs activities include competitive SNSs activities and evaluative SNSs activities. Both of the two dimensions deal with how Instagram users evaluate and learn from other users and improve their own performance on the social media platform. The activities in this category focus on an envier's actions toward himself/herself (e.g., changing his/her own status). The interactive SNSs activity has

valance (positive vs. negative). Positive interactive SNSs activities are aimed to build connections with others, whereas negative interactive SNSs activities are used to demean others. The activities in this category focus on the envier's actions towards the envied person, being either approachable or unfriendly.

We also found that malicious enviers are more likely to conduct negative interactive SNSs activities and less likely to conduct positive interactive SNSs activities than benign enviers. This finding is easy to understand since a maliciously envied individual is more likely to be hostile towards the envied person than a benignly envied individual. In contrast, a benignly envied individual is more likely to be friendly to the envied person than a maliciously envied individual. We did not find a significant difference between benign and malicious envy in self-improvement SNSs activities, which means that both benign envier and malicious enviers have similar intentions to conduct self-improvement SNSs activities (both competition and evaluation). It might be because both malicious envious people and benign envious people want to show superiority to the envied people, Thus, in order to cope with the envy feeling, both of them engage in the same level of self-improvement activities.

EXPERIMENT 2

Because we employed a survey in experiment 1 in which we were not able to test the causal relationship between envy and SNS activities. Thus, in experiment 2, in order to test the causal relationship, we manipulated envy by following the procedure developed by Van de Ven et al. (2009, 2011). The goal of Experiment 2 is to verify the findings from Experiment 1 by using a different method. Specifically, we intended to test the main effect of envy on Instagram activities (Hypotheses 1a, 1b, and 2). Moreover, in this

experiment, we also examined whether self-efficacy motive and belonging motive mediate the relationship between envy and SNS activities (Hypotheses 1a, 1b, and 2). A scenario-based between-subject experiment was conducted.

Participants and Procedures

One hundred and eight-four students from a medium-sized university in the eastern United States participated in the experiment in exchange for course credit. Of these participants, twenty-eight participants indicated that they did not have an Instagram account and therefore were dropped from the analysis. Nineteen remaining participants failed the attention check questions and were removed from the data set. Thus, the final sample size is one hundred and thirty-seven. Among the participants, 71% are female, 74% aged from 18 to 24 years old, 55% are Caucasian, and 60% have an annual income lower than $20,000.

Participants were told that the study is to examine the influence of emotions on social network sites (SNSs) activities. They were randomly assigned to a benign envy condition (n=45), a malicious envy condition (n=45), or a control condition (n=47). Participants read a scenario about Instagram first. Then they were asked to imagine that they are in a situation in which both the participant and his/her friend Taylor are influential on Instagram about luxury brand consumption and Taylor's followers suddenly increased a lot last week because Taylor posted several luxury brand-related posts. The manipulation of envy has followed the procedure developed by Van de Ven et al. (2009, 2011). The participants were asked to imagine feeling jealous and some admiration for Taylor (benign envy condition), to imagine feeling jealous and begrudging for Taylor (the malicious envy condition), and just to imagine that they really liked

Taylor's posts (the control condition). We also manipulated whether the person's status is deserved (the benign envy condition) or underserved (the malicious envy condition). In the benign envy condition, we included the information that "*Taylor worked very hard to upload fascinating luxury brand-related posts.*" In the malicious envy condition, the participants read that "*Taylor copied other Instagram users' work*". After reading the scenario, participants were asked to answer some questions regarding their corresponding Instagram activities.

Measures

Dependent variable: *Instagram activates*

We used the same scale developed in Experiment 1 and the same measurement structure of Instagram activities. To test whether the structure of the measurement can be applied in this experiment, we employed a CFA analysis. AMOS results suggested that the goodness-of-fit indices were marginally acceptable: $\chi^2 = 175.6$, df = 84, RMSEA = 0.09, CFI = 0.90. This result indicates that the measurement structure of SNS activities fit well with the data.

Mediators:

Self-efficacy motive. The measures of self-efficacy were adapted from Iglesias et al. (2011). The items were reworded to fit in the luxury brand context (e.g., "I feel confident that I am an expert in luxury brands," "I feel confident that I am able to tell if a luxury product is genuine or not after I take a look at it"). Participants rated the extent to which they agree with the items on a 7-point Likert scale anchored at 1(Strongly disagree) to 7 (Strongly agree).

Belonging motive. The general belongingness scale (GBS) developed by Malone et al. (2012) was adapted to assess the level of belongingness. The twelve items were reworded to fit in the Instagram context (e.g., "When I am with other people, I feel included" will be changed to "When I follow other users on Instagram, I feel included"). The GBS has 12 items, including six items to measure acceptance/inclusion and another six items to measure the rejection/exclusion dimension. Participants rated the extent to which they agree with the items on a 7-point Likert scale anchored at 1(Strongly disagree) to 7 (Strongly agree).

Control variables:

All control variables including social comparison, social desirability, dispositional envy, demographic variables used the same measures as in Experiment 1.

Results

Manipulation check. Following Van de Ven et al. (2009, 2011), we compared participants' ratings on malicious envy, benign envy, and deservedness in a MANOVA with Envy Condition (malicious vs. benign vs. control) as the independent variable. The analysis resulted in a significant multivariate effect of Envy Condition, $F(6, 264) = 25.47$, $p < 0.001$, $\eta_p^2 = 0.26$. Then, we used a series of ANOVA analyses to make comparison. The results showed that our manipulation of perceived deservedness worked as expected (Table 4). Specifically, the participants in the benign envy condition reported a significantly higher level of deservedness than those in the control and malicious conditions (M $_{benign}$ = 5.76, M $_{control}$ = 5.17, M $_{malicious}$ = 1.66, $F(2, 134) = 47.15$, $p < 0.001$, $\eta_p^2 = 0.41$). More importantly, those in the malicious envy condition reported a

significantly higher level of malicious envy than those in both benign and control

conditions (M $_{malicious}$ = 2.77, M $_{benign}$ = 2.19, M $_{control}$ = 1.87, F (2, 134) = 7.44, $p < 0.001$,

η_p^2 = 0.10). Participants in the benign envy condition reported a higher level of benign

envy than both other two conditions (M $_{benign}$ = 5.06, M $_{control}$ = 4.43, M $_{malicious}$ = 1.16, F

(2, 134) = 47.15, $p < 0.001$, η_p^2 = 0.08). Above all, the manipulation check results

indicate that our manipulations worked as expected.

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Insert Table 4 about here

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Main effects. Multivariate analysis of covariance (MANCOVA) was used to test the

main effects. Here, we used the four types of Instagram activities (competition,

evaluation, positive interactive activity, and negative interactive activity) as the

dependent variables and envy (benign vs. malicious) as the independent variable. Social

desirability, social comparison, dispositional envy, and other demographic variables were

also included as control variables. For the multi-item variables, the average of all items

was used in the analysis. The MANCOVA result showed that the dependent variables

("competition", "evaluation", "positive interaction" and "negative interaction) were

significantly different (F (4, 85) = 6.36, $p < 0.01$). Then, we used ANCOVA to make a

comparison on each individual activity between the two groups (Table 5). First of all,

participants in the benign envy condition were more likely to conduct positive interactive

SNSs activities than participants in the malicious envy condition (M $_{benign}$ = 4.77, M

$_{malicious}$ = 3.70, F (1, 89) = 9.63, $p < 0.01$) and participants in the malicious envy condition

were more likely to conduct negative interactive SNSs activities than participants in the

benign envy condition (M $_{benign}$ = 2.10, M $_{malicious}$ = 2.79, F (1, 88) =9.61, *p* < 0.01).

Therefore, we can conclude that malicious enviers are more likely to engage in negative

interactive SNSs activities and less likely to engage in positive interactive SNSs activities

than benign envious people. Thus, H1a and H1b were supported. Second, H2

hypothesized that benign enviers are more likely to conduct self-improvement SNSs

activities (competition and evaluation) than malicious enviers. The results showed that

participants in the benign envy condition were more likely to evaluate the other users

than participants in the malicious envy condition (M $_{benign}$ = 5.76, M $_{malicious}$ = 4.79, F (1,

89) = 8.97, *p* < 0.01). There were no significant differences between two conditions on

competitive activities (*p* > 0.05). Because benign envy only increases social media user's

intention to engage in evaluation SNSs activity, H2 was partially supported.

Insert Table 5 about here

Mediation analysis. One of the purposes of this experiment was to test the

hypothesized mediation effects: self-motives (belonging motive and self-efficacy motive)

mediate the relationship between envy and SNSs activities (H3a and H3b). We tested this

mediation model using a bootstrapping mediation method with 5,000 resamples

(Preacher, Rucker, and Hayes, 2007). Specifically, a PROCESS Model 6 (Hayes, 2013)

was used. The results are presented in Table 6. H3a proposed that the relationship

between envy and interactive SNSs activities is mediated by belonging motive. However,

within the mediational model, the direct effects of envy on interactive activities (positive

& negative) were significant. Specifically, the CIs include negative numbers. Therefore,

hypothesis H3a was not supported. Further, only when competitive SNSs activity is the dependent variable, the CI is significant with negative numbers with a 95% confidence interval when self-efficacy is the mediator (Table 6). Therefore, the results supported our hypothesis that the relationship between benign envy and competition activity is mediated by self-efficacy motive. However, the mediation effect of self-efficacy on the relationship between envy and evaluation was not significant. Thus, hypothesis H3b was partially supported.

Additional analysis. We further followed the same procedure to compare the benign condition versus the control condition and the malicious condition versus the control condition (Table 5). The results showed that there was no significant difference between the benign envy condition and the control condition. When we compared the malicious envy condition with the control condition, we found that participants in the malicious envy condition are more likely to conduct negative interactive activity (M $_{control}$ = 2.11, M $_{malicious}$ = 2.79, F (1, 91) = 7.56, $p < 0.01$) and less likely to conduct positive interactive activity than participants in the control condition (M $_{control}$ = 4.88, M $_{malicious}$ = 3.70, F (1, 91) = 11.60, $p < 0.01$). However, there were no significant differences in competitive and evaluative SNS activities between the two groups.

We also tested the mediating effects of belonging motive and self-efficacy motive on the relationships between envy and SNS activities by comparing the malicious envy condition and benign envy condition to the control condition (Table 5). However, no significant effects were found.

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Insert Table 6 about here

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Discussion

In experiment 2, we largely confirmed the results in Experiment 1 with a different method. Specifically, both experiments found that malicious envy increases social media users' intentions to conduct negative interactive SNSs activities more than benign envy and benign envy increases social media users' intentions to conduct positive interactive SNSs activities more than malicious envy. The results were consistent with what the envy theory suggested that benign enviers want to improve themselves while malicious enviers want to level down the others (Lange and Crusius, 2014). Furthermore, in experiment 2, we found that when envy is manipulated, benign envy is more likely to increases social media users' intentions to conduct evaluative SNSs activities (self-improvement SNSs activities) than malicious envy. Evaluative SNSs activates help envious people to know more about the comparison targets by checking and browsing the envied person's profiles. After carefully understand the comparison target, this type of self-improvement SNSs activity helps the envier to find out an appropriate way to improve themselves. This is easy to explain because even though malicious envious people may also want to improve themselves, benign envious people pursue a process-focused self-improvement goal rather than an outcome-focused self-improvement goal (Salerno et al., 2018). Therefore, benign envious people have a higher motivation to learn the envied person's achievements. The results in experiment 2 also suggested that the relationship between envy and competitive SNSs activities is fully mediated by self-efficacy motive. In other words, when self-efficacy is salient, benign envious people are more willing to conduct competitive SNSs activities compared to malicious envious people. However, another

mediator "belonging motive" is not significant between envy and interactive SNSs activities. This may be due to the fact that building connections with the envied person do not help the envier cope with the envy emotion.

EXPERIMENT 3

The purpose of this experiment is to test the moderating effect of the envier's status. Experiment 3 featured a 3 (envy type: benign envy vs. malicious envy vs. control) * 2 (envier's status: high-power vs. low-power) between-subjects factorial design. We hypothesized that the effects between envy and Instagram activities are moderated by the status of the envier (high-power vs. low-power) (H4a and H4b). We employed a scenario-based approach to manipulating different types of envy and the envier's status.

Participants and Procedures

Two hundred and forty-one participants who all have an Instagram account were recruited on an online panel (Amazon Mechanical Turk). Four participants who did not meet the attention check requirements were removed from the data set. Finally, the data consisted of two hundred and thirty-seven participants (49% are female, 43% % aged 25-34 years old, 69% are Caucasian, and 50% have a bachelor's degree).

Manipulation

In this experiment, we used the scenario to manipulate both envy and the envier's status. All participants were randomly assigned to six different conditions and were asked to read a scenario. In the scenario, the participants were asked to imagine that they are in a situation in which both the participant and his/her friend Alex are Instagram users and most of the images or videos posted by Alex and the participant are luxury brand related. Following Van de Ven et al. (2009, 2011), we manipulated benign versus malicious envy

by indicating whether the person's status is deserved (the benign envy condition) or underserved (the malicious envy condition). In the benign envy condition (n = 77), the manipulation was "*all the products Alex posted are genuine.*" In the malicious envy condition (n = 79), the participants read the information that "*all the products Alex posted are fake*". In the control condition (n = 81), the participants read the information that "*you feel that you really like Alex's posts.*"

According to our definition, the difference between high-power members and low-power members lies in the number of followers and the number of posts. We manipulated the status based on both of the two criteria. In the lower social status condition (n = 123), participants read the information that "*You feel that you are not influential on Instagram about luxury brand consumption since you only have few luxury brand-related posts and have attracted a small number of followers. Until now, you have 120 followers and have uploaded 9 luxury brand-related posts on the platform.*" In the higher social status condition (n = 114), participants read the information that "*You feel that you are influential on Instagram about luxury brand consumption since you have many luxury brand-related posts and have attracted many followers. Until now, you have 4,855 followers and have uploaded 608 luxury brand-related posts on the platform.*"

Measures

Dependent variable: *Instagram activates*

We used the same scale developed in Experiment 1 and the same measurement structure of Instagram activities as in Experiments 1 and 2. We employed a CFA analysis to test whether the structure of the measurement is consistent across three experiments. AMOS results suggested that the goodness-of-fit indices were acceptable: $\chi^2 = 240.6$, df

= 84, RMSEA = 0.08, CFI = 0.93. This result indicated that the measurement structure of SNS activities fits well with the data. Other control variables (social comparison, social desirability, and dispositional envy), and demographic variables are measured by the same items as in Experiment 1 and Experiment 2.

Results

Manipulation check. Manipulation check results showed that both the manipulation of envy and the envier's status was effective (Table 7). Following Van de Ven et al. (2009, 2011), we compared participants' ratings on malicious envy, benign envy, and deservedness in a MANOVA with Envy Condition (malicious vs. benign vs. control) as the independent variable. The analysis resulted in a significant multivariate effect of Envy Condition, $F(6, 464) = 21.56$, $p < 0.001$, $\eta_p^2 = 0.22$. Then, we used a series of ANOVA analyses to make comparison. Results demonstrated that perceived deservingness in the benign envy condition was higher than that in the malicious envy condition ($M_{benign} = 5.27$, $M_{malicious} = 3.15$, $F(2, 234) = 64.02$, $p < 0.001$), which indicates that the manipulation of envy worked as we expected. Furthermore, participants in the benign envy condition reported a higher level of benign envy than those in both of the other two conditions ($M_{benign} = 5.24$, $M_{malicious} = 4.33$, $M_{control} = 5.18$, $F(2, 234) = 12.18$, $p < 0.001$, $\eta_p^2 = 0.09$), and those in the malicious envy condition reported a higher level of malicious envy than the other two condition ($M_{malicious} = 4.04$, $M_{benign} = 3.17$, $M_{control} = 3.29$, $F(2, 234) = 6.77$, $p < 0.01$, $\eta_p^2 = 0.06$). This result provided additional support to the conclusion that the manipulation of envy worked well.

We also checked the envier's status manipulation. We first compared participants' ratings on number of followers and number of posts in a MANOVA with envier's status (high vs. low) as the independent variable. The analysis resulted in a significant multivariate effect of envier's status, F (2, 234) = 126.80, $p < 0.001$, $\eta_p^2 = 0.52$. Then, we used a series of ANOVA analyses to make comparison. As we had expected, respondents in the high-power condition reported that they have more followers (M $_{high}$ = 2.72, M $_{low}$ = 1.46, F (2, 234) = 207.66, $p < 0.001$, $\eta_p^2 = 0.47$) and have more posts (M $_{high}$ = 2.72, M $_{low}$ = 1.43, F (2, 234) = 200.38, $p < 0.001$, $\eta_p^2 = 0.46$) than respondents in the low-power condition.

Insert Table 7 about here

Main effects. To confirm prior experiments' results on the main effect and test the moderating effect of the envier's status, we used a Multivariate analysis of covariance (MANCOVA). In MANCOVA, envy is the between-subjects independent variable, the four types of SNSs activities were dependent variables and other control variables (social comparison, social desirability, and dispositional envy) were also included. For the multi-item variables, the average of all items was used in the analysis. The MANCOVA result showed that the dependent variables ("competition", "evaluation", "positive interaction" and "negative interaction") as a whole were significantly different across two conditions (F (4, 151) = 17.87, $p < 0.01$). Then we used an analysis of covariance (ANCOVA) to compare the difference in each individual activity across two conditions (Table 8). First,

participants in the benign envy condition were more willing to conduct positive interactive SNSs activities than participants in the malicious envy condition (M_{benign} = 5.00, $M_{malicious}$ = 3.46, $F (1, 155)$ = 50.27, $p < 0.01$). Second, participants in the malicious envy condition were more willing to conduct negative interactive SNSs activities than participants in the benign envy condition (M_{benign} = 2.81, $M_{malicious}$ = 3.81, $F (1, 155)$ = 15.63, $p < 0.001$). Third, participants in the benign envy condition were more likely to conduct evaluative SNSs activities than participants in the malicious envy condition (M_{benign} = 5.14, $M_{malicious}$ = 4.56, $F (1, 155)$ = 6.11, $p < 0.05$). Fourth, participants' intentions to conduct competitive SNSs activities were significantly higher in the benign envy condition than in the malicious condition (M_{benign} = 5.31, $M_{malicious}$ = 5.03, $F (1, 155)$ = 2.90, $p < 0.1$). In conclusion, H1a, H1b, and H2 were all supported.

Insert Table 8 about here

Moderating effect. We tested the moderating effect (H4a and H4b) in a moderating analysis using the PROCESS macro based on Model 1, proposed by Preacher and Hayes (2008). Here, SNSs activities are continuous dependent variables, envy (independent variable) and the envier 'status (moderator) were treated as dummy variables. Analyses conducted through bootstrapping (5,000 bootstrap samples) indicated no significance for the moderating effects ($p > 0.05$) (Zhao, Lynch, and Chen 2010). Therefore, H4a and H4b were not supported (Table 9).

Additional analysis. We followed the same procedure to compare the benign envy condition versus the control condition and the malicious envy condition versus the

control condition (Table 8). Like the results we obtained in experiment 1, there was no significant difference between the benign envy condition and the control condition. Respondents in the malicious envy condition were more likely to conduct negative interactive SNSs activities than respondents in the control condition (M $_{\text{malicious}}$ = 3.81, M $_{\text{control}}$ = 3.13, F (1, 160) = 9.76, $p < 0.001$), and respondents in the malicious envy condition were less likely to conduct positive interactive SNSs activities than respondents in the control condition (M $_{\text{malicious}}$ = 4.93, M $_{\text{control}}$ = 3.36, F (1, 160) = 46.89, $p < 0.001$). In addition, compared to respondents in the control condition, respondents in the malicious envy condition had higher possibility to conduct evaluative SNSs activity (M $_{\text{malicious}}$ = 3.81, M $_{\text{control}}$ = 3.13, F (1, 160) = 4.24, $p < 0.01$).

Next, we followed the same procedure to test the moderating effect when comparing the benign envy condition and the malicious envy condition to the control condition. When comparing the malicious envy condition and the control condition, the bootstrapping results suggested that the moderating effect is not significant ($p > 0.05$). When comparing the benign envy condition and the control condition, we found that when the envier is a high-power member rather than a low power member, the relationship between benign envy and evaluative SNSs activity was stronger ($\beta = 0.07$, F (1,147) = 2.69, $p < 0.05$).

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Insert Table 9 about here

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Discussion

In Experiment 3, we confirmed the results from the prior experiments that benign envy increases social media users' intentions to engage in positive interactive SNSs activities than malicious envy, whereas malicious envy increases social media users' intentions to engage in negative interactive SNSs activities than benign envy. Comparing to malicious envy, benign envy is more likely to increases social media users' self-improvement SNSs activities (both competition and evaluation SNSs activities) that malicious envy. This result shows that the benign envier and malicious envier have different levels of intention to conduct self-improvement SNSs activities (competition and evaluation). Consistent with prior researches on envy in different research contexts (e.g., Van de Ven et al., 2011; Salerno et al., 2018), benign envy motivates individuals to improve themselves while malicious envy does not.

The moderating effect of the envier's status on the relationship between envy (malicious vs. benign) and SNSs activities was not significant. It might be due to the fact that when the envy emotion becomes strong (either malicious or benign), envious people no matter their status will engage the similar Instagram activities. However, when comparing benign envy with the control group (like), we found that the higher status benign enviers are more likely to engage in evaluation activities than individuals who just like others' posts. This result indicates that benign envy and like are two distinct emotions in that benign envy and like motivate individuals to engage in different behaviors. The envious individuals may try to learn from the others by examining and analyzing their profiles while if an individual only likes another one, he/she will not be motivated to examine the other's profile. Together, all the findings we obtained in

Experiment 3 supported the contention that benign envious people and malicious envious people are connected to different Instagram activities. However, the moderator "envier's status" did not affect the strength of the relationships between the types of envy and corresponding Instagram activities. In other words, no matter the envier is a high-power member or a low-power member on Instagram, the envier's intentions to conduct SNSs activities will not change. The envier's status is not a factor that can moderate the relationship between envy and SNSs activities.

EXPERIMENT 4

In Experiment 4, we employed a scenario-based survey, in which envy will be generated naturally instead of being manipulated as in Experiment 2 & 3. Experiment 4 examines whether consumers with different social status (high-power member vs. low-power member) in the social media platform tend to produce different types of envy (benign envy vs. malicious envy). We hypothesized that when envying others, high-power online users are more likely to produce malicious envy than low-power users (H5a). On the contrary, we expected that when envying other people, low-power users are more likely to produce benign envy than high-power members (H6a). In addition, we also examined the moderating effect of the status of the comparison target on the relationships. We expected to see that to what extent envy is elicited depends on the status of the comparison others (high-power vs. low-power) (H5b and H6b).

We employed a combination of a scenario-based survey and a scenario-based experiment. Specifically, we measured enviers' status on Instagram and their envy emotion which was generated based on a scenario. We used the scenario to manipulate the envied person's status.

Participants and Procedures

We recruited one hundred and sixty-two participants who have an Instagram account from an online panel (Amazon Mechanical Turk). Twelve participants who did not correctly answer the attention check questions were removed from the data set. The final sample consists of two hundred and fifty participants. About 43% of the respondents are female, 57% % of the participants aged from 25-34 years old, 73% of the participants are Caucasian and 73% of participants have a bachelor's degree.

At the beginning of the survey, all respondents are instructed to answer four questions regarding their status on Instagram. Then all participants were randomly assigned to two different conditions according to different envied person's status (High-power vs. Low-power). They were asked to imagine that his/her friend Taylor is an Instagram user and read the information that "*Taylor has many posts and most of the images or videos that Taylor has posted on Instagram are luxury brand-related (e.g. luxury bag, luxury watch, luxury shoes, luxury travel, luxury hotel, luxury restaurant, etc.).*" All participants were randomly assigned to two different conditions according to different envied person's status (High-power vs. Low-power). Whether the envied person is a high-power member, or a low-power member is manipulated based on the number of followers and number of posts on Instagram (Leban and Voyer, 2015). In the high-power condition (n=76), participants read the information that "*Taylor has attracted many followers and is pretty influential on Instagram about luxury brand consumption. Up to now, Taylor has 4,900 followers and has uploaded 610 luxury brand-related posts on the platform.*" In the low-power condition (n=74), participants read the information that "*Taylor has attracted only a small number of followers and is not influential on*

Instagram about luxury brand consumption. Up to now, Taylor has 126 followers and has uploaded 10 luxury brand-related posts on the platform." After reading the scenario, respondents will be asked questions about their emotions and reactions to the situation.

Measures

Instagram activity. We still used the same scale developed in Experiment 1 and the same measurement structure of Instagram activities was used. We employed a CFA analysis to test whether the structure of the measurement can be used in this experiment. AMOS results suggested that the goodness-of-fit indices were acceptable: $\chi^2 = 214.7$, df = 98, RMSEA = 0.08, CFI = 0.94. This result indicates that the measurement of SNS activities fits the data well.

Envy (malicious envy versus benign envy). The measures for two types of Envy were adapted from Crusius and Lange (2014). There are ten items (five to measure benign envy, and five items measure malicious envy). Respondents were asked to indicate their level of agreement (1 = "strongly agree," and 7 = "strongly disagree) on the ten items (e.g, "If I notice that another person is better than me, I try to improve myself"; "If other people have something that I want for myself, I wish to take it away from them"). Because the envy scale is a multi-item variable with two dimensions (envy: benign and malicious), we used the mean scores of two dimensions separately. Thus, two continuous variables ("benign envy" and "malicious envy") were used in the analysis.

Enviers' status. The envier's status was measured in the survey using four questions. First, respondents were asked to indicate how many followers and posts they have on their Instagram account (1 = 1-99, 2 = 100-199, 3 = 200-299, 4 = 300-399, 5 = 400-499, 6 = 500-999, 7 = 1000-1499, 8 = 1500-1999, 9 = 2,000 and more, 10 = I don't know).

Second, respondents need to provide the information that "*How many luxury brand-related posts do you have on your Instagram?*" This question was measured using a 5-point Likert scale anchored at 1(None) to 5 (I don't know). Last, they are required to rate their perceived influence (1 = "not at all" and 5 = "very much") on luxury brand consumption on Instagram (*"To what extent do you think you are influential about luxury brand consumption on Instagram?"*). We first rescaled the four continuous variables and then used the average of all items in the analysis.

The measurement of other control variables (social desirability, social comparison, Instagram usage, and social media involvement) and demographic variables are the same as in the previous 3 experiments. For the multi-item variables, the average of all items was used in the analysis.

Results

Manipulation check. We checked the envied person's status manipulation. We first compared participants' ratings on perceived influence, number of followers, and number of posts in a MANOVA with envier's status (high vs. low) as the independent variable. The analysis resulted in a significant multivariate effect of envier's status, $F (3, 146) = 60.88$, $p < 0.001$, $\eta_p^2 = 0.56$. Then, we used a series of ANOVA analyses to make comparison. Manipulation check results show that the envied person's status worked as expected (Table 10). We used perceived influence on Instagram to manipulate the envied person's status. ANOVA results show that the perceived influence in the high-power condition was rated higher than that in the low-power condition ($M_{high} = 3.79$, $M_{low} = 2.73$, $F (1, 148) = 32.07$, $p < 0.001$, $\eta_p^2 = 0.18$). Also, respondents in the high-power

condition reported that they have more followers (M $_{high}$ = 2.62, M $_{low}$ = 1.34, F (1, 148)

= 132.87, $p < 0.001$, η_p^2 = 0.47) and have more posts (M $_{high}$ = 2.64, M $_{low}$ = 1.39, F (1,

148) = 110.19, $p < 0.001$, η_p^2 = 0.43) than respondents in the low-power condition.

Insert Table 10 about here

Effect of Envier's status on envy. We used a regression analysis to examine the

relationship between envier's status and the types of envy (H5a and H5b), and the

moderating effect of the envied person's status (H6a and H6b) (Table 11). H5a proposes

that comparing with low-power members, high-power members are more likely to have

malicious envy toward other social media community members. Hypothesis 5a was

supported as the result demonstrates that high-power members are more likely to have

malicious envy than low-power members (β = 0.76, $p < 0.1$, SD = .176). In contrast, H5b

proposes that comparing to low-power members, high-power members are less likely to

have benign envy toward other social media community members. Hypothesis 5b was not

supported as the result suggested that compared to low-power members, high-power

members are more likely to have benign envy (β = 0.65, $p < 0.01$, SD = .178). The result

was the opposite of our hypothesis. Thus, Hypothesis 5b was not supported

Moderating effect of the envied person's status on the relationship between the

envier's status and envy. We tested the moderating effect of envied person's status

between the envier's status and types of envy using the PROCESS macro based on Model

1 proposed by Preacher and Hayes (2008). Analyses conducted through bootstrapping

(5,000 bootstrap samples) demonstrated that the moderating effect of envied person's

status is significant (Table 11). The results suggested that the envier is more likely to generate malicious envy when s/he envies at a low-power member than a low-power member (β malicious = - 0.51, SD malicious = 0.23, $p < 0.05$). Also, the envier is more likely to generate benign envy when s/he envies at a low-power member than a low-power member * β benign = - 0.53, SD benign = 0.23, $p < 0.05$). Thus, H6a was supported and H6b was supported.

Insert Table 11 about here

Discussion

In Experiment 4, we investigated the relationship between the envier's status and different types of envy along with the moderating effect of the envied person's status on the relationship. Results showed that a high-power member is more likely to generate malicious envy than a low-power member and the relationship is weakened when the envied person is a high-power member than a low-power member, which is consistent with our hypothesis. Our results also suggested that a high-power member is more likely to generate benign envy than a low-power member and the relationship is weakened when the envied person is a high-power member than a low-power member. However, our hypothesis proposes that low-power members are more likely to have benign envy because they are information seekers and generally look up to other community members (Van de Ven et al., 2009). The results are not consistent with our hypotheses. Together the above results indicate that a high-power member is more likely to generate both benign and malicious envy towards other members. This result can be explained by the

high-power members' high involvement in the platform, which may generate stronger envy emotions in them no matter it is benign envy or malicious envy. Moreover, we found that the relationship between enviers' status and both types of envy were weakened when the envied person is a high-power member than a low-power member. This result indicates that both high-power and low-power members tend to have similar envy emotions towards other high-power members while their envy emotions toward other low-power members vary greatly.

GNERAL DISCUSSION

Through four experiments, this study investigated the relationships between different types of envy elicited on the social media platform and SNSs activities. Moreover, we examined the moderating effect of the envied person's status on the relationship. In addition, we also evaluated the relationship between the envier's status and different types of envy emotions. Employed a scenario-based survey, the first experiment examined how envy leads to different types of SNSs activities when envy was not manipulated. Moreover, following Churchill (1979), we developed a new scale of SNSs activities and used it in our study. We found that there are two categories of SNSs activities, including self-improvement activities (competition and evaluation) and interactive activities (positive and negative). In the survey, we found that a benign envier is more likely to conduct positive interactive SNSs activity and less likely to do the negative interactive SNSs activity than a malicious envier (H1a and H1b). In the second experiment, to test the causal relationships between envy and SNSs activities, we manipulated envy. The results were consistent with Experiment 1. In addition, we also found that the benign envier is more likely to conduct the competitive SNSs activities

than the malicious envier which was not supported in Experiment 1 (H2). This might because we used deservedness to manipulate envy. For the benign envier, the feeling that the envied person deserves the achievements becomes stronger, this feeling will increase the benign envier's intention to improve his/her performance on SNSs. In other words, by conducting evaluative SNSs activity, online users will understand the envied person better and can help the benign envier to improve his/her status quickly. In Experiment 2, we also tested the mediating effects of "self-motives" (self-efficacy vs. belonging) on the relationships between envy and SNSs activities (H3a and H3b). The results showed that the relationship between envy and competitive (self-improvement) SNSs activity is mediated by self-efficacy motive. This result indicated that envy may threaten an individual's self-efficacy, which might motivate the individual to cope with the threat with competitive behaviors. The self-efficacy did not mediate the relationships between envy and other SNSs activities which might be caused by the fact that the other SNSs activities do not help an individual to cope with the threaten to self-efficacy. Belonging did not work as a mediator, which indicates that envy may not activate individuals' belonging motive.

The third experiment confirmed the results of the first two experiments about the relationship between envy (benign and malicious) and the interactive SNSs activities (positive interaction and negative interaction) (H1a and H1b). Moreover, it also confirmed Experiment 2's finding regarding the significant relationship between envy and consumer's intention to conduct competitive SNSs activities. In addition, Experiment 3 also found a significant relationship between envy and the consumer's intention to conduct evaluative SNSs activities. In other words, Experiment 3 provided full support to

both H1a, H1b, and H2. Experiment 2 and 3 used the same method and their findings on the main effects are largely consistent. The different findings on the relationship between envy and consumer's intention to conduct competitive SNSs activities might be caused by different research contexts. Therefore, across three experiments, the main effects of envy and SNSs activities are largely supported (Hypotheses 1a, 1b and 2). Therefore, we can make the conclusion that while a benign envier inclines to conduct positive interactive SNSs activities (e.g. "Like" the user's posts or comments), a malicious envier is more likely to take negative interactive actions (e.g. Share negative opinion about the user with other friends). Moreover, a benign envier is more likely to focus on how to improve themselves on the social media platform than a malicious envier.

In experiment 3, we did not find the moderating effect of the envier's status (high-power vs. low-power) on the relationship between envy and SNSs activities (H4a and H4b). The results indicated that the envier's intention to conduct SNSs activity is not affected by his/her status on the social media platform. This might because when benign envy or malicious envy affects online user's intention to engage in SNSs activities, both benign envious people and malicious envious people will neglect their status and focus on how to get rid of the envy emotion. This experiment also compared benign envious people with people who simply like another user's achievements. We found that benign envious people are more willing to do evaluative SNSs activities. This result may cause by the fact that benign envy and like are two distinct emotions and can lead online users to take different approaches on SNSs. The benign envier may browse and analyze the posts and profile of the envied person, but the person who simply like another user will not engage in these behaviors.

In Experiment 4, envy was not manipulated. In other words, we used a scenario to let respondents generate envy emotions automatically. We aimed at testing the relationship between the envied person's status and different types of envy along with the moderating effects of the envied person's status on the relationship. We manipulated the envied person's status on the social networking site. The results showed that high-power online users (more followers and more posts on social media platforms) are more likely to generated envy (both malicious envy and benign envy). The results might be caused by the fact that high-power members have more followers and posts on the SNSs and when other online users overtake s/he, the envy emotion is stronger. We also tested the moderating effect of the envied person's status on the relationship between envier's status and different types of envy. The results suggested that the envious people are less likely to generate envy (both benign envy and malicious envy) when they compare themselves with other high-power members rather than low-power members. The result suggests that when the envious people compare themselves with other online users, their envy emotions are varied.

THEORETICAL IMPLICATION

This study contributes to the literature in several important ways. First, we uncovered the role of envy in social media platforms and demonstrated how it influences individuals' SNSs activities. Although envy is a common emotion of social media users, the role of envy in social media has been largely neglected. To the best of our knowledge, this is a pioneer study to examine the relationship between envy and social media behaviors. Second, this study extends our understanding regarding which conditions, different types of envy are generated among different consumer groups. Previous

research largely focuses on the influence of envy on individuals in different settings. For instance, Vecchio (2010) studied the influence of envy on employees' workplace performance. Kirchsteiger (1994) explored the roles of envy in ultimatum gaming behaviors. In contrast, our research examined how and under which condition either malicious or benign envy is generated. Moreover, we also found that that which type of envy will be generated depends on which consumer groups the envier compares with, which shed new light on the social comparison mechanism underlying envy generation. Third, this study links the self-motive (including belonging motive and self-efficacy motive) to envy research. Previous research (Salovey and Rodin, 1991; Lange and Crusius, 2015; Duffy et al. 2012) identified self-esteem as the underlying motive for envy. This study furthers the findings by suggesting that beyond self-esteem, self-efficacy motive also an important self-motive of envy, which extends our understanding of the psychological mechanism underlying envy. Fourth, this research develops a new SNSs activity scale in the Instagram context. This new scale incorporates many new items that are not included in previous research (e.g. "share your moments on Instagram Stories", "share your negative opinion about the user with your friends"). This scale can be used in future Instagram and social media research.

MANAGERIAL IMPLICATIONS

The current research provides important implications to marketing and social media practitioners by exploring the relationship between envy and SNSs activities along with the social comparison mechanism underlying the relationship. Our results show that different types of envy lead to different SNSs activities. In order to generate desired customer responses, online marketers may design their advertising and marketing

campaigns to elicit different envy emotions among their customers. For example, companies may provide incentives to encourage their customers to share the experience with their products on social media to facilitate social comparison. When other consumers see the posts, envy might lead them to engage in buying or other promotional behaviors.

Also, communicate with consumers is very important for companies to develop long-term relationships with their consumers. Our results show that suggests that benign enviers are more likely to conduct positive interactive activities. By conducting positive interactive activities, consumers are more likely to build relationships with the company. Our results also show that malicious enviers are more likely to conduct negative interactive activities. By conducting negative interactive activities, consumers may share their negative opinions about the company with other people. Therefore, when consumers choose to conduct negative interactive activities instead of positive interactive activities, the company's image will be damaged. From this perspective, it is important for companies to find out how to elicit benign envy instead of malicious envy emotion among their customers. For example, for benign enviers, the perceived deservedness of the envied person is higher than the malicious enviers. When companies upload posts on their profiles, they should work harder to increase the perceived deservedness. For example, companies may upload creative posts or upload posts more frequently on their profiles.

We also found high-power members are more likely to generate both benign and malicious envy towards other members than low-power members. Moreover, both the envier's and envied person's status moderate the relationships between envy and SNSs

activities. From a practical perspective, these findings can help social media marketers customize their marketing offers and conduct targeted marketing campaigns. In the social media setting, more and more companies are involved in the social networking environment. For example, many companies cooperate with online users on social media platforms to communicate with customers and promote products. Our finding suggests that high-power members are more likely to generate envy emotions and to conduct self-improvement and positive interactive activities. Thus, the high-power member should be the focus of social media marketers' networking and collaboration strategies. Because self-improvement SNSs activities are likely to attract other online users' attention, companies can attract more consumers by cooperating with the high-power members (have a large number of followers and posts) on the social media platform. Above all, understanding under which condition each type of envy is generated and how the envier copes with envy could help marketers better design their social media marketing strategies.

Similar to the theoretical implications, the new SNSs activities put forth has implications for management. By understanding the types of activities consumers typically engage in on social media platforms, companies can build richer marketing metrics. For example, the findings could encourage managers to update social networking sites pages that help companies to attract more consumers. Based on this, managers can be confident that if they invest in social networking sites, they are more likely to have loyal customers and increase sales. Ultimately, the current research helps companies better understand the financial returns of their use of social media.

LIMITATIONS AND FUTURE RESEARCH

Several limitations of this current research may stimulate further research. First, in this research, we manipulated envy by following Van de Ven et al. (2011)'s procedure. Specifically, we asked respondents to imagine to have the emotion "like" in the control condition and have the emotion "admiration" in the benign envy condition. However, "Like" and "admiration" are similar to a certain degree. In this study, we focused on the comparison between malicious envy and benign envy. In future research, researchers may need to revise the procedure to elicit a neutral emotion in the control condition. Second, this research investigates how the social comparison on social media platform leads to envy emotion, and further leads to the envier's intention to conduct different SNSs activities. However, online users might conduct SNSs activities because of other emotions besides envy. Future research is needed to examine how other emotions may affect online users' SNSs activities. Third, following the research of Van de Ven et al. (2011), in Experiment 2 and Experiment 3, we manipulated envy type using perceived deservedness. However, according to the envy literature, benign envy and malicious envy can also be separated based on perceived controllability (Van de Ven et al., 2012), different goals (Salerno et al., 2018) and sense of injustice (Smith et al., 1996). Future research may employ different approaches to manipulating benign envy and malicious envy to further confirm our results. Fourth, in this research, we explored the mediating effect of self-motives (self-efficacy and belonging) and the moderating effect of the envier's status (high-power vs. low-power). The mediator belonging motive and the moderator did not work. There might be other mediators and moderators that affect the relationship between envy and SNSs activities. Thus, Future research is needed to

identify other mediators and moderators of the relationships between envy and SNSs

activities.

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TABLES AND FIGURES

Table 1. Characteristics of high-power members & low-power members

	High-power members	Low-power members
Important features	- Register on the forum for at least one year; - Activate in the forum; - Upload more than 500 helpful luxury products posts; - Receive "established member" label on the forum.	- Just register on the for less than one year; - Less active in the forum; - Upload luxury product posts occasionally; - The mainly action in the forum is put comments under high-power members' posts.
Status on the forum	- Being considered a reference person who gives low-power members fashion advice; - Display growing number of luxury products collection.	- Being an advice seeker; - Compete with other low-power members implicit in the forum to achieve recognition from high-power members.
Enhance status means	- Reply to low-power members' posts self-consciously with scarcity comments and then the replies become tokens to low-power members.	- Express admiration for high-power members' posts with flattery, sometimes accompanying self-depreciation.

Table 2. Measurement items, EFA results and Cronbach's α

Factors/items	Factor Loading	Cronbach α	Eigenvalues	AVE
- Self-improvement activities				
A. Competition		0.93	7.73	0.59
A1. Use products that are interesting and unusual to assist you in establishing a distinctive image on Instagram.	0.89			
A2. Post some rare luxury products that are not easily found.	0.82			
A3. Create posts related to luxury product that cannot be duplicated easily.	0.79			
A4. Post image/video more frequently.	0.76			
A5. Post high-quality image/video.	0.76			
A6. Share your moments on Instagram Stories.	0.73			
A7. Initiate posts related to an area that you are an expert.	0.71			
A8. Post/upload on your profile.	0.64			
B. Evaluation		0.88	2.29	0.73
B1. Browse another user's home page/newsfeed without leaving comments.	0.92			
B2. Check out another user's profile without leaving comments.	0.78			
- Interactive activities				
C. Positive interaction		0.87	1.24	0.60
C1. Comment on or reply to another user's posts.	0.86			
C2. "Like" another user's posts or comments.	0.84			
C3. Follow another user on other social media platforms.	0.60			
D. Negative interaction		0.88	1.04	0.70
D1. Share your negative opinion about another user with your friends.	0.94			
D2. Unfollow another user on Instagram.	0.80			
D3. Laugh at another user on Instagram.	0.77			

Table 3. ANCOVA Results of Experiment 1

Instagram activity	Benign envy		Malicious envy		Statistics		
	M	SD	M	SD	F (1, 306)	p	η^2_p
Competition	4.22	(1.57)	4.24	(1.62)	1.24	0.27	0.00
Evaluation	4.86	(1.48)	4.65	(2.00)	0.83	0.36	0.00
Positive interaction	4.57	(1.63)	4.16	(1.67)	4.88	0.03*	0.02
Negative interaction	3.30	(1.88)	4.47	(1.54)	9.04	0.00**	0.03

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

Table 4. Manipulation checks per condition of Experiment 2

Manipulation variables	Control		Benign envy		Malicious envy		Statistics		
	M	SD	M	SD	M	SD	F (2, 134)	p	η^2_p
Deservedness	5.17	(1.22)	5.76	(1.15)	1.66	(1.66)	47.15	0.00 ***	0.41
Malicious envy	1.87	(0.89)	2.19	(1.01)	2.77	(1.44)	7.44	0.00 **	0.10
Benign envy	4.43	(1.12)	5.06	(1.02)	1.16	(1.16)	5.99	0.00 **	0.08

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

Table 5. ANCOVA Results of Experiment 2

- Malicious envy vs. benign envy

Instagram activity	Benign envy		Malicious envy		Statistics		
	M	SD	M	SD	F $(1, 89)$	p	η_p^2
Competition	5.39	(1.25)	4.97	(1.19)	2.55	0.11	0.03
Evaluation	5.76	(1.38)	4.79	(1.79)	8.97	0.00**	0.10
Positive interaction	4.77	(1.32)	3.70	(1.73)	9.63	0.00**	0.11
Negative interaction	2.10	(1.22)	2.79	(1.28)	9.61	0.00**	0.11

- Benign envy vs. Control

Instagram activity	Control		Benign envy		Statistics		
	M	SD	M	SD	F $(1, 91)$	p	η_p^2
Competition	4.88	(1.61)	5.39	(1.24)	2.00	0.16	0.02
Evaluation	5.37	(1.63)	5.76	(1.38)	0.79	0.38	0.01
Positive interaction	4.88	(1.31)	4.77	(1.32)	0.39	0.53	0.01
Negative interaction	2.11	(1.30)	2.10	(1.22)	0.05	0.83	0.00

- Malicious envy vs. Control

Instagram activity	Control		Malicious envy		Statistics		
	M	SD	M	SD	F $(1, 91)$	p	η_p^2
Competition	4.88	(1.61)	4.97	(1.86)	0.18	0.67	0.00
Evaluation	5.37	(1.63)	4.79	(1.79)	3.09	0.08*	0.04
Positive interaction	4.88	(1.31)	3.70	(1.73)	11.60	0.00***	0.13
Negative interaction	2.11	(1.30)	2.79	(1.28)	7.56	0.01**	0.08

Note. * p < .05. **p<.01. ***p<.001

Table 6. Effects of envy on four types of Instagram activities

	Direct effect	Indirect effect (s) CI (within 95% confidence interval)	
		Belonging	Self-efficacy
- Malicious envy vs. benign envy			
Competition	-0.05	(-0.1332, 0.1505)	(-0.7740, -0.0108) *
Evaluation	-0.91**	(-0.0598, 0.3031)	(-0.9801, 0.140)
Positive interaction	-0.96**	(-0.1039, 0.2711)	(-0.7972, 0.1390)
Negative interaction	0.86*	(-0.1618, 0.1575)	(-0.2645, 0.4268)
- Benign envy vs. control			
Competition	0.09	(-0.0302, 0.7934)	(-0.1021, 0.601)
Evaluation	0.14	(-0.2043, 0.3690)	(-0.1517, 0.1289)
Positive interaction	-0.33	(-0.1963, 0.4809)	(-0.0860, 0.0591)
Negative interaction	0.00	(-0.2370, 0.1842)	(-0.0750, 0.0941)
- Malicious envy vs. control			
Competition	-0.28	(-0.1358, 0.2428)	(-0.0768, 0.2419)
Evaluation	0.67	(-0.2414, 0.1978)	(-0.1369, 0.1650)
Positive interaction	-1.14**	(-02891, 0.1259)	(-0.1324, 0.1400)
Negative interaction	0.79**	(-0.1372, 0.1276)	(-0.0703, 0.0913)

Note. * p < .05. **p<.01. ***p<.001

Table 7. Manipulation checks per condition of Experiment 3

- Envy manipulation									
Manipulation variables	Control		Benign envy		Malicious envy		Statistics		
	M	SD	M	SD	M	SD	F $(2, 234)$	p	η^2_p
Deservedness	5.32	(1.15)	5.27	(1.10)	3.15	(1.78)	64.02	0.00 ***	0.35
Malicious envy	3.29	(1.80)	3.17	(1.57)	4.04	(1.46)	6.77	0.00 **	0.06
Benign envy	5.18	(1.16)	5.24	(1.04)	4.33	(1.60)	12.18	0.00 ***	0.09

- Envier's status manipulation							
Manipulation variables	High-power		Low-power		Statistics		
	M	SD	M	SD	F $(2, 234)$	p	η^2_p
Number of posts	2.72	(0.59)	1.43	(0.79)	200.38	0.00 ***	0.46
Number of followers	2.72	(0.60)	1.46	(0.73)	207.66	0.00 ***	0.47

Note. * p < .05. **p<.01. ***p<.001

Table 8. ANCOVA Results of Experiment 3

- Malicious envy vs. benign envy

Instagram activity	Benign envy		Malicious envy		Statistics		
	M	SD	M	SD	F $(1, 155)$	p	η^2_p
Competition	5.31	(0.97)	5.03	(1.38)	2.90	0.09 *	0.02
Evaluation	5.14	(1.29)	4.56	(1.81)	6.11	0.02 **	0.04
Positive interaction	5.00	(1.24)	3.36	(1.68)	50.27	0.00 ***	0.26
Negative interaction	2.81	(1.62)	3.81	(1.51)	16.61	0.00 ***	0.10

- Benign envy vs. Control

Instagram activity	Control		Benign envy		Statistics		
	M	SD	M	SD	F $(1, 158)$	p	η^2_p
Competition	5.28	(1.13)	5.32	(0.97)	0.18	0.67	0.00
Evaluation	5.08	(1.44)	5.14	(1.29)	0.39	0.54	0.00
Positive interaction	4.93	(1.41)	5.00	(1.24)	0.31	0.58	0.00
Negative interaction	3.13	(1.87)	2.81	(1.62)	0.47	0.50	0.00

- Malicious envy vs. Control

Instagram activity	Control		Malicious envy		Statistics		
	M	SD	M	SD	F $(1, 160)$	p	η^2_p
Competition	5.28	(1.13)	5.02	(1.38)	1.80	0.18	0.01
Evaluation	3.13	(1.87)	3.81	(1.51)	4.24	0.00 ***	0.06
Positive interaction	4.93	(1.41)	3.36	(1.68)	46.89	0.00 ***	0.24
Negative interaction	3.13	(1.87)	3.81	(1.51)	9.76	0.00 ***	0.06

Note. * p < .1. **p<.05. ***p<.01

Table 9. Moderation Results of Experiment 3

Variable	Dependent variables			
	Competition	Evaluation	Positive interaction	Negative interaction
- Malicious envy vs. benign envy				
Envy * Status	0.13	-0.36	-0.16	-0.01
	(0.35)	(0.49)	(0.46)	(0.47)
Observations	156	156	156	156
R^2	0.22	0.15	0.33	0.26
F Statistic (1, 145)	4.01	2.57	7.01	5.15
- Benign envy vs. control				
Envy * Status	0.22	0.07**	0.17	0.38
	(0.33)	(0.42)	(0.41)	(0.50)
Observations	158	158	158	158
R^2	0.15	0.15	0.16	0.28
F Statistic (1, 147)	2.57	2.69	2.77	5.92
- Malicious envy vs. control				
Envy * Status	0.41	0.66	0.05	0.39
	(0.37)	(0.48)	(0.48)	(0.52)
Observations	160	160	160	160
R^2	0.21	0.24	0.33	0.21
F Statistic (1, 149)	3.91	4.71	4.49	3.94

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

Table 10. Manipulation checks per condition of Experiment 4

Manipulation variables	High-power		Low-power		Statistics		
	M	SD	M	SD	F (1, 148)	p	η^2_p
Perceived influence	3.79	(1.11)	2.77	(1.09)	32.07	0.00 ***	0.18
Number of posts	2.64	(0.73)	1.39	(0.74)	110.19	0.00 ***	0.43
Number of followers	2.62	(0.69)	1.34	(0.67)	132.87	0.00 ***	0.47

Note. * p < .05. **p<.01. ***p<.001

Table 11. Results of Experiment 4

Variable	Dependent variable:	
	Malicious envy	Benign envy
Envier's status	0.76^{***} (0.18)	0.65^{***} (0.18)
Envied person's status	0.71^{*} (0.37)	1.18^{***} (0.37)
Envier's status * Envied person's status	-0.51^{**} (0.23)	-0.53^{**} (0.23)
Social comparison	-0.23 (0.14)	0.18 (0.14)
Social desirability	0.14 (0.13)	0.26^{*} (0.14)
Attitude toward luxury product	0.08 (0.10)	0.02 (0.10)
Attitude toward Instagram	-0.15 (0.12)	0.28^{**} (0.12)
Gender	-0.09 (0.19)	0.11 (0.19)
Age	0.03 (0.09)	0.15 (0.10)
Ethnicity	-0.02 (0.09)	-0.03 (0.09)
Income	-0.20^{***} (0.07)	-0.05 (0.07)
Education	0.27^{**} (0.11)	-0.10 (0.11)
Constant	-0.08 (0.91)	-0.9 (0.92)
Observations	150	150
R^2	0.72	0.55
Adjusted R^2	0.69	0.50
Residual Std. Error (df = 135)	1.09	1.10
F Statistic (df = 14; 135)	24.92^{***}	11.74^{***}
Note:		$^{*}p<0.1;\ ^{**}p<0.05;\ ^{***}p<0.01$

APPENDICES

APPENDIX 1 - MANIPULATION

Section A: Experiment 2

A1. Envy

Benign envy condition:

Please imagine that both Taylor and you are Instagram users. Most of the images or videos posted by Taylor and you are luxury brand related. Both Taylor and you fell you are influential on Instagram about luxury brand consumption. Last week, Taylor posted several luxury brand-related posts and the number of followers suddenly increased a lot, and you start to feel a little jealous. After you read Taylor's posts carefully, you learned that Taylor worked very hard to post these fascinating images. You notice that you admire Taylor.

Malicious envy scenario:

Imagine that both Taylor and you are Instagram users. Most of the images or videos posted by Taylor and you are luxury brand related. Both Taylor and you fell you are influential on Instagram about luxury brand consumption. Last week, Taylor posted several luxury brand-related posts and the number of followers suddenly increased a lot, and you start to feel a little jealous. After you read Taylor's posts carefully, you learned that these images are copied from another Instagram user. You notice that you begrudge Taylor.

Control envy scenario:

Imagine that Taylor and you are Instagram users. Most of the images or videos posted by Taylor and you are luxury brand related. Both Taylor and you fell you are influential on Instagram about luxury brand consumption. Last week, Taylor posted several luxury brand-related posts

and the number of followers suddenly increased a lot, and you feel that you really like Taylor's posts.

Section B: Experiment 3

B1. Envy

Benign envy condition:

Please imagine that both Alex and you are Instagram users. Most of the images or videos posted by Alex and you are luxury brand related. Last week, Alex posted several luxury brand-related posts and the number of followers suddenly increased a lot, and you start to feel a little jealous. After you read Alex's posts carefully, you learned that all the products Alex posted are genuine. You notice that you admire Alex.

Malicious envy condition:

Please imagine that both Alex and you are Instagram users. Most of the images or videos posted by Alex and you are luxury brand related. Last week, Alex posted several luxury brand-related posts and the number of followers suddenly increased a lot, and you start to feel a little jealous. After you read Taylor's posts carefully, you learned that all the products Alex posted are fake. You notice that you begrudge Alex.

Control envy scenario:

Please imagine that both Alex and you are Instagram users. Most of the images or videos posted by Alex and you are luxury brand related. Last week, Alex posted several luxury brand-related posts and the number of followers suddenly increased a lot, and you feel that you really like Alex's posts.

B2. Envier's status

High-power social media users:

You feel that you are influential on Instagram about luxury brand consumption since you have many luxury brand-related posts and have attracted many followers. Until now, you have 4,855 followers and have uploaded 608 luxury brand-related posts on the platform.

Low-power social media users:

You feel that you are not influential on Instagram about luxury brand consumption since you only have few luxury brand-related posts and have attracted a small number of followers. Until now, you have 120 followers and have uploaded 9 luxury brand-related posts on the platform.

Section C: Experiment 4

C1. Envied person's status

High-power social media users:

Please imagine that Taylor is an Instagram user. Taylor has many posts and most of the images or videos that Taylor has posted on Instagram are luxury brand-related (e.g. luxury bag, luxury watch, luxury shoes, luxury travel, luxury hotel, luxury restaurant, etc.). Taylor has attracted many followers and is pretty influential on Instagram about luxury brand consumption. Up to now, Taylor has 4,900 followers and has uploaded 610 luxury brand-related posts on the platform. Last week, Taylor posted several luxury brand-related posts and the number of followers suddenly increased a lot.

Low-power social media users:

Please imagine that Taylor is an Instagram user. Taylor has only few posts and most of the images or videos that Taylor has posted on Instagram are luxury brand-related (e.g. luxury bag,

luxury watch, luxury shoes, luxury travel, luxury hotel, luxury restaurant, etc.). Taylor has attracted only a small number of followers and is not influential on Instagram about luxury brand consumption. Up to now, Taylor has 126 followers and has uploaded 10 luxury brand-related posts on the platform. Last week, Taylor posted several luxury brand-related posts and the number of followers suddenly increased a lot.

APPENDIX 2 – SCALE MEASUREMENTS

Section A: Dependent variable

A1. Instagram activities

Likert Scale (1=Strongly disagree, 7= Strongly agree)

Self-improvement activities

Competition

(1)   Use products that are interesting and unusual to assist you in establishing a distinctive

image on Instagram.

(2)   Post some rare luxury products that are not easily found.

(3)   Create posts related to luxury product that cannot be duplicated easily.

(4)   Post image/video more frequently.

(5)   Post high-quality image/video.

(6)   Share your moments on Instagram Stories.

(7)   Initiate posts related to an area that you are an expert.

(8)   Post/upload on your profile.

Evaluation

(9)   Browse another user's home

(10)   Check out another user's profile without leaving comments.

Interactive activities

Positive interaction

(11)   Comment on or reply to another user's posts.

(12)   "Like" another user's posts or comments.

(13)   Follow another user on other social media platforms.

Negative interaction

(14)   Share your negative opinion about another user with your friends.

(15)   Unfollow another user on Instagram.

(16)   Laugh at another user on Instagram.

A2. Envy (Crusius and Lange, 2014)

Likert Scale (1=Strongly disagree, 7= Strongly agree)

(1)   I felt malicious envy toward the person about the object

(2)   I wished that the other person would no longer have the object.

(3)   I would have liked to damage the object.

(4)   I felt coldness toward the person.

(5)   I wished that the other person would fail at something.

(6)   I would have liked to hurt the person.

(7)   I had negative thoughts about the person.

(8)   I would have liked to take the object away from the person.

(9)   I felt benign envy toward the person about the object.

(10)   I admired the person.

(11)   I wanted to try harder to obtain the object as well.

(12)   I felt inspired to also attain the object.

(13)   I wished to have the object too.

(14)   I considered the person to be likable.

(15)   I wanted to be like the person

(16) I desired the object.

Section B: Mediators

B1. Self-efficacy measure: (Iglesias et al., 2011)

Likert Scale (1=Strongly disagree, 4= Strongly agree)

(1) I feel confident that I am an expert in luxury brands.

(2) I feel confident that I know more about luxury brands than my peers.

(3) I feel confident that my knowledge of luxury brands is highly regarded by others.

(4) I feel confident that others look up to me because of my expertise in luxury brands.

(5) I feel confident that I am able to tell if a luxury product is genuine or not after I take a

look at it.

(6) For a certain luxury brand, I am confident that I know who purchases it.

(7) When I purchase a luxury branded product, I am certain the product will make a good

impression on others.

(8) I feel confident that I know what luxury branded products make good impressions on

others.

(9) I believe that I own more luxury branded products than my peers.

(10) I believe that I buy the luxury branded product more often than my peers.

(11) I believe that I spend more on the luxury branded product than my peers.

(12) I am confident that most products that I use are luxury brands.

(13) I feel confident that I am able to afford the most luxury products I am interested in.

B2. General belongingness scale (GBS) (Malone et al., 2012)

<u>Likert Scale (1=Strongly disagree, 7= Strongly agree)</u>

Acceptance/Inclusion

(1)   When I am with other people, I feel included.

(2)   I have close bonds with family and friends.

(3)   I feel accepted by others.

(4)   I have a sense of belonging.

(5)   I have a place at the table with others.

(6)   I feel connected with others.

Rejection/Exclusion

(7)   I feel like an outsider.

(8)   I feel as if people do not care about me.

(9)   Because I do not belong, I feel distant during the holiday season.

(10)   I feel isolated from the rest of the world.

(11)   When I am with other people, I feel like a stranger.

(12)   Friends and family do not involve me in their plans.

Section C: Control variable

C1. The Benign and Malicious Envy Scale (BeMaS) (Lange and Crusius, 2015)

<u>Likert Scale (1=Strongly disagree, 7= Strongly agree)</u>

(1)   When I envy others, I focus on how I can become equally successful in the future.

(2)   If I notice that another person is better than me, I try to improve myself.

(3)   Envying others motivates me to accomplish my goals.

(4)   I strive to reach other people's superior achievements.

(5)   If someone has superior qualities, achievements, or possessions, I try to attain them for myself.

(6)   I wish that superior people lose their advantage.

(7)   If other people have something that I want for myself, I wish to take it away from them.

(8)   I feel ill will toward people I envy.

(9)   Envious feelings cause me to dislike the other person/

(10)   Seeing other people's achievements makes me resent them.

C2. Social comparison scale (Gibbons and Buunk, 1999)

Likert Scale (1=Strongly disagree, 7= Strongly agree)

(1)   I often compare how my loved ones (boy or girlfriend, family members, etc.) are doing with how others are doing.

(2)   I always pay a lot of attention to how I do things compared with how others do things.

(3)   If I want to find out how well I have done something, I compare what I have done with how others have done.

(4)   I often compare how I am doing socially (e.g., social skills, popularity) with other people.

(5)   I often like to talk with others about mutual opinions and experiences.

(6)   I often try to find out what others think who face similar problems as I face.

(7)   I always like to know what others in a similar situation would do.

(8)   If I want to like more about something, I try to find out what others think about it.

C3. Social desirability scale (Bearden et al., 1989)

Likert Scale (1=Strongly disagree, 7= Strongly agree)

(1)   I often consult other people to help choose the best alternative available from a product class.

(2)   If I want to be like someone, I often try to buy the same brands that they buy.

(3)   It is important that others like the products and brands I buy.

(4)   To make sure I buy the right product or brand, I often observe what others are buying and using.

(5)   I rarely purchase the latest fashion styles until I am sure my friends approve of them.

(6)   I often identify with other people by purchasing the same products and brands they purchase.

(7)   If I have little experience with a product, I often ask my friends about the product.

(8)   When buying products, I generally purchase those brands that I think others will approve of.

(9)   I like to know what brands and products make good impressions on others.

(10)   I frequently gather information from friends or family about a product before I buy.

(11)   If other people can see me using a product, I often purchase the brand they expect me to buy

(12)   I achieve a sense of belonging by purchasing the same products and brands that others purchase.

Section D: Demographic Information

D1. Your gender is:

(1) Female   (2) Male   (3) Other

D2. Your ethnicity is:

(1) African American   (2) Caucasian   (3) Hispanic

(4) Asian/Pacific Islander   (5) Native American   (6) Other

D3. Your income range is:

(1) Less than $20,000   (2) 20,000 to $34,999   (3) $35,000 to $49,999

(4) $50,000 to $74,999   (5) $75,000 to $99,999   (6) Over $100,000

D4. What is the highest level of formal education you have completed?

(1) Less than high school   (2) High school diploma or GED

(3) Some college, no degree   (4) Associate degree or other two-year degree

(5) Bachelor's degree   (6) Graduate degree

D5. What is your current age?

(1) <18   (2) 18-24

(3) 25-29   (4) 30-34

(5) 35-44   (6) 45-54

(7) 55-64   (8) 65 and over

ESSAY 2: BUYING AUTHENTIC LUXURY PRODUCTS OR COUNTERFEITS: THE ROLE OF BENIGN AND MALICIOUS ENVY

ABSTRACT

Counterfeited luxury products have been very popular in the global market in recent years. Particularly, the increasing use of counterfeit goods has become a growing concern in the luxury industry worldwide. Although many studies have been conducted to explore the motives behind counterfeited luxury product purchase, the social driver of purchasing counterfeited luxuries is not clear. Based on social comparison theory (SCT), this research explored the relationships between envy and consumers' purchasing intentions towards both counterfeit luxury products and authentic luxury products. Moreover, this research examined the mediating effect of achievement motives (hope for success versus fear of failure) and the moderating effect of counterfeit popularity and relative social status on these relationships. To test the hypothesized relationships, a series of three experiments were conducted. Experiment 1 used limited-edition Nike shoes to elicit envy and found that malicious envious people are more likely to purchase authentic luxury products than benign envious people. Even though the mediator "achievement motives" was tested in this experiment, the results were not significant. Using female participants and Louis Vuitton bag as the research context, Experiment 2 found that malicious envious people are more likely to purchase counterfeit luxury products than benign envious people and the relationship is mediated by fear of failure motive. Experiment 2 further tested the moderator "counterfeit popularity" and found that malicious envious consumers' intentions towards counterfeit become stronger when the counterfeit is popular than when the counterfeit is not popular. Finally, in experiment 3, a high-end luxury product "ROLEX watch" was used as the research context. Results demonstrated that benign envious people are more likely to purchase counterfeit than malicious envious people and hope for success motive mediates the

relationship between benign envy and authentic luxury product purchase intention. The

moderator "relative social status" was also tested, but the results were not significant.

Keywords*:* benign envy, malicious envy, counterfeit luxury product, hope for success, fear of

failure, purchasing intention

INTRODUCTION

Counterfeiting has increasingly become an economic and social problem worldwide (Grossman and Shapiro, 1988a). James Moody, the former chief of FBI (Federal Bureau of Investigation) Organized Crime Division, said that "Counterfeiting will become the crime of the 21st century" (Maia et al., 2014). For now, counterfeits exist in a broad range of economic segments, from pharmaceuticals to electric appliances to leatherwear (Wilcox et al., 2009). Although many countries have pursued legal battles to fight against counterfeiting, counterfeit consumption is not decreasing, but increasing. It is estimated that in 2011, nearly 5% to 7% of products are counterfeits globally and the volume of counterfeit transactions is an incredible $600 billion per year (Ahuvia et al., 2013). According to the Global Brand Counterfeiting Report 2018, the figure nearly doubled in 2017. About $1.2 trillion is lost losses across all industries, with counterfeiting accounting for losses of $98 billion in luxury consumer brands. This suggests that the anticounterfeiting battle is especially fierce in the luxury industry (Wilcox et al. 2009). Counterfeiting leads to lower sales and the decline of brand equity (Commuri, 2009). Considering the large scale and significant effects associated with counterfeiting, how to encourage consumers to buy authentic products has become an important but challenging issue.

The increasing demand for counterfeits lies in the development of the luxury industry (Wiedmann et al., 2011). Given their high price and exclusive nature, luxury brands are accessible to only a small number of consumers, and most consumers are not able to afford an authentic luxury brand (Nueno and Queelch, 1998). However, more and more consumers from the lower-class have desires for luxury brands because they are increasingly concerned with status and want to edge themselves into the higher social class. Since many consumers cannot afford authentic luxury brands, some of them turn to counterfeit luxury products, possessing the

high brand value of genuine luxury brands illegally. Wilcox et al. (2009) found that most consumers purchase counterfeits consciously.

Given the significance of the topic, numerous studies have been conducted to examine counterfeit buying and consumption. Previous studies have focused on the antecedents of counterfeit consumption, including price (Tan, 2002; Commuri, 2009), quality (Jenner and Artun, 2005), social influence (Hoon Ang et al. 2001; Wang et al., 2005), and demographics (Chiou et al., 2005; Tom et al., 2005). However, the social causes of counterfeit luxury consumption have been largely ignored. The conspicuous nature of authentic luxury consumption implies the important role of social comparison (Zhang and Kim, 2013). Particularly, it is expected that envy, which is closely related to social comparison, plays a critical role in stimulating consumers' counterfeit purchase behaviors. However, the envy mechanism underlying counterfeit luxury consumption is still unclear. To fill out the research gap, the current research focuses on the potential influence of envy and social comparison on stimulating consumers' counterfeit purchase intentions.

Most of the psychological researchers (Van de Ven et al., 2011; Lange and Crisius, 2015) have reached an agreement that envy can be categorized into benign envy and malicious envy depending on different motivations regarding how to solve their perceived discrepancy with the envied person. Benign envious people want to improve themselves (e.g., "I am confident I can achieve the goal"), while malicious envious people tend to destroy the status of the envied person (e.g., "I will feel better if the person loses the advantage") (Van de Ven et al., 2009). The current research explores under what type of envy, consumers would like to purchase counterfeit luxury products. Moreover, this study examines the potential mediating effect of achievement motive on the relationships between envy and purchase of counterfeited products by using three different

research contexts (limited-edition Nike shoes, Louis Vuitton bag, and ROLEX watch). In addition, because envy is closely related to social comparison (Lin et al., 2018), the intergroup comparison could potentially link to envy. We also examine the moderating effect of two variables (counterfeit popularity and relative social status) on the relationship between envy and counterfeit purchasing.

This research makes several important contributions. First, the current research contributes to the counterfeit research by introducing social comparison theory (SCT) into the area. While it has been widely accepted that consumers buy counterfeit luxury goods to build their social self-images and self-identities (Perez et al., 2010), there is a lack of a theoretical framework to explain the social comparison mechanism underlying counterfeit purchases. Second, this study provides an alternative explanation regarding why many consumers tend to purchase counterfeit luxury product. We identify envy as a social cause that can directly lead to counterfeit luxury purchase intention. As suggested in previous research, envy is a kind of stimulus that can affect how consumers evaluate their buying decisions toward different types of products (Van de Ven et al., 2011). Our research is a pioneer study to treat envy as an antecedent that affects consumers' purchase decisions toward a counterfeit luxury product versus an authentic luxury product. Third, this study sheds new light on the relationship between envy and counterfeit purchase by unveiling the boundary conditions of the relationship. Specifically, this study examines the moderating effects of counterfeit popularity and relative social status on the relationship between envy and counterfeit purchase intentions.

LITERATURE REVIEW

Defining counterfeits

Counterfeited products refer to replicas of those that are made to resemble authentic products but with lower prices and lower quality (Lai and Zaichkowsky, 1999). Counterfeiting refers to the act of producing or selling a product containing an intentional and calculated reproduction of a genuine trademark. A counterfeit mark is identical to or substantially indistinguishable from a genuine mark (McCarthy, 2004). In essence, counterfeiting is an unauthorized behavior because it illegally copies a trademark, patent, or copyrighted goods (Bamossy and Scammon, 1985). Along with the prodigious growth of luxury product consumption worldwide, counterfeit purchasing has also increased significantly (Wiedmann et al., 2011). The counterfeiting problem has increasingly become a concern for researchers, consumers, companies, and policymakers internationally (Dividson et al., 2017).

Categories of counterfeiting

Counterfeiting is classified into two types based on consumers' perception: deceptive counterfeiting and non-deceptive counterfeiting (Wilcox et al., 2009). The underlying difference behind these two is whether consumers are aware that the product they are buying is a counterfeit. On the one hand, deceptive counterfeiting means that people are not aware that they are present in the counterfeit market but think the product they are buying has its brand value. On the other hand, non-deceptive counterfeiting means that people are aware that the product they choose is not an authentic one. When we talk about counterfeited luxury products in this paper, we refer to non-deceptive counterfeiting because most of the time consumers can easily find out the difference between authentic luxury products and counterfeit luxury products based on price, quality, and the buying channel (Wilcox et al., 2009).

Risks associated with counterfeit consumption

Although the risks of producing counterfeits are reflected in many dimensions (such as the brand relationship), the production of counterfeits maintains an upward trend because of lacking relevant regulation and high-profit margin (Grossman and Shapiroa, 1988a).

Based on the definition of counterfeiting (McCarthy, 2004), risks associated with counterfeit consumption mainly reflect in the following aspects. First, compared with authentic products, counterfeits put more potential risks on consumers because counterfeits are made and sold illegally (Bamossy and Scammon, 1985). For example, counterfeit goods do not provide consumers with warranty service. If the counterfeit is damaged after purchase, the consumer cannot get any compensation. Second, counterfeit products are not as good as authentic luxury products in terms of quality. However, with the increasing demand for counterfeit over the past decade, the quality of counterfeits has largely increased. Lisa Maria Turunen and Laaksonen (2011) classified luxury – counterfeit continuum in five categories: Non-brand product; Cheap, lower-quality counterfeit; Expensive, quality counterfeit; Affordable, authentic luxury; Expensive, authentic luxury. Expensive, quality counterfeit products possess not only the design of authentic luxury but also begin to possess the characteristics of luxurious quality and durability. Third, counterfeits cannot be independent of the original brand with high value because the production of counterfeits cannot be separated from the important factors of the original genuine products (Eisend and Schuchert-Gu¨ler, 2006).

Antecedents of counterfeit consumption

Existing literature suggests that antecedents of counterfeit consumption reflect on many dimensions (Moores and Dhillon, 2000; Hoon Ang et al., 2001; Chuchinprakarn, 2003; Moores and Dhaliwal, 2004; Jenner and Artun, 2005; Wang et al., 2005). First, *economic benefits*. The

preponderant antecedent of counterfeit consumption is the considerable price difference between counterfeit and authentic luxury products (Moores and Dhaliwal, 2004). Due to their lower prices, counterfeits are considered attractive, even for customers who wanted to buy an authentic product at first (Tom et al., 1998). Also, the perceived quality difference between counterfeit and genuine brands (Jenner and Artun, 2005) can affect consumers' purchase intentions. Second, *personal factors*. Personal factors include many aspects, such as brand perception (Wilcox et al., 2009), consumers' attitude toward counterfeits (Tom et al., 1998; Hoon Ang et al., 2001; Chiou et al, 2005; Penz and Stöttinger, 2005; Wang et al., 2005), consumers' purchase experiences (Tan, 2002; Yoo and Lee, 2005; Yoo and Lee, 2012), and moral beliefs (Tan, 2002; Moores and Chang, 2006; Wilcox et al., 2009). Third, *demographics*. A number of counterfeit researchers (Hoon Ang et al., 2001; Tan, 2002; Wang et al., 2005) suggest that demographics (e.g., age, gender, income, education) are closely related to counterfeit purchasing. Fourth, *social influence*. Institutional factors, such as legal institutions, contribute to the rates of counterfeiting for not only an individual country but also across nations (Lee and Yoo, 2009). Counterfeit consumption is also associated with several other factors, such as country-of-origin of the original product (Chakraborty et al., 1997).

Theoretical frameworks used in counterfeiting research

Two theories have been used in counterfeit research: Theory of Planned Behavior (Ajzen, 1991) and functional theories of attitudes (Shavitt, 1989). *Theory of Planned Behavior (TPB)* proposes that individuals' intentions to perform some behavior can be predicted by their attitudes toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). Specifically, attitudes toward the behavior refer to how the person evaluates the possible outcomes of the behavior, subjective norms refer to normative beliefs that are related to the

motivation to obey these rules, and perceived behavioral control refers to existing abilities to facilitate the process to achieve the expectation (Cheng et al., 2011). Therefore, the Theory of Planned Behavior (TPB) (Ajzen, 1991) suggests that a favorable attitude, beneficial subjective norm, and the confidence to act will increase the motivation to facilitate the process. Based on TPB (Ajzen, 1991), Penz and Stöttinger (2005) surveyed 1040 Austrian consumers who are either counterfeit buyers or non-counterfeit buyers to study their demands toward counterfeit products. The authors concluded that perceived behavioral control has the strongest influence on consumers' intentions to buy counterfeits. Later, Cheng et al. (2011) also employed the Theory of Planned Behavior (TPB) (Ajzen, 1991) to examine factors influencing consumers' counterfeit purchase intention.

Functional theories of attitudes (Shavitt, 1989) suggest that attitudes can serve as either social-adjustive function or value-adjustive function. These two dimensions are related to self-presentation and self-expression, respectively. Based on Functional theories of attitudes, Wilcox et al. (2009) found that counterfeit purchasing is driven by social-adjustive function rather than value-adjustive function. When the social-adjustive function is salient, consumers will be more sensitive to product-related information (such as product image). One explanation for this result is the need for social acceptance surrounding counterfeits. Projecting product information helps consumers to achieve social projective. Therefore, social-adjustive attitudes help to stimulate consumer's desire to purchase counterfeit goods in terms of the overt logo of counterfeit luxury goods.

Research Gap

Prior research has identified many factors that lead to a counterfeit purchase. These factors can be classified into four dimensions (economic benefits, personal factors, demographics, and

social influence). However, no existing research has linked social factors to counterfeit purchases. Moreover, there is still a lack of a solid theoretical explanation for consumers' counterfeit purchasing behaviors. In order to fill this gap, based on the Social Comparison Theory (SCT) and previous envy research, this study sets to develop a theoretical framework to examine how envy influences consumers' counterfeit purchases.

HYPOTHESIS DEVELOPMET

Envy is a very common emotion that most people may possess in certain situations. Envy is an emotion that can predict the behavioral outcome of the envier. People tend to evaluate themselves based on how they compare themselves with the others, either consciously or unconsciously, to construct their self-identities and make personal decisions (Festinger, 1954). Envy includes both the envier, the individual who envies the other, and the envied, the individual who the envier compares with (D'Arms, 2009). A most common definition of envy is that it is a negative emotion that "arises when a person lacks another's superior quality, achievement, or possession and either desires it or wishes that the other lacked it" (Parrott and Simth, 1993, p. 906). In 2007, Simth and Parrott further defined envy as "an unpleasant, often painful emotion characterized by feelings of inferiority, hostility, and resentment caused by an awareness of a desired attribute enjoyed by another person or group of persons" (p. 46). Later, a broader definition of envy provided by the Merriam-Webster dictionary (2009) is the "painful or resentful awareness of an advantage enjoyed by another joined with a desire to possess the same advantage." Although researchers have defined envy from different perspectives, these definitions have reached a consensus regarding the nature of envy. Firstly, envy is an unpleasant emotion. Secondly, envy stimulates consumer's desire to have an object possessed by the superior. Lastly and most importantly, envy is rooted in social comparison (Festinger, 1954;

Silver and Sabini, 1978; Sheeran et al., 1995; Milovic and Dingus, 2014; Lin et al., 2018). In

other words, envy is generated from social comparisons.

Types of Envy

The outcome of envy depends on what type of envy the envier possesses. Before the 21st

century, when envy was discussed, scholars only looked at one dimension of envy (Farber, 1961;

Daniels, 1964; Schoeck, 1969; Foster, 1972). Envy has been seen as a "sin" (Silver and Sabini,

1978), a hostile emotion (Smith, 1991), and an unpleasant emotion (Simth et al., 1998). The dark

side of envy can be a cause of schadenfreude (Smith et al., 1996), and a trigger for destructive

behavior, such as frustration, low self-esteem, and nervousness (Schoeck, 1969; Kreisler, 1997).

However, recent research identified envy as a multifaceted construct (Smith et al., 1999; Smith

and Kim, 2007; Van de Ven et al., 2009; Van de Ven et al., 2011; Belk, 2011). Envy can be

separated into two categories, benign envy and malicious envy, depending on the different

appraisal of deservedness, motivational dynamics, and controllability (Van de Ven et al., 2012).

Although both types of envy are considered equally powerful, the motivation for the envier to

deal with these two types of envy is different. First, a sense of injustice is a core element in envy

(Smith et al., 1996). What types of envy is elicited is affected by the feeling of injustice level

(Belk, 2011). A high level of injustice is related to malicious envy, and a low level of injustice is

related to benign envy. In other words, experiencing benign envy or malicious envy will affect

how the envier evaluates the envied. Benign envy evaluates the possession of the envied as

deserved, whereas malicious envy evaluates the possession of the envied as not deserved (Van de

Ven et al., 2011). Second, these two types of envy should relate to different behaviors regarding

how envious people set their goals. Specifically, when experiencing benign envy, enviers tend to

improve their current position because they set a proper goal to catch up with the envied (Van de

Ven et al., 2009; Lange and Crusius, 2014). For example, envy is a productive driver to stimulate

people's desires for achieving products (Van de Ven et al., 2009) and promoting risk-taking

behavior (Lahno and Serra-Garcia, 2015). On the contrary, when experiencing malicious envy,

the envier tends to decrease or denigrate the advantage of the envied person to bring balance to

life (Van de Ven et al., 2009). Although envy is normally related to negative emotions, such as

pain and resentment, it can also lead to pleasure feeling (Smith et al., 1996). If the envied person

encounters adversity or frustration, the envier may experience schadenfreude when the envied

person is both self-relevant and advantaged (Smith et al., 1996; Van de Ven et al., 2015), leading

to devastating and hostile behavior (Duffy et al., 2012). Third, perceived controllability can

determine which type of envy is triggered. Benign envy is associated with appraisal of high

controllability, whereas malicious envy is associated with appraisal of low controllability (Van

de Ven et al., 2012).

Belk (2011) separated envy into three categories (benign envy, malicious envy, and mixed-

motive envy) based on eight dimensions of envy's characteristics (such as emotion toward the

other, goal, and relevant moral discourse). Mixed motive envy lies between the two types of

envy that have extreme features. Specifically, when the target of mixed-motive envy is specified,

the envier may think they are more deserving. But the envier still shows admiration for the

envied person. Therefore, the inclination of the mixed motives is to both level down the envied

person and achieve the desired object (Belk, 2011).

Social Comparison Mechanism

In this research, we set out to examine the role played by envy in the counterfeit purchase.

To achieve this research goal, we develop our theoretical framework based on social comparison

theory (SCT, Festinger, 1954). SCT (Festinger, 1954) has been widely used to explain how

people compare themselves (opinions and abilities) with others in order to find out their body images and define their social identities. According to Social Comparison Theory (Festinger, 1954), individuals often evaluate their own performance by comparing their own positions, attributes, and possessions with those of others. Individuals have to evaluate themselves and compare with others accurately to ensure function effectively (Jones and Gerard, 1967). Festinger (1954) also proposes that similar social comparison poses pressure on people in terms of pushing individuals to compete with others who have similar attributes. Envy is rooted in the nature of social comparison (Alicke and Zell, 2008). Individuals can be relieved from the envious emotional state by narrowing down the difference between them and others (D' Arms, 2009). Based on Social Comparison Theory (Festinger, 1954), we evaluate the differential effects of two different types of envy (benign envy vs. malicious envy) on counterfeit purchases. Moreover, we hypothesize that the achievement motives (hope for success and fair of failure) mediate the relationships between envy and counterfeit purchase. Lastly, we hypothesize that the relationships between envy and counterfeit purchases are moderated by counterfeit popularity and relative social status.

The relationships between different types of envy and counterfeit luxury purchase

When the envied person possesses an authentic luxury product, we propose that the benign envier and the malicious envier will have different purchase intentions toward the authentic luxury product and a counterfeited luxury product. For benign envious people, purchasing a counterfeit cannot help them solve the perceived discrepancy. Thus, they are more likely to pay more to purchase an authentic product that elicits envy (Van de Ven et al., 2011). In other words, owning an authentic luxury product rather than a counterfeited product helps the envier show the ability to edge herself/himself into the higher social class. The target of benign envier is the

product. The envier is willing to pay more to get the authentic product that elicits his/her envy (Van de Ven et al., 2011). For malicious envier, the target is to lower the envied person's status (Lange and Crusius, 2015). When the envied person has an authentic luxury product, a malicious envier may tend to purchase a counterfeited luxury product because s/he hopes to get rid of negative emotion in the short term and does not consider any possible consequence (Lange et al., 2018). When the authentic luxury product cannot be afforded in the short term, purchasing a counterfeit luxury product as a substitute is an economical way. Turning to a related, but the different product can help the malicious envier get relived from the envy state (Van de Ven et al., 2011).

Although a malicious envier also works to improve his/her status, this malicious person is more unscrupulous and impulsive (Lange et al., 2018). The malicious envier may tend to impair the envied person's success by denigrating the envied person's advantage (Crusius and Lange, 2014; Lange and Crusius, 2015). Malicious envier may also devalue his/her desired product. Similarities between a counterfeited luxury product and an authentic luxury product may cause malicious envious people to believe that the luxury product is not that much more worthy. Considering about practicality and accessibility, the person who has malicious envy is more likely to choose a counterfeited luxury product instead of an authentic luxury product.

H1a: A benign envier is more likely to purchase an authentic luxury product than a malicious envier.

H1b: A benign envier is less likely to purchase a counterfeit than a benign envier.

The mediating effects of achievement motives

The achievement motive is defined as ''a strong affective association, characterized by an anticipatory goal reaction, and based on the past association of certain cues with pleasure and pain'' (McClelland, 1955, p. 226). The achievement motives include two dimensions: hope for success (HS) and fear of failure (FF). Both the hope for success (HS) motive and fear of failure (FF) motive are associated with an evaluation standard (Lange and Crusius, 2015). For individuals, although these two dimensions can co-exist, which motive is more salient depends on how a person evaluates his/her ability to fulfill the goal (Atkinson, 1957). Hope for success (HS) means that individuals are positive about the upcoming challenge and have the capacity to take actions to achieve the challenging goal; whereas fear of failure (FF) means that an individual will not take the risk of uncertainty in order to avoid the unpleasant feeling of possible failure.

The activation of the achievement motives depends on the individual's willingness and capability to perform the process to achieve success (Atkinson, 1964). We hypothesize that the achievement motives (hope for success vs. fear of failure) will mediate the relationship between envy and individuals' counterfeit or authentic product purchasing. Specifically, hope for success mediates the relationship between envy and counterfeit purchase, while fear of failure mediates the relationship between envy and counterfeit purchase.

Although the benign envier and the malicious envier have different objectives, both of them want to decrease the unpleasant feeling of envy. Therefore, decreasing the sense of envy is the evaluation standard shared by both types of envious people. However, as suggested by the envy theories, the benign envier and the malicious envier have different goals (Van de Ven et al., 2011).

On the one hand, the benign envious people set their motivational goals to increase personal possession. They are more confident about future outcomes and intend to narrow down the gap between the envied person and the envier by acquiring the object (Van de Ven et al., 2011). The benign envier believes in his/her power to control the expected standard and achieve the goal. Given that the benign envious people perceive themselves as capable of achieving the desired object owned by the envied person and intend to obtain the object successfully, hope for success (HS) motive explains the relationship between envy and counterfeit purchase.

On the other hand, malicious envious people do not believe in their own ability to achieve success because they have low control over future outcomes (Van de Ven et al., 2011). Both the nature of malicious envy and fear of failure motive are inherently grounded in avoidance behavior. Malicious envious people fear that they have no means to level down the status of the envied person, which may lead to their fear of failure. One distinctive characteristic of a counterfeit luxury good is its social-adjustive function (Wilcox et al., 2009). The outside appearance of counterfeited luxury products is similar to authentic luxury products. Taking an alternative approach to buy a counterfeited luxury product meets the goal of malicious envious people. In other words, fear of failure (FF) motives the malicious envious people to purchase counterfeit products.

H2a: Hope for success mediates the relationship between envy and authentic purchase intention.

H2b: Fear of failure mediates the relationship between envy and counterfeit purchase intention.

The moderating effect of counterfeit popularity

Drawing on previous studies (Bearden and Etzel, 1982), consumers' perceptions of their reference groups could affect their product buying decisions. The values, norms, and attitudes of the reference group could significantly affect consumers' buying behavior (Schiffman and Kanuk, 2007). Our research suggests that the popularity of counterfeit in society could strengthen or weaken the relationships between envy and consumers' counterfeit buying intentions.

As we hypothesized above, a benign envier is more likely to buy an authentic luxury product than a malicious envier. However, under certain conditions, this hypothesize may not be the case. For example, for a malicious envier, when counterfeit luxury products are popular in life, their purchasing intention towards an authentic luxury product might become stronger. Malicious envious people possess hostile attitudes toward the envied person, and their final goal is to level down the envied target (Lange and Crusius, 2015). The goal of a malicious envier is not necessary to achieve the object. As long as the psychological gap is bridged, the malicious envier will be satisfied. When the counterfeit is prevalent, a malicious envier may believe that purchasing counterfeit can easily be caught. Counterfeit owners do not want other people to doubt the authenticity of the product they use because most of them hope not to be caught (Perez et al., 2010). Thus, counterfeit popularity could drive a malicious envier to buy an authentic product instead of a counterfeit one. However, for a benign envier, the ultimate objective is to obtain the same product owned by the envied person. Therefore, s/he uses the envied person as the comparison target, and s/he will not change his/her purchasing intention if counterfeit is popular or unpopular. For the same reason, a benign envier will not be affected by counterfeit popularity and will stick to purchasing an authentic luxury product. Therefore, counterfeit

popularity weakens the relationship between envy and authentic luxury product purchasing intention.

We also proposed that a malicious envier is more likely to buy a counterfeit than a benign envier. As discussed above, malicious envious people are more likely to purchase counterfeits because they tend to devalue the genuine luxury products and are easily attracted by counterfeits with similar attributes. When counterfeit is popular in life, malicious envious people are more convinced that authentic luxury products are not worth buying. The possibility that malicious envious people will buy counterfeits will increase. However, under the same situation, benign envious people will stick to buy exactly the same product as the envied person, benign envious people's counterfeit purchasing intention will not be largely affected envy counterfeit is popular. Therefore, counterfeit popularity strengthens the relationship between envy and counterfeit luxury product purchasing intention.

H3a: Counterfeit popularity weakens the relationships between envy and authentic purchasing intentions.

H3b: Counterfeit popularity strengthens the relationships between envy and counterfeit purchasing intention.

The moderating effect of relative social status

Envy plays a critical role in status purchasing (Anderson et al., 2015). Benign envious people and malicious envious people take divergent approaches to regulate status (Crusius and Lange, 2017). The current research further proposes that the relationships between envy (benign envy versus malicious envy) and product purchasing intentions (both authentic luxury product

and counterfeit luxury product) are contingent on the social status comparison. Social status comparison is a result of the social comparison process. Social Comparison Theory (SCT) demonstrates that social comparison process includes the motivation to affiliate with the others and the motivation to compare themselves with the others (Taylor and Lobel, 1989).

Benign envious people feel confident about their ability to achieve the same object as the envied person. When the envied person possesses an authentic luxury product, they will stick to buy the authentic luxury product. However, the extent to which they are willing to pay a price premium to purchase a genuine luxury product is determined by their perceived social status gap. When an envier believes his/her social status is lower than the envied, s/he might have a higher intention to buy a genuine luxury product to reflect his/her higher social status (Yoo and Lee, 2009).

For malicious envier, when the envied person has an authentic luxury product, perceived risk and the individual's need for social approval are essential determinants of his/her counterfeit purchase intentions (Witt and Bruce, 1972). As discussed above, malicious envious people are more likely to purchase counterfeits because they tend to devalue the genuine luxury products and tend to be attracted by counterfeits with similar attributes. This relationship might be weakened when the envious people evaluate themselves as having a higher social status compared with the envied people. For malicious envious people, they believe themselves have low control over future outcomes (Lange and Crusius, 2015). Thus, they are less likely to set high goals to buy an authentic luxury product that they cannot afford. However, when malicious envious people have a higher social status compared to the envied people, the extent to which they feel incapacity will decrease. Thereby, for malicious envious people, the motivation for purchasing counterfeit luxury products will also be reduced.

H4a: The relative social status of an envier compared to the envied person strengthens the relationships between envy and individuals' authentic purchasing intentions.

H4b: The relative social status of an envier compared to the envied person weakens the relationships between envy and individuals' counterfeit purchasing intention.

METHODOLOGY

OVERVIEW OF EXPERIMENTS

The current research intends to examine the effect of envy on consumer's intention to purchase either a counterfeit luxury product or an authentic luxury product. Because the price of luxury brands is varied in the market, we tested our hypotheses in a series of three experiments using different research contexts (limited-edition Nike shoes, Louis Vuitton bag, and ROLEX watch) and different samples. The purpose of Experiment 1 was to examine the relationship between the type of envy and consumer's purchasing intention (hypotheses 1a and 1b), along with the mediating effect of achievements (hope for success vs. fear of failure) (hypotheses 2a and 2b). This experiment used student sample and the limited-edition Nike shoes as the research context. Next, in experiment 2, except testing the main effects and mediating effect by using a different research context (Louis Vuitton bag) and a different sample (only female consumers), this experiments also examined the moderating effect of the counterfeit popularity (popular versus unpopular) (hypotheses 3a and 3b). Finally, in experiment 3, we studied the effect of envy on counterfeit purchasing intention by using a high-end luxury product (ROLEX watch). The moderating effect of the second moderator "relative social status" (higher social status and lower social status) on the relationships between envy and consumer's purchasing intention were also tested (hypotheses 4a and 4b).

EXPERIMENT 1

This is a scenario-based between-subject experiment. The goal of this experiment is to test whether different types of envy (benign envy versus malicious envy) influence consumers' purchasing intentions towards authentic luxury products and counterfeit luxury products (H1 and H1b). Moreover, we predicted that hope for success mediates the relationship between envy and purchasing intention of luxury brands and fear of failure mediates the relationship between envy and purchasing intention for counterfeited products (H2a and H2b).

Participants and Procedures

One hundred and forty-three students from a medium-sized university in the eastern United States participated in the experiment in exchange for course credit. Of these participants, eighteen participants who failed the attention check questions were removed from the data set. Finally, the final sample size is one hundred and twenty-five. Among these participants, 71% are female, 65% aged from 18 to 24 years old, 58% are Caucasian, and 45% have an annual income lower than $20,000. Participants were randomly assigned into three conditions (benign envy vs. malicious envy vs. control). All respondents were told that the experiment is to examine the influence of emotions on counterfeit purchasing.

Manipulation

All participants were randomly assigned to benign envy (n = 47), malicious envy (n = 43), or control condition (n = 35). Participants were asked to read a scenario about a pair of authentic limited-edition Nike shoes. We used the limited-edition Nike shoes as the research context because we conducted interviews with students and found that Nike is one of the most frequently mentioned brands that are likely to elicit envy among students. In the scenario, participants were instructed to imagine that they are in a situation in which one of his/her friends just bought a pair

of authentic limited-edition Nike shoes and wore them to the dinner and this friend told you that this is the newest edition designed by a famous luxury brand designer. Then different types of envy were manipulated. The manipulation of envy has followed the procedure developed by Van de Ven et al. (2009, 2011). The participants were asked to imagine feeling jealous and some admiration for their friend (benign envy condition), to imagine feeling jealous and begrudging for their friend (the malicious envy condition), or just to imagine that they really liked the product (control condition). We further manipulated benign envy and malicious envy by manipulating whether the product is deserved (the benign envy condition) or underserved (the malicious envy condition). In the benign envy condition, we included the information that "*your friend worked very hard to earn the money to buy this pair of authentic limited-edition Nike shoes.*" In the malicious envy condition, participants read that "*this is just one pair of authentic luxury shoes that were given to your friend by your friend's father.*" In the control condition, participants read that "*you feel that you really like this pair of authentic limited-edition Nike shoes.*" After reading the scenario, participants were asked to answer some questions regarding their corresponding purchase intentions toward both the counterfeit luxury product and the authentic luxury product.

Measures

Dependent variable:

Purchase intention. We used two sets of questions to assess participants' purchasing intentions. First, we used one scale to measure their purchasing intentions toward counterfeit luxury products and another scale to measure their purchasing intentions toward authentic luxury products. Purchasing intentions were measured by using a modified 4-items, 7-point scale (anchored at 1=" strongly disagree" and 7=" strongly agree") adapted from Dodds, Monroe, and

Grewal (1991). Second, as an alternative approach, respondents were asked to choose a type of product they are most likely to buy from a list of five product categories (*Please imagine that you are the person in the scenario and indicate below which type of product you want to buy the most?* "The same limited-edition Nike shoes", "A higher price authentic limited-edition Nike shoes", "A lower price limited-edition Nike shoes", "A realistic counterfeited limited-edition Nike shoes", and "A lower quality counterfeited limited-edition Nike shoes.")

Mediator:

Achievement motives (hope for success versus fair of failure). Achievement motives were measured based on a scale developed by Lang and Fries (2006). It measures achievement motives with a nine-item, seven-point scale (1 = "strongly agree," and 7 = "strongly disagree"). The scale includes five items to measure hope for success (e.g., "I like the situation, in which I can find how successful I am") and four items (e.g., If I do not understand a problem immediately I start feeling anxious") to measure fear of failure.

Control variables:

Social comparison orientation. We used a scale that was developed by Gibbons and Buunk (1999) to measure social comparison orientation. This scale has been broadly used in envy research to check people's propensity to compare with other people (Van de Ven et al., 2011) (e.g., "If I want to find out how well I have done something, I compare what I have done with how others have done"; "I always like to know what others in a similar situation would do"). Participants rated the extent to which they agree with the items on a 7-point Likert scale anchored at 1(Strongly disagree) to 7 (Strongly agree).

Attitudes toward the brand. Consumer's attitudes toward the brand were measured by a scale adapted from Sengupta et al. (2002). We used the adapted version to ask participants to rate

their agreements with three items ("I think this is a very good product"; "I think this is a very valuable product"; "My opinion of the product is very favorable."). Participants rated the extent to which they agree with the items on a 7-point Likert scale anchored at 1(Strongly disagree) to 7 (Strongly agree).

Attitudes toward counterfeit. Respondent's attitude toward counterfeit was measured by a 12-item scale developed by Tom et al. (1998), one of the most common scales used in counterfeit research. Two sample items of this scale include "I like buying counterfeits of luxury brands because it is like playing a practical joke on the manufacturer of luxury brands" and "Buying counterfeits of luxury brands demonstrates that I am a wise shopper." Participants rated the extent to which they agree with the items on a 7-point Likert scale anchored at 1(Strongly disagree) to 7 (Strongly agree).

Luxury product ownership. Based on the scale developed by Yoo and Lee (2012), we used two questions to assess consumers' brand ownership of luxury products. Respondents were asked to indicate their authentic luxury product purchase history based on two questions ("*How often do you purchase authentic luxury products?*" and "*How many authentic luxury products do you own in total?*").

Demographic variables. We measured demographic variables, including age, gender, educational level, income, and ethnicity at the end of the questionnaire.

Results

Manipulation check. We compared participants' ratings on malicious envy, benign envy, and deservedness in a MANOVA with Envy Condition (malicious vs. benign vs. control) as the independent variable. The analysis resulted in a significant multivariate effect of Envy Condition, $F_{(6, 240)} = 6.15$, $p < 0.001$, $\eta_p^2 = 0.13$. Then, we used a series of ANOVA analyses to make

comparison. First, following Van de Ven et al. (2009, 2011), we used perceived deservedness to manipulate benign versus malicious envy. Specifically, we compared participants' ratings on deservedness across different conditions. The results showed that our manipulation of perceived deservedness worked as expected. The participants in the benign envy condition reported a higher level of deservedness than those in the control and malicious conditions (M $_{benign}$ = 6.06, M $_{malicious}$ = 4.74, M $_{control}$ = 5.86, F (2, 122) = 15.72, $p < 0.01$). Also, we compared the average scores of the items on both benign envy and malicious envy. The results showed that participants in the malicious envy condition reported a higher level of malicious envy than those in both of the other two conditions (M $_{malicious}$ = 2.08, M $_{benign}$ = 1.67, M $_{control}$ = 1.36, F (2, 122) = 6.07, $p < 0.01$, $\eta_p^2 = 0.09$). However, participants in the benign envy condition, malicious envy condition, and the control condition did not show a significant difference in the level of benign envy (M $_{malicious}$ = 2.08, M $_{benign}$ = 4.16, M $_{control}$ = 4.44, F (2, 122) = 6.07, $p > 0.05$, $\eta_p^2 = 0.01$).

Insert Table 1 about here

Main effects. A series of two OLS regression was used to test hypothesis 1a (the relationship between envy and consumer's purchasing intention toward authentic luxury products) and hypothesis 1b (the relationship between envy and consumer's purchasing intention toward counterfeit luxury products) (Table 2). Here, we used envy as the independent variable and purchase intentions as the dependent variables. Control variables (social comparison, attitudes toward luxury products, attitude toward counterfeit products, and demographic variables) were included. For the multi-item variables, the average of all items was used in the analysis. Hypothesis 1a proposed that a benign envier is more likely to purchase an authentic

luxury product than a malicious envier. The results showed that malicious envious people are more likely to purchase authentic luxury products than benign envious people ($\beta = 0.63$, F (8, 81) = 3.47, $p < 0.1$). The result was the opposite to our hypothesis. Therefore, H1a was not supported. H1b proposed that a benign envier is less likely to purchase a counterfeit than a malicious envier. However, there was no difference between malicious envious people and benign envious people when purchase intention toward counterfeit is the dependent variable (F (8, 81) = 2.61, $p > 0.1$). Thereby, H1b was not supported.

Insert Table 2 about here

Mediation analysis. One of the purposes of this experiment was to test the hypothesized mediation effects: achievement motives (hope for success and fear of failure) mediate the relationships between types of envy (benign envy vs. malicious envy) and purchase intention toward a counterfeit luxury product and an authentic luxury product (H2a and H2b). We tested this mediation model using a bootstrapping mediation method with 5,000 resamples (Preacher, Rucker, and Hayes, 2007). Specifically, a PROCESS Model 4 (Hayes, 2013) was used. The results were presented in Table 3. The CIs of both purchase intentions toward counterfeit luxury products and purchase intentions toward authentic luxury products were not significant. Specifically, the CIs include negative numbers. Therefore, both hypothesis H2a and H2b were not supported.

Insert Table 3 about here

Additional analysis. Besides, we further compared respondents in the malicious envy condition and the benign condition to respondents in the control condition. But we did not find any significant results for the relationship between envy and consumer's purchasing intention for both comparisons (Table 2). Then, we tested the mediating effect of achievement motives (Table 3). No significance was found when we compared the benign envy condition with the control condition. When compared the malicious envy condition to the control condition, the results demonstrated that the mediation effect exists, but no direct effect (Zhao et al., 2010). Thus, there was an indirect-only mediation effect of fear of failure motive (FF) on the relationship between malicious envy and counterfeit luxury product purchasing intention.

As an additional test, instead of using two continuous variables to measure purchase intentions towards counterfeit products and authentic products respectively, we used a categorical dependent variable (*select from the following options: a pair of same authentic limited-edition Nike shoes, a pair of higher price authentic limited-edition Nike shoes, a pair of lower price authentic limited-edition Nike shoes, a pair of realistic counterfeited limited-edition Nike shoes, and a pair of lower quality counterfeited limited-edition Nike shoes)*. We used a series of binary logistic regressions to predict the likelihood of buying an authentic luxury product or a counterfeit luxury product (Table 4). In the binary logistic regression models, envy was a categorical independent variable and the dependent variable of product choice was captured by using five dummy variables (*the same authentic luxury product, a higher price authentic luxury product, a realistic counterfeited luxury product, and a lower quality counterfeited luxury product*). We made three groups of comparisons (benign envy vs. malicious envy; benign envy vs.

control; malicious envy vs. control). Thus, fifteen binary logistic regression analyses were conducted. When we compared the benign envy condition with the malicious envy condition and compared the benign envy condition with the control condition, no significant results were found ($p > 0.1$). When comparing the malicious envy condition with the control condition, the results suggest that the respondents in the malicious envy condition are less likely to purchase a realistic counterfeit luxury product ($\beta = -2.01$, $p < 0.1$) than the respondents in the control condition.

Insert Table 4 about here

Discussion

Using a pair of authentic limited-edition Nike shoes as the research context, we tested the main effects between envy and consumer's purchase intention towards counterfeit luxury products and purchasing intention towards authentic luxury products (H1a and H1b) and the mediating effect of achievement motives (hope for success vs. fear of failure). In Experiment 1, we surprisingly found that malicious envious people are more likely to purchase authentic luxury products than benign envious people. The result was the opposite of our hypothesis. This might because a pair of authentic limited-edition Nike shoes is rare, and it is difficult to find an authentic one in the market. Also, the price of a pair of authentic limited-edition Nike shoes is affordable for most participants. For malicious envier, to show his/her superiority, s/he may have a stronger intention to find an authentic one to cope with the negative envy emotion. Also, binary regression results indicated that compared to respondents in the control condition, respondents in the malicious envy condition are less likely to buy a realistic counterfeit luxury product. The

results further confirmed that malicious people will avoid purchasing a counterfeit product even though the counterfeit one is much cheaper. This result is counterintuitive. In addition, when we compared benign envious people with malicious envious people, the mediator "achievement motives" did not work in the relationship between envy and purchase intentions toward either counterfeit luxury products or authentic luxury products. This might be because respondents are students and most of them have a low annual income (less than $20,000), achievement motives might not a major driver for their purchase decisions. However, when we tested the mediating effect of achievement motives by comparing the malicious envy condition and control condition, we found that an indirect-only mediating effect of fear of failure between envy and counterfeit luxury product purchasing intention. The result suggests that even though malicious envious people hope to have an authentic luxury product, they may not be able to afford one or the authentic product is difficult to find in the market. Under these circumstances, they may turn to buy a counterfeit one when fear of failure motive becomes salient.

EXPERIMENT 2

One purpose of Experiment 2 is to test the main effect of envy on consumer's purchasing intention toward counterfeit luxury products and authentic luxury products (H1 and H1b) and the mediating effect of achievement motives (hope for success and fear of failure) (H2a and H2b) using a different research context (Louis Vuitton bag). Experiment 2 also examined the moderating effect of counterfeit popularity on the relationships between envy and purchase intentions (H3a and H3b). This experiment featured a 3 (envy type: benign envy vs. malicious envy vs. control) * 2 (counterfeit popularity: popular vs. unpopular) between-subjects factorial design.

Participants and Procedures

Two hundred and forty-one female participants were employed from Amazon Mechanical Turk (MTurk). Twenty-three participants who failed the attention check requirements were removed from the data set. Thus, the final data set has two hundred and twenty-eighty female participants (29% aged from 25 to 34 years old, 86% are Caucasian and 36% have a bachelor's degree). These participants were randomly assigned to one of six experimental conditions. Participants were told that one of their friends who is the envied person just bought an authentic Louis Vuitton bag. We used Louis Vuitton bag as the research context because Louis Vuitton bag is a popular luxury product, and it has been used to elicit envy in previous research (Chou et al., 2017). Also, the counterfeit Louis Vuitton bag is widely used as the research subject in counterfeit research (Wilcox et al., 2009).

We manipulated both envy types and counterfeit popularity in a scenario. First, following the procedure of Van de Ven et al. (2009, 2011), we used perceived deservedness to manipulate envy, participants were randomly assigned to three types of envy conditions. In the benign envy condition (n = 72), participants read the information that "*your friend worked very hard to earn the money to buy this authentic Louis Vuitton bag.*" In the malicious envy condition (n = 75), participants read the information that "*this is just one of the authentic luxury bags that were given to your friend by your friend's father.*" In the control condition (n = 81), participants read the information that "*you feel that you really like this authentic Louis Vuitton bag.*"

Second, we manipulated counterfeit popularity by following the approach developed in Lin (2011). Specifically, participants read the information "*Many people use counterfeited Louis Vuitton bags in life*" in the popular condition (n = 118) and "V*ery few people use counterfeited Louis Vuitton bags in life*" in the unpopular condition (n = 110).

Measure

The measurement of dependent variable "purchase intention toward counterfeit luxury product and authentic luxury product", independent variable "envy", and other control variables (social comparison, attitude toward the luxury product, attitude toward the counterfeit, luxury product ownership), and demographic variables are the same as in Experiment 1. For the multi-item variables, the average of all items was used in the analysis.

Results

Manipulation Check. Following Van de Ven et al. (2009, 2011), we compared participants' ratings on malicious envy, benign envy, and deservedness in a MANOVA with Envy Condition (malicious vs. benign vs. control) as the independent variable. The analysis resulted in a signifi cant multivariate effect of Envy Condition, $F (6, 446) = 28.48$, $p < 0.001$, $\eta_p^2 = 0.28$. Then, we used a series of ANOVA analyses to make comparison (Table 5). As we had expected, the benign envy condition was associated with significantly higher values on the perceived deservingness than the malicious envy condition and the control condition ($M_{benign} = 6.14$, $M_{malicious} = 4.03$, $M_{control} = 5.35$, $p < 0.01$, $\eta_p^2 = 0.41$)). Furthermore, those in the malicious envy condition reported a higher level of malicious envy than those in both of the other two conditions ($M_{malicious} = 3.15$, $M_{benign} = 1.84$, $M_{control} = 1.59$, $F (2, 225) = 41.38$, $p < 0.01$, $\eta_p^2 = 0.27$). Also, those in the malicious envy condition reported a higher level of benign envy than those in both of the other conditions ($M_{benign} = 4.49$, $M_{malicious} = 4.90$, $M_{control} = 4.08$, $F (2, 225) = 4.75$, $p < 0.01$, $\eta_p^2 = 0.04$). Then, we checked the manipulation of counterfeit popularity. The ANOVA

results show that respondents in the popular condition rated significantly higher on perceived popularity than respondents in the unpopular condition (M $_{popular}$ = 3.82, M $_{unpopular}$ = 2.26, F (1, 226) = 378.21, $p < .001$, $\eta_p^2 = 0.04$).

Insert Table 5 about here

Main effects. We used a series of two OLS regression to test hypothesis 1a (the relationship between envy and consumer's purchasing intention toward authentic luxury products) and hypothesis 1b (the relationship between envy and consumer's purchasing intention toward counterfeit luxury products). Envy was treated as the independent variable. Counterfeit purchasing intention and authentic luxury product purchasing intention were two dependent variables. Control variables (social comparison, attitudes toward luxury products, attitude toward counterfeit products, and demographic variables) were included. The regression results were summarized in Table 6. The results indicated that there was no significant difference between the benign envious people and the malicious envious people on authentic luxury product purchase intention ($p > 0.05$). Hypothesis 1a, which proposed that a benign envier is more willing to purchase an authentic luxury product than a malicious envier, was not supported. H1b proposed that a benign envier is less willing to purchase a counterfeit than a malicious envier. The regression results demonstrated that malicious envious people are more likely to purchase counterfeit luxury products than benign envious people ($\beta = 0.65$, R^2 = 0.29, $p < 0.01$). Therefore, H1b was supported.

Insert Table 6 about here

Mediation analysis. We tested a model aimed to corroborate all our three hypotheses and formally test our hypothesized mediation model: types of envy affect achievement motives (hope for success versus fear of failure), which in turn affect purchase intentions. We tested this mediation model using a bootstrapping mediation method with 5,000 resamples (Preacher, Rucker, and Hayes, 2007). Specifically, a PROCESS Model 4 (Hayes, 2013) was used (Table 7). Within the mediational model, both the direct effect and indirect effect between envy on authentic luxury product purchase intention were not significant. Specifically, CIs includes negative numbers. Hypothesis 2a suggested that hope for success (HS) mediates the relationship between envy and authentic purchase intention. Therefore, hypothesis H2a was not supported. Hypothesis 2b proposes that fear of failure (FF) mediates the relationship between envy and counterfeit purchase intention. Therefore, hypothesis H2b was supported. The results suggested that the direct effect of envy on counterfeit purchasing intention was not significant. However, for the indirect effect, the CI of counterfeit purchase intention was significant with positive numbers with a 95% confidence interval when fear of failure is the mediator. Thereby, we found that there was an indirect-only mediation effect of fear of failure motive (HS) for the relationship between envy and counterfeit product purchase intention.

Insert Table 7 about here

Moderating effect. We tested the moderating effect of counterfeit popularity (H3a and H3b) using a bootstrapping method with 5,000 resamples (Preacher, Rucker, and Hayes, 2007).

Specifically, a PROCESS Model 1 (Hayes, 2013) was used. Here, purchase intention toward counterfeit luxury products and purchase intention toward authentic luxury products were continuous dependent variables, envy (independent variable) and counterfeit popularity (moderator) were treated as dummy variables. Control variables (social comparison, attitude toward counterfeit, and attitude toward luxury product) were also included in the analysis. H3a suggested that counterfeit popularity weakens the relationship between envy and authentic luxury product purchasing intention. The results showed that the interaction term between envy and authentic luxury product purchase intention was not significant ($p > 0.1$). Therefore, H3a was not supported. H3b suggested that counterfeit popularity strengthens the relationship between envy and counterfeited luxury product purchasing intention. The results indicated that the interaction term between envy and counterfeit popularity is positive significant ($\beta = 1.62$, $p < 0.05$). The results demonstrated that when counterfeit is popular, the relationship between envy and counterfeit purchase intention becomes stronger. Therefore, H3b was supported.

Insert Table 8 about here

Insert Figures 1 and 2 about here

Additional analysis. Following the same procedures as in Experiment 1, we compared the malicious envy condition and the benign envy condition with the control condition (Table 6). When compared the malicious envy condition to the control condition, we found that malicious envious people are more likely to purchase counterfeit luxury products than participants in the

control condition ($\beta_{malicious} = 1.07, p < 0.001$) and the relationship is strengthened when counterfeit is popular ($\beta_{malicious*popular} = 1.10, p < 0.05$).

Then, we tested the mediation effect of achievement motives (hope for success versus fear of failure) when comparing the malicious envy condition and benign envy condition to the control condition (Table 8). When compared the malicious condition to the control condition, we found that there was an indirect-only mediating effect of hope for success motive (HS) on the relationship between envy and authentic luxury product purchase intention. Also, fear of failure motive (FF) partially mediates the relationship between envy and counterfeit luxury product purchase intention. When comparing the benign envy condition with the control condition, the results show that there was an indirect-only mediating effect of fear of failure motive (FF) on the relationship between envy and counterfeit luxury product purchase intention.

Last, instead of using two continuous variables to measure purchase intentions towards counterfeit products and authentic products respectively, we used a categorical dependent variable (*select from the following options: the same authentic Louis Vuitton bag, a higher price authentic Louis Vuitton bag, a lower price authentic Louis Vuitton bag, a realistic counterfeited Louis Vuitton bag, and a lower price counterfeited Louis Vuitton bag)*. A series of binary logistic regressions were used to predict the likelihood of buying an authentic luxury product or a counterfeit luxury product (Table 9). In the binary logistic regression model, envy was a categorical independent variable and the dependent variables of product choice were coded as five dummy variables (*the same authentic luxury product, a higher price authentic luxury product, a realistic counterfeited luxury product, and a lower quality counterfeited luxury product*). We made three groups of comparisons (benign envy vs. malicious envy; benign envy vs. control; malicious envy vs. control). Thus, fifteen binary logistic regression analyses were

conducted. First, when comparing the benign envy condition with the malicious envy condition, the results showed that benign envious people are more likely to purchase a lower price authentic luxury product ($\beta = 0.87$, $p < 0.05$). Also, when comparing the malicious envy condition with the control condition, the results suggested that the respondents in the malicious envy condition are more likely to purchase a realistic counterfeit luxury product ($\beta = 0.74$, $p < 0.05$) than the respondents in the control condition. The results of the rest regression models were not significant.

Insert Table 9 about here

Discussion

Using female respondents and Louis Vuitton bag as the research context, in Experiment 2, we found that malicious envious people are more likely to purchase counterfeit luxury products compared to benign envious people, which is consistent with our hypothesis 1. However, no significant results were found when we compare their intentions to purchase authentic luxury products. This might be because Louis Vuitton bags are affordable to most of the respondents (65% of respondents have an annual income ranged from \$35,000 to \$149,999). Therefore, both malicious envious consumers and benign envious consumers might purchase an authentic Louis Vuitton bag because they can easily afford the price. Furthermore, the moderating effect of counterfeit popularity was analyzed. As we hypothesized, the relationship between envy and intention to purchase counterfeit luxury products is strengthened when the counterfeit luxury product is popular in life. However, counterfeit popularity does not affect the relationship between envy and authentic luxury product purchase intention. As explained before, the

authentic Louis Vuitton bag is affordable for most participants, counterfeit popularity will not affect the relationships between envy and their purchase intention toward authentic luxury products.

The mediating effect of achievement motives (hope for success and fear of failure) was also tested in this experiment. Here, we found that fear of failure (FF) mediates the relationship between envy and counterfeit purchase intention but hope for success (HS) did not mediate the relationship between envy and authentic luxury purchase intention. This may be because the price of Louis Vuitton bag is not as high as other high-end luxury brands (e.g., ROLEX, Hermès, and Balenciaga), it is not exclusive enough to become a "badge" to show off one individual's success.

EXPERIMENT 3

The purpose of this experiment is to test the moderating effect of relative social status. We hypothesized that the relative social status of an envier compared to the envied person strengthens the relationships between envy and individuals' authentic purchasing intentions (Hypotheses 4a). We also hypothesized that the relative social status of an envier compared to the envied person weakens the relationships between envy and individuals' counterfeit purchasing intentions (Hypotheses 4b). Experiment 3 featured a 3 (envy type: benign envy vs. malicious envy vs. control) * 3 (relative social status: higher social status vs. equal social status vs. lower social status) between-subjects factorial design. We employed a scenario-based approach to manipulating different types of envy and relative social status.

Participants and procedures

Three hundred and sixty-four participants were recruited from Amazon Mechanical Turk (Mturk). Forty-seven participants failed the attention check requirements were removed from the

data set. Thus, the final sample had two hundred and seventeen participants. About 59% of the participants are male, 35% % of the participants aged 25-34 years old, 59% of the participants are Caucasian, and 61% of participants have a bachelor's degree. We randomly assigned these participants to one of nine experimental conditions.

In experiment 3, respondents were told that the product owned by the envied person is an authentic *ROLEX watch*. We used the Rolex watch as the research context in this experiment because the Rolex watch has been used as the product to elicit envy in previous research (Lisa Maria Turunen and Laaksonen, 2011). Also, the Rolex watch is a high-end luxury watch brand that can signal a person's social status (Rege, 2008).

We manipulated the envy type and relative social status in a scenario. First, following the procedure of envy manipulation developed by Van de Ven et al. (2009, 2011), the respondents read the same information as in Experiment 1 and Experiment 2). In the benign envy condition (n = 107), participants read the information that "*your friend worked very hard to earn the money to buy this authentic ROLEX watch.*" In the malicious envy condition (n = 104), participants read the information that "*this is just one authentic luxury watches that were given to your friend by your friend's father.*" In the control condition (n = 106), participants read the information that "*you feel that you really like this authentic ROLEX watch.*"

Second, based on the subjective social status scale (Operario et al., 2004), we manipulated relative social status by letting participants imagine "*The friend you envied who has the Rolex watch has a more respected job and is richer than you*" (the lower social status condition, n = 71), or "*The friend you envied who has the Rolex watch has a same job and income as you*" (the equal social status condition, n = 70), or "*You have a more respected job and is richer than the friend you envied who has the Rolex watch*" (the higher social status

condition, n = 69). After reading the scenario, participants will continue to complete a questionnaire. In the beginning, respondents need to answer two manipulation questions related to envy type (*According to the scenario, do you agree that your friend at dinner deserves the product?*) and relative social status (*According to the scenario, to what extent do you agree that your friend at dinner has a higher social status than you?*). Then participants continued to complete the entire questionnaire.

Measure

The measurement of the dependent variable "purchase intention toward counterfeit luxury products and authentic luxury product" and other control variables (social comparison, attitude toward the luxury product, attitude toward the counterfeit, luxury product ownership, and demographic variables) is the same as in experiment 1 and 2. For the multi-item variables, the average of all items was used in the analysis.

Results

Manipulation Check. First, we compared participants' ratings on malicious envy, benign envy, and deservedness in a MANOVA with Envy Condition (malicious vs. benign vs. control) as the independent variable. The analysis resulted in a significant multivariate effect of Envy Condition, $F\ (6, 624) = 4.87$, $p < 0.001$, $\eta_p^2 = 0.05$. Then, following the procedure developed by Van de Ven et al. (2009, 2011), we used a series of ANOVA analyses to conduct the manipulation check for envy type. The main effect of envy type on perceived deservingness was significant ($F\ (2,314) = 7.49$, $p < 0.01$, $\eta_p^2 = 0.05$). The results showed that the perceived deservingness in the malicious envy and the control condition were lower than in the benign condition ($M_{benign} = 5.66$, $M_{malicious} = 5.03$, $M_{control} = 5.47$). Then, those in the benign envy

condition experienced benign envy the most (M $_{benign}$ = 5.04, M $_{malicious}$ = 4.84, M $_{control}$ = 4.80, F

(2, 314) = 3.84, p < .005, η_p^2 = 0.02), and those in the malicious envy condition experienced

malicious envy the most (M $_{malicious}$ = 4.07, M $_{benign}$ = 3.95, M $_{control}$ = 3.29, F (2, 314) = 5.98, p

< .001, η_p^2 = 0.04). Furthermore, we checked the manipulation of perceived relative social

status. As we had expected, the respondents in the lower status condition perceive that the envied

person has a higher social status than the respondents in higher status condition (M $_{higher}$ = 3.02,

M $_{lower}$ = 3.94, F (2, 314) = 17.68, p < .001, η_p^2 = 0.10).

Insert Table 10 about here

Main effects. We used a series of two OLS regression to test the main effects of envy on

purchasing intention toward authentic luxury products (H1a) and purchasing intention toward

counterfeit (H1b) (Table 11). In the regression analysis, envy was treated as a dummy

independent variable. Counterfeit purchasing intention and authentic luxury product purchasing

intention were two dependent variables. Control variables (social comparison, attitudes toward

luxury products, attitude toward counterfeit products, and demographic variables) were included.

The results demonstrated that there was no significant difference on authentic luxury product

purchasing intention between malicious envious people and benign envious people (p > 0.05).

Thus, H1a was not supported. The results also suggest that a benign envier is more likely to

purchase a counterfeit than a malicious envier (β = -0.29, p < 0.05). The results are not consistent

with Experiment 2. Thus, H1b was not supported.

Insert Table 11 about here

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Mediation analysis. In Experiment 3, we also tested the mediation effect of achievement motives (hope for success versus fear of failure) by using a bootstrapping mediation method with 5,000 resamples (Preacher, Rucker, and Hayes, 2007). Specifically, a PROCESS Model 4 (Hayes, 2013) was used. The results were presented in Table 12. However, we found no significant result. Within the mediational model, both the direct effect and indirect effect between envy on authentic luxury product purchase intention and counterfeit purchase intention were not significant. Specifically, CIs includes negative numbers. Therefore, hypothesis H2a and H2b were not supported in this experiment.

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Insert Table 12 about here

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Moderating effect. We have proposed that the relationships between types of envy and luxury product purchase intentions are moderated by perceived status compared with the envied person. We tested the moderating effect of relative social status (H4a and H4b) using the PROCESS macro based on Model 1 proposed by Preacher and Hayes (2008) (Table 13). Here, purchase intention toward counterfeit luxury products and purchase intention toward authentic luxury products were continuous dependent variables, envy (independent variable) and relative social status (moderator) were treated as dummy variables. Control variables (social comparison, attitude toward counterfeit, and attitude toward luxury product) were also included in the analysis. Hypothesis 4a has proposed that the relative social status (higher vs. lower) of an

individual compared to the envied person moderates the relationships between envy and individuals' authentic purchasing intention. Also, hypothesis 4b has proposed that the relative social status (higher vs. lower) of an individual compared to the envied person moderates the relationships between envy and individuals' counterfeit purchasing intention. However, the interaction term between envy and relative social status was not significant for both two dependent variables (purchase intention toward counterfeit luxury product and purchase intention toward authentic luxury product) ($p > 0.1$). Therefore, H4a and H4b were not supported.

Insert Table 13 about here

Insert Figures 3 and 4 about here

Additional analysis. We compared the malicious envy condition and the benign envy condition with the control condition for the relationship between envy and purchase intentions (Table 11). The results showed that benign envious people are more likely to purchase authentic luxury products than participants in the control condition ($\beta_{benign} = 0.35$, $p < 0.1$).

We also tested the mediation effect of achievement motives (hope for success versus fear of failure) when comparing the malicious envy condition and benign envy condition to the control condition (Table 12). No significant results were found on the mediation effects of achievement motives when comparing the malicious envy condition with the control condition. Further, when comparing the benign envy condition with the control condition, we found that there was an indirect-only mediation effect of hope for success

motive (HS) for the relationship between envy and authentic luxury product purchase intention.

In addition, instead of using two continuous variables to measure purchase intentions towards counterfeit products and authentic products respectively, we used a categorical dependent variable (*select from the following options: the same authentic ROLEX watch, a higher price authentic ROLEX watch, a lower price authentic ROLEX watch, a realistic counterfeited ROLEX watch, and a lower price counterfeited ROLEX watch*). A series of binary logistic regressions were used to predict the likelihood of buying an authentic luxury product or a counterfeit luxury product (Table 14). In the binary logistic regression model, envy was a categorical independent variable and the dependent variable of product choice was coded as five dummy variables (*the same authentic luxury product, a higher price authentic luxury product, a realistic counterfeited luxury product, and a lower quality counterfeited luxury product*). Three groups of comparisons (benign envy vs. malicious envy; benign envy vs. control; malicious envy vs. control) were made. In total, we conducted fifteen binary logistic regression analyses. However, no significance results were found ($p > 0.1$).

Insert Table 14 about here

Discussion

Using ROLEX watch as the research context, we first tested the main effect between of envy on purchase intentions (counterfeit vs. authentic) and the mediating effect of achievement motives (hope for success vs. fear of failure) in Experiment 3. Surprisingly, we found that benign envious people are more likely to purchase counterfeit than malicious envious people. This may

because the price of a ROLEX watch is much higher than a Louis Vuitton bag. Therefore, when

thinking about whether to buy an authentic ROLEX watch, consumers need to think more about

other factors, such as affordability and practicability. When a benign envier cannot afford an

authentic Rolex watch, s/he may turn to a counterfeit. As in Experiment 2, we found that benign

envious people and malicious envious people did not have different intentions towards buying

authentic luxury products. Regarding the mediating effect of achievement motives, the results

suggested an indirect-only mediating effect of hope for success motive on the relationship

between envy and authentic luxury product purchase intention. This result indicates that hope for

success is the underlying psychological mechanism underlying the relationship between envy

and authentic luxury product purchase intentions. Furthermore, the moderating effects of relative

social status were not significant in this experiment. This might be because when consumers

think about whether to purchase a high-end luxury product, the relative social status comparison

factor might not be an important consideration in their purchasing intentions towards either the

authentic luxury product or a counterfeit luxury product.

GNERAL DISCUSSION

CONCLUSION

Through three experiments, this paper investigated how different types of envy lead

to different purchase intentions toward counterfeit luxury products and authentic luxury

products. In the first experiment, we used limited-edition Nike shoes as the research

context and a student sample to test the main effect (the relationship between envy and

consumer's purchase intention toward a counterfeit luxury product and an authentic

luxury product) and the mediating effect of achievement motives (hope for success vs.

fear of failure). We found that benign envious people are less willing to buy authentic

limited-edition Nike shoes than malicious envious people. This result is the opposite of our hypothesis and counter-intuitive. This result might be caused by the unique characteristics of the product and sample. A pair of limited-edition Nike shoes is not easy to find in the market, but it is affordable to students. Thus, owning an authentic pair helps a malicious envier show off his/her capability and level down the envied person's status. Thus, malicious enviers are more eager to buy a pair of authentic limited-edition Nike shoes than benign enviers. In experiment 1, we did not find the mediating effect of the achievement motives (hope for success vs. fear of failure) on the relationship between envy and purchase intentions, which indicates that envy may not activate individuals' achievement motives. This result might be caused by the fact that many students do not treat owning or not owning a pair of limited-edition of Nike shoes as an indicator of their life success or failure.

In the second experiment, we used a Louis Vuitton bag as the research context and a female sample to test the relationships. This experiment found that compared to benign envious people, malicious envious people are more likely to purchase a counterfeit Louis Vuitton bag. This result was consistent with Hypothesis 1b but opposite to the findings in Experiment 1. The different results from the two experiments might be caused by the different characteristics of the research context. In general, Louis Vuitton bags are more expensive than a pair of Nike shoes and consumers are more likely to see a counterfeited Louis Vuitton bag than a pair of limited-edition Nike shoes in their real lives. Thus, a consumer is more likely to think about buying a counterfeited product when s/he is envy at a Louis Vuitton bag than at a limited-edition Nike shoe.

Consistent with the findings from Experiment 1, we found that the main effect of envy on authentic product purchase intention was not significant and so did the mediating effect of hope for success. Inconsistent with Experiment 1, we found that the relationship between envy and counterfeit product purchase intention was mediated by fear of failure motive. This result indicates that why malicious envied consumers are more likely to purchase counterfeited luxury products is largely due to the fact that they are afraid that other people will see her do not own the Louis Vuitton bag. Experiment 1 did not find the mediating effect might be caused by the student sample. Many students might not think that not owning a pair of limited-edition Nike shoes is a life failure. Thus, envy cannot activate fear of failure motive in them. Experiment 2 also tested the moderating effects of "counterfeit popularity". We found that counterfeit popularity moderated the relationship between envy and counterfeit purchase intention. In other words, when counterfeit luxury product is popular in life, envious people are more likely to purchase counterfeit luxury products, especially for malicious envious people.

Finally, in Experiment 3, the ROLEX watch was used as the research context. Here, we found that benign envious people are more likely to purchase counterfeit than malicious envious people, which is consistent with the findings from Experiment 1 and opposite to the findings from Experiment 2. The result suggested that when an authentic luxury product is very expensive and cannot be afforded by most consumers, benign envious people may purchase a counterfeit as a substitute. Further, we found that the relationship between benign envy and purchase intention toward an authentic luxury product was mediated by hope for success motive, which was not found in both Experiment 1 and Experiment 2. This difference might be due to the nature of ROLEX

watch that it is much more expensive and exclusive than Nike shoes and Louis Vuitton bags. Thus, consumers are likely to use ROLEX to show off their success. The second moderator "relative social status" was also tested in this experiment. However, we did not find any significant results. This result indicates that envious people might not care much about status comparison when considering buying either an authentic ROLEX Watch or a counterfeit one. Instead, they may focus more on how to cope with the envy emotion.

Using three different research contexts (limited-edition Nike shoes, Louis Vuitton bag, and ROLEX watch), we found inconsistent results regarding the main effects and mediating effects across three experiments. Firstly, as we explained above, it is likely that the inconsistency is caused by different research contexts. Due to the different prices and exclusivities of different luxury products (limited-edition Nike shoes, Louis Vuitton bag, and ROLEX watch) we used in different experiments, envious consumers may activate different motives and choose different products. Specifically, the price of a pair of limited-edition Nike shoes is affordable for most consumers. However, exclusivity is relatively higher. The price of a Louis Vuitton bag is higher than a pair of limited-edition Nike shoes, but the exclusivity is lower than a pair of limited-edition Nike shoes. For the ROLEX watch, the price is the highest compared to a pair of limited-edition Nike shoes and a Louis Vuitton bag. Secondly, we found inconsistent results for three experiments may because of the sample. Experiment 1 used a student sample with both male and female, Experiment 2 used only female sample from mTurk, and Experiment 3 used both male and female sample from mTurk. For the student sample we used in the first experiment, half of the respondents have an annual income lower than $20,000 and 65% of the respondents are young people aged from 18 to 24 years old. For young people, they

are more likely to be attracted by the Nike brand. In the second experiment, 82% of respondents have an annual income of more than $20,000 and 29% of respondents aged 25 to 34 years old. For these female respondents, most of them can afford the price of a Louis Vuitton bag. In the last experiment, 35% % of the participants aged 25-34 years old, and 65% of the participants are male. Also, 91% of respondents have an annual income of more than $20,000 and only 15% of respondents have an annual income of more than $100,000. For consumers who have an annual income lower than $100,000 may treat a ROLEX watch as a high-end luxury product and not be able to purchase one.

THERETICAL IMPLICATIONS

Recent work in social psychology has largely deepened our understanding of envy. Envy, which is a multifaceted emotion, has been investigated by many psychological scholars (Parrott and Richard, 1993; Smith et al., 1999; Smith and Kim, 2007; Van de Ven et al., 2009; Lange and Crusius, 2015). It has been demonstrated that envy has a significant influence on consumer behavior (Lange and Crusius, 2014). However, regarding how different types of envy lead to distinct behaviors, most of the literature demonstrates that benign envy motivates consumers to improve themselves while malicious envy leads to avoidance behavior such as turning to a different product (Van de Ven et al., 2011). We believe that envy is also a motivational driver of counterfeit luxury product purchase behaviors since when an envious consumer cannot afford or do not willing to pay for an expensive authentic luxury product the consumer may buy a counterfeited product. However, researchers have rarely examined the important role of envy in counterfeit purchasing in the counterfeit research literature. Based on the psychological research on envy, we examined the important role played by envy in

counterfeit luxury product purchases. This study makes make several important contributions to the literature.

First, although counterfeit purchasing has been a longstanding research area, ours is the first empirical effort to employ envy as a socio-psychological driver to examine why and under what conditions consumers turn to counterfeited luxury products instead of authentic luxury products to fulfill their needs. We found that the two types of envy work differently when affecting people's purchase intentions towards either authentic luxury products or counterfeited luxury products. Moreover, we explored the different psychological mechanisms underlying the relationships between envy and consumers' purchase intentions toward authentic luxury products and counterfeit luxury products. Specifically, we found that consumers' achievement motives mediate the relationships. In addition, this study also brings in Social Comparison Theory into counterfeit research, which provides a new perspective to study counterfeit consumption behavior.

Second, we explored the moderating effects of counterfeit popularity and relative social status on the relationship between envy and consumers' purchase intentions toward authentic luxury products and counterfeit luxury products, which sheds new light on the relationships between envy and consumers' purchase intentions. For example, we found that the relationship between envy and counterfeit purchase intention will increase when counterfeits are popular in life. Thus, we found that as a social driver, benign envy and malicious envy could encourage consumers to buy either an authentic luxury product or a counterfeited luxury product under different situations.

Third, some of the findings of this study are counter-intuitive, which might extend the original envy theory. Traditional envy theory believes that malicious envy is a

detrimental force (Smith and Kim, 2007; Van de Ven et al., 2011; Lange and Crusius, 2015). However, a recent study conducted by Salerno et al. (2018) suggested that malicious envy might also push people to improve themselves. Our research supported the findings from Salerno et al. (2018) and empirically demonstrated that in some situations, malicious envy may motivate consumers to buy an authentic luxury product rather than a counterfeited luxury product. This finding may provide a new direction for future envy research.

MANAGERIAL IMPLICATIONS

This study provides important implications for luxury brand marketers, mangers, and also retailers. The increasing demand for counterfeited luxury products has become a serious problem for authentic luxury brands (Grossman and Shapiro, 1988a). Because the price of an authentic luxury product is relatively higher than a counterfeit, more and more consumers turn to buy a counterfeit because of the affordability and practicability. It is critical to help luxury brands to find an effective way to control counterfeit luxury consumption. The current research provides important implications for marketing by analyzing the relationship between envy and consumer's counterfeit purchasing intention. Regarding the negative effects associated with the popularity of counterfeit luxury consumption, it is critical to know how to encourage consumers to shop the authentic luxury products. Understanding the psychological mechanism of counterfeit purchasing intention helps luxury brand managers to modify marketing strategies.

Eliciting consumers' envy towards other consumers is a widely-used advertising approach for luxury brands. Our results show that luxury brand marketers should be careful in using this strategy. Firstly, regarding consumer's intention to purchase an

authentic luxury product, our result indicates that malicious enviers are more likely to purchase a pair of authentic limited-edition Nike shoes than benign enviers. This result is counter-intuitive. Unlike other companies, in order to increase sales, Nike should take steps to make consumers feel malicious envy. Otherwise, Nike's sales and profits will be reduced. Secondly, regarding consumer's intention to purchase a counterfeit, our results show that malicious enviers are more likely to purchase a counterfeited Louis Vuitton bag and less likely to purchase a ROLEX watch than benign enviers. Based on these results, Louis Vuitton and ROLEX should use divergent plans to decrease consumers' counterfeit purchasing intentions. In other words, Louis Vuitton should take strategies to avoid making consumers feel malicious envy, whereas ROLEX needs to adopt measures to avoid making consumers feel benign envy. For example, if Louis Vuitton uses marketing strategies to let consumers elicit malicious envy, which increases the purchase of counterfeit products and backfires the authentic brand's sale. Thus, it is very important for the luxury brand marketer to understand what the difference between two types of envy is, how the different facets of envy are activated and how they lead to distinct buying behaviors. With the information, luxury brands can develop effective strategies to communicate with and market to their customers.

Another finding of this study is that counterfeit popularity strengthens the relationship between envy and counterfeit purchasing intention. In other words, when more people use counterfeits, envious consumers are more willing to buy a counterfeit. It is important for luxury companies to be conscious of the impact of counterfeit popularity. Counterfeiters hurt tax revenues by failing to report their production and transactions. Thereby, in order to reduce consumer's desire to shop a counterfeit, luxury companies

should produce the product that cannot be easily imitated. Manufacturers should focus on developing technologies that make counterfeiting difficult. Luxury companies should also let consumers know that the characteristics of luxury goods cannot be replaced by counterfeit goods. Moreover, it may be more effective to adopt a strategy in which legitimate companies highlight the risks of buying counterfeit products. For example, instead of telling consumers that buying a counterfeit is an immoral behavior, the company might warn them about the risks associated with buying a counterfeit. When more and more consumers aware that buying a counterfeit has lots of risks, consumers may choose to shop the genuine product instead of a counterfeit. Therefore, it is important to increase the perceived risk of product failure to reduce consumers' interest in buying counterfeited luxury goods. Once a society has reached a consensus on the risks of buying counterfeit caused by lower quality and social damage, it will help consumers develop a negative attitude towards buying counterfeit goods.

In addition, this research demonstrates that achievement motives mediate the relationship between envy and purchasing intentions. Specifically, hope for success motive mediates the relationship between envy and authentic luxury product purchasing intention, whereas fear of failure motive mediates the relationship between envy and counterfeited luxury product purchasing intention. This result helps luxury brand marketers to have a better understanding of the underlying motives that lead a consumer to choose either an authentic luxury product or a counterfeit. Based on this, the luxury brand company should work out what are effective ways to trigger consumers' hope for success motive and decrease their fear of failure motive. Because fear of failure motive relates to uncertainty avoidance, which means that consumers do not want to take risks if

they have uncertainty about the results (Atkinson, 1957). Thereby, as a luxury brand manager, s/he should find ways to communicate with consumers to reduce their perceived uncertainty. For example, the luxury brand manager may make use of social networking sites (such as Instagram and Facebook) to build relationships with potential customers.

LIMITATIONS AND FUTURE RESEARCH

Several potential limitations and future research directions merit consideration. First, despite that our research demonstrated the important role of benign envy in stimulating authentic luxury product consumption, little is known about how to elicit consumers' benign envy instead of malicious envy. Thus, future research is needed to examine how different types of envy are generated. Second, we found that under certain conditions, malicious envy could motivate consumers to buy an authentic luxury product, which is counter-intuitive. Consistently, Salerno et al. (2018) found that malicious envy might also push people to improve themselves. Future research may verify this finding and provide a clearer understanding of malicious envy. Third, the results from the three experiments are somewhat inconsistent. We believe that the inconsistency is largely caused by the different research contexts (i.e., different luxury products and samples). It is likely that due to the fact that the prices and exclusivity vary greatly in different luxury products, envious consumers' reactions to different luxury brands might be significantly different. Future research is needed to examine the influence of the research context, particularly the influence of different types of luxury products. Third, counterfeit consumption is still an under-researched area and there is a lack of theoretical explanations for counterfeit consumption. This study employed the social comparison

approach and emphasized the role of consumer envy in counterfeit consumption. Other potential theoretical approaches should be examined in future research to provide a better understating of the psychological mechanism underlying counterfeit consumption. In addition, we followed Van de Ven et al. (2011)'s procedure to manipulate envy in this research. Respondents were required to imagine that they really like the product in the control condition and admire the envied person in the benign envy condition. However, "like" and "admiration" are similar emotions. Future research needs to find a better way to manipulate envy to make the difference between the control condition and the benign envy condition clearer.

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TABLES AND FIGURES

Table 1. Manipulation checks per condition of Experiment 1

- Envy manipulation									
Manipulation variables	Control		Benign envy		Malicious envy		Statistics		
	M	SD	M	SD	M	SD	F (2, 122)	p	η^2_p
Deservedness	5.86	(1.12)	6.06	(0.94)	4.74	(1.43)	15.72	0.00 ***	0.21
Malicious envy	1.36	(0.51)	1.67	(0.86)	2.08	(1.19)	6.07	0.00 ***	0.09
Benign envy	4.10	(1.49)	4.16	(1.65)	4.44	(1.69)	0.54	0.59	0.01

Note. * p < .05. **p<.01. ***p<.001

Table 2. OLS regression results of Experiment 1

Variable	Benign vs. Malicious		Control vs. Malicious		Control vs. Benign	
	Dependent variable		Dependent variable		Dependent variable	
	Counterfeit	Authentic	Counterfeit	Authentic	Counterfeit	Authentic
Envy	0.10	0.63*	0.37	0.45	0.54	-0.19
	(0.32)	(0.36)	(0.36)	(0.40)	(0.36)	(0.36)
Social comparison	0.48**	0.21	0.23	0.21	0.42 **	0.10
	(0.14)	(0.16)	(0.16)	(0.17)	(0.19)	(0.20)
Attitude toward luxury product	0.08	0.49 ***	0.15	0.52 ***	0.09	0.48 ***
	(0.11)	(0.13)	(0.13)	(0.14)	(0.12)	(0.12)
Attitude toward counterfeit	-0.27 **	0.05	-0.22 *	0.21	0.57 **	-0.21
	(0.11)	(0.12)	(0.12)	(0.13)	(0.18)	(0.19)
Luxury product purchase frequency	-0.02	-0.14	-0.27	0.15	-0.06	-0.27
	(0.22)	(0.25)	(0.25)	(0.27)	(0.28)	(0.27)
Luxury product possession	-0.14	0.17	-0.05	-0.01	-0.14 *	-0.05
	(0.24)	(0.27)	(0.27)	(0.30)	(0.24)	(0.28)
Gender	-0.35	0.72	-0.30	0.67	0.56	0.80**
	(0.38)	(0.42)	(0.41)	(0.46)	(0.38)	(0.39)
Income	0.15	0.20	-0.09	0.07	0.07	0.18
	(0.14)	(0.15)	(0.13)	(0.14)	(0.14)	(0.14)
Constant	1.41	-1.94	3.67 **	-0.02	-3.37 **	-0.48
	(1.34)	(1.51)	(1.45)	(1.61)	(1.54)	(1.58)
Observations	89	89	77	77	81	81
R^2	0.21	0.26	0.17	0.27	0.29	0.34
Adjusted R^2	0.13	0.68	0.07	0.19	0.21	0.26
Residual Std. Error	1.50	0.26	1.49	1.65	1.52	1.56
F Statistic	2.61***	3.47***	1.76 *	3.22 ***	3.34***	4.20***
	(8, 81)	(8, 81)	(8, 69)	(8, 69)	(9, 72)	(9, 72)

Note: *p<0.1; **p<0.05; ***p<0.01

Table 3. Mediation effect of achievement motives results of Experiment 1

	Direct effect	Indirect effect (s) CI (within 95% confidence interval)	
		Hope for success	Fear of failure
- Benign envy & Malicious envy			
Counterfeit	-0.16	(-0.0878, 0.1171)	(-0.0233, 0.5670)
Authentic	0.53 *	(-0.2996, 0.7147)	(-0.3207, 0.0492)
- Control vs. Benign envy			
Counterfeit	0.18	(-0.0566, 0.1406)	(-0.1239, 0.5757)
Authentic	-0.19	(-0.3350, 0.5375)	(-0.3218, 0.0544)
- Control vs. Malicious envy			
Counterfeit	0.07	(-0.1495, 0.2448)	(0.0014, 0.6574) *
Authentic	0.14	(-0.1511, 0.9414)	(-0.3682, 0.1477)

Note. * p < .05. **p<.01. ***p<.001

Table 4. Binary logistic regression results of Experiment 1

Dependent variable	β	Std. Error	p	CI (within 95% confidence interval)
- Benign envy & Malicious envy				
Same authentic	-0.43	0.40	0.38	(0.247, 1.705)
Higher price authentic	0.46	0.38	0.23	(0.713, 7.728)
Lower price authentic	0.17	0.31	0.70	(0.496, 2.846)
Realistic counterfeit	-0.94	1.08	0.38	(0.047, 3.209)
- Control vs. Benign envy				
Same authentic	0.97	0.62	0.11	(0.789, 8.980)
Higher price authentic	-0.07	0.79	0.92	(0.196, 4.375)
Lower price authentic	0.03	0.54	0.95	(0.361, 2.952)
Realistic counterfeit	-0.30	0.75	0.69	(0.172, 3.218)
- Control vs. Malicious envy				
Same authentic	0.14	0.61	0.82	(0.349, 3.790)
Higher price authentic	1.08	0.77	0.16	(0.812, 4.743)
Lower price authentic	0.33	0.52	0.52	(0.507, 3.833)
Realistic counterfeit	-2.01	1.13	0.08*	(0.015, 1.228)

Note. *p<.1** p < .05. ***p<.01.

Table 5. Manipulation checks per condition of Experiment 2

- Envy manipulation

Manipulation variables	Control		Benign envy		Malicious envy		Statistics		
	M	SD	M	SD	M	SD	F (2, 225)	p	η_p^2
Deservedness	5.35	(1.46)	6.14	(0.81)	4.03	(1.32)	78.86	0.00 ***	0.41
Malicious envy	1.59	(0.94)	1.84	(0.98)	3.15	(1.43)	41.38	0.00 ***	0.27
Benign envy	4.08	(1.74)	4.49	(1.69)	4.90	(1.52)	4.75	0.01 *	0.04

- Counterfeit popularity manipulation

Manipulation variables	Popular		Unpopular		Statistics		
	M	SD	M	SD	F (1, 226)	p	η_p^2
Perceived popularity	3.82	(0.48)	2.26	(.71)	378.21	0.00 ***	0.63

Note. * p < .05. **p<.01. ***p<.001

Table 6. OLS regression results of Experiment 2

Variable	Benign vs. Malicious		Control vs. Malicious		Control vs. Benign	
	Dependent variable		Dependent variable		Dependent variable	
	Counterfeit	Authentic	Counterfeit	Authentic	Counterfeit	Authentic
Envy	0. 65 **	0.29	1.07 ***	0.21	0.40	-0.20
	(0.27)	(0.27)	(0.26)	(0.28)	(0.24)	(0.26)
Social comparison	0.00	0.19**	0.03	0.13	0.06	0.13
	(0.09)	(0.09)	(0.07)	(0.08)	(0.70)	(0.08)
Attitude toward luxury product	0.09	0.09	0.06	0.23**	0.05	0.25**
	(0.09)	(0.09)	(0.09)	(0.10)	(0.09)	(0.09)
Attitude toward counterfeit	0.68***	-0.06	0.71***	-0,12	0.78***	-0.08
	(0.10)	(0.10)	(0.09)	(0.10)	(0.09)	(0.09)
Luxury product purchase frequency	0.21	0.10	0,14	0,21	0.25	0.41**
	(0.20)	(0.20)	(0.19)	(0.22)	(0.18)	(0.19)
Luxury product possession	-0.17	0.37*	0.14	0.45	-0.35*	0.38
	(0.20)	(0.20)	(0.19)	(0.23)	(0.19)	(0.20)
Income	0.06	0.14*	0.06	0.04	0.01	0.07
	(0.08)	(0.08)	(0.07)	(0.08)	(0.07)	(0.08)
Constant	0.22	1.61	0.35	0.70	2.81***	0.74
	(0.75)	(0.75)	(0.62)	(0.69)	(0.54)	(0.48)
Observations	147	147	156	156	152	152
R^2	0.29	0.17	0.37	0.20	0.41	0.31
Adjusted R^2	0.26	0.13	0.34	0.17	0.38	0.27
F Statistic	8.22	4.05	12.52	5.40	1.45	9.14
	(7,139)	(7,139)	(7,148)	(7,148)	(7, 145)	(7, 145)

Note: $^*p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

Table 7. Mediation effect of achievement motives results of Experiment 2

	Direct effect	Indirect effect (s) CI (within 95% confidence interval)	
		Hope for success	Fear of failure
- Benign envy & Malicious envy			
Counterfeit	0.17	(-0.0328, 0.2265)	(0.0488, 0.5500) *
Authentic	0.84	(-0.0014, 0.4530)	(-0.1850, 0.1426)
- Control vs. Benign envy			
Counterfeit	0.29	(-0.0521, 0.820)	(0.0156, 0.4380) *
Authentic	-0.17	(-0.2629, 0.3920)	(-0.3111, 0.0019)
- Control vs. Malicious envy			
Counterfeit	0.52*	(-0.1823, 0.1381)	(0.2778, 0.9669) *
Authentic	0.21	(0.1441, 0.7231) *	(-0.2621, 0.3241)

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

Table 8. Moderation results of Experiment 2

	Benign vs. Malicious		Control vs. Malicious		Control vs. Benign	
Variable	Dependent variable		Dependent variable		Dependent variable	
	Counterfeit	Authentic	Counterfeit	Authentic	Counterfeit	Authentic
Envy* Popularity	1.62 ** (0.53)	-0.29 (0.53)	1.10 *** (0.48)	0.33 (0.55)	-0.49 (0.47)	0.37 (0.19)
Observations	147	147	156	156	146	146
R^2	0.34	0.21	0.40	0.22	0.43	0.33
F Statistic	7.76 (9,137)	4.12 (9,137)	10.74 (9,146)	4.53 (9,146)	11.97 (9, 143)	7.77 (9, 143)

Note: *p<0.1; **p<0.05; ***p<0.01

Table 9. Binary logistic regression results of Experiment 2

Dependent variable	β	Std. Error	p	CI (within 95% confidence interval)
- Benign envy & Malicious envy				
Same authentic	0.07	0.43	0.87	(0.456, 2.515)
Higher price authentic	-0.73	0.68	0.28	(0.128, 1.826)
Lower price authentic	0.87	0.43	0.04 *	(1.037, 5.523)
Realistic counterfeit	-0.58	0.35	0.11	(0.284, 1.132)
Lower quality counterfeit	0.44	0.71	0.54	(0.386, 6.231)
- Control vs. Benign envy				
Same authentic	-0.32	0.42	0.44	(0.321, 1.642)
Higher price authentic	-0.65	0.69	0.35	(0.136, 2.042)
Lower price authentic	0.03	0.37	0.94	(0.499, 2.122)
Realistic counterfeit	0.20	0.36	0.58	(0.602, 2.486)
Lower quality counterfeit	0.48	0.70	0.50	(0.410, 6.343)
- Control vs. Malicious envy				
Same authentic	-0.26	0.41	0.50	(0.340, 1.692)
Higher price authentic	0.13	0.58	0.82	(0.367, 1.711)
Lower price authentic	-0.75	0.40	0.06	(0.217, 1.024)
Realistic counterfeit	0.74	0.35	0.03 *	(1.061, 4.141)
Lower quality counterfeit	0.01	0.78	0.99	(0.214, 4.577)

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

Table 10. Manipulation checks per condition of Experiment 3

- Envy manipulation									
Manipulation variables	Control		Benign envy		Malicious envy		Statistics		
	M	SD	M	SD	M	SD	F (2, 314)	p	η^2_p
Deservedness	5.47	(1.15)	5.66	(1.13)	5.03	(1.37)	7.49	0.00 ***	0.05
Malicious envy	3.29	(1.89)	3.95	(1.71)	4.07	(1.70)	5.98	0.00 ***	0.04
Benign envy	4.80	(1.48)	5.04	(1.27)	4.84	(1.43)	3.84	0.02 *	0.02

- Relative social comparison manipulation									
Manipulation variables	Equal status		Lower status		Higher status		Statistics		
	M	SD	M	SD	M	SD	F (2, 314)	p	η^2_p
Perceived status	3.27	(1.19)	3.94	(1.01)	3.02	(1.29)	17.68	0.00 ***	0.10

Note. * p < .05. **p<.01. ***p<.001

Table 11. OLS regression results of Experiment 3

Variable	Benign vs. Malicious		Control vs. Malicious		Control vs. Benign	
	Dependent variable		Dependent variable		Dependent variable	
	Counterfeit	Authentic	Counterfeit	Authentic	Counterfeit	Authentic
Envy	-0. 29**	-0.17	-0.10	-0.06	0.20	0.29 *
	(0.27)	(0.19)	(0.18)	(0.18)	(0.71)	(0.18)
Social comparison	0.00	0.21**	0.13	0.14	0.11	0.34***
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.08)
Attitude toward luxury product	0.21**	0.28***	0.04	0.42***	0.21**	0.52***
	(0.08)	(0.09)	(0.09)	(0.09)	(0.09)	(0.08)
Attitude toward counterfeit	0.63***	0.09	0.64***	0.15**	0.61	0.16**
	(0.06)	(0.06)	(0.05)	(0.05)	(0.06)	(0.05)
Income	-0.12	-0.03	0.03	0.01	0.02	0.14**
	(0.07)	(0.07)	(0.06)	(0.06)	(0.06)	(0.05)
Gender	-0.10	-0.26	-0.11	0.08	-0.07	0.30*
	(0.18)	(0.19)	(0.08)	(0.18)	(0.19)	(0.18)
Constant	1.03	1.43	0.86	-0.53	0.20	--0.43
	(0.82)	(0.88)	(0.82)	(0.81)	(0.71)	(0.65)
Observations	210	210	209	209	211	211
R^2	0.62	0.43	0.61	0.54	0.51	0.51
Adjusted R^2	0.60	0.30	0.59	0.51	0.49	0.50
F Statistic	29.95	13.69	27.96	20.70	29.96	30.84
	(11,199)	(11,199)	(11, 198)	(11, 198)	(7,204)	(7, 204)

Note. *p<0.1; **p<0.05; ***p<0.01

Table 12. Mediation effect of achievement motives results of Experiment 3

	Direct effect	Indirect effect (s) CI (within 95% confidence interval)	
		Hope for success	Fear of failure
- Benign envy & Malicious envy			
Counterfeit	-0.41*	(-0.183, 0.0134)	(-0.2736, 0.0618)
Authentic	0.40	(-0.3421, 0.0359)	(-0 0812, 0.0450)
- Control vs. Benign envy			
Counterfeit	-0.41*	(-0.2224, .0139)	(-0.2812, 0.0601)
Authentic	-0.04	(0.0783, 0.6022) *	(-0.1045, 0.0788)
- Control vs. Malicious envy			
Counterfeit	-0.20	(-0.0616, 0.3249)	(-0.0399, 0.1050)
Authentic	-0.17	(-0.0313, 0.1553)	(-0 0622, 0.1275)

Note. * p < .05. **p<.01. ***p<.001

Table 13. Moderation results of Experiment 3

Variable	Benign vs. Malicious Dependent variable		Control vs. Malicious Dependent variable		Control vs. Benign Dependent variable	
	Counterfeit	Authentic	Counterfeit	Authentic	Counterfeit	Authentic
Envy* Relative social status	-0.30 (0.36)	0.18 (0.38)	-0.02 (0.39)	0.06 (0.38)	0.32 (0.50)	0.05 (0.41)
Observations	211	211	210	210	212	211
R^2	0.63	0.44	0.61	0.55	0.26	0.41
F Statistic	25.26 (13,197)	12.12 (13,197)	23.59 (13,196)	18.12 (13,196)	7.80 (9, 202)	15.39 (9, 202)

Note: *p<0.1; **p<0.05; ***p<0.01

Table 14. Binary logistic regression results of Experiment 3

Dependent variable	β	Std. Error	p	CI (within 95% confidence interval)
- Benign envy & Malicious envy				
Same authentic	-0.27	0.35	0.46	(0.389, 1.535)
Higher price authentic	-0.09	0.30	0.76	(0.510, 1.635)
Lower price authentic	0.11	0.34	0.75	(0.573, 2.168)
Realistic counterfeit	0.20	0.38	0.60	(0.578, 2.596)
Lower quality counterfeit	0.64	1.24	0.61	(0.166, 21.482)
- Control vs. Benign envy				
Same authentic	-0.30	0.33	0.36	(0.389, 1.414)
Higher price authentic	0.44	0.34	0.19	(0.805, 2.992)
Higher price authentic	-0.65	0.69	0.35	(0.136, 2.042)
Lower price authentic	0.11	0.34	0.74	(0.580, 2.158)
Realistic counterfeit	-0.14	0.36	0.69	(0.433, 1.732)
Lower quality counterfeit	-0.13	0.84	0.88	(0.170, 4.549)
- Control vs. Malicious envy				
Same authentic	-0.20	0.35	0.56	(0.413, 1.611)
Higher price authentic	0.42	0.33	0.21	(0.791, 2.907)
Lower price authentic	0.09	0.75	0.81	(0.533, 2.237)
Realistic counterfeit	-0.17	0.40	0.67	(0.390, 1.834)
Lower quality counterfeit	-0.54	1.26	0.67	(0.049, 6.896)

Note. * p < .05. **p<.01. ***p<.001

Figure 1. Experiment 2 - Moderation effect of counterfeit popularity

(Benign envy vs. Malicious envy)

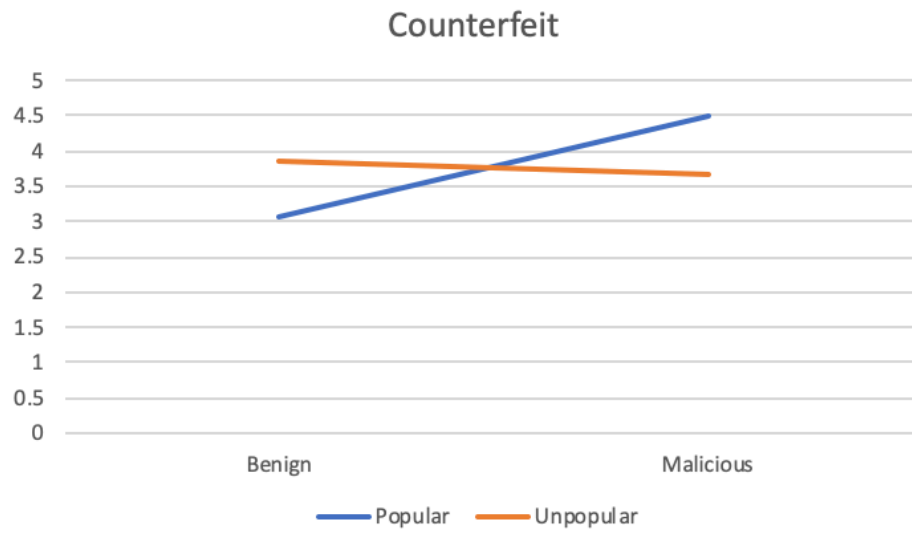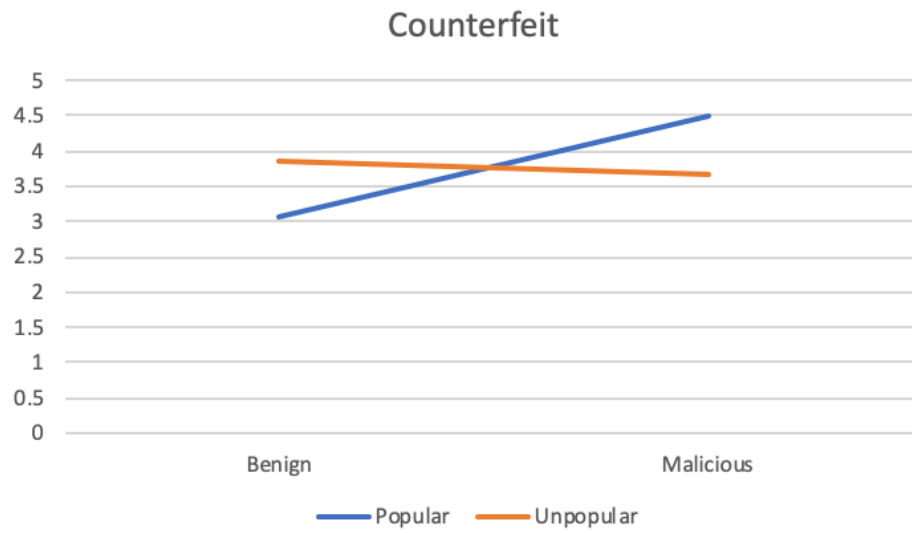Figure 2. Experiment 2 - Moderation effect of counterfeit popularity

(Control vs. Malicious envy)

APPENDICES

APPENDIX 1 - MANIPULATION

Section A: Experiment 1

A1. Envy

Benign envy condition:

Imagine that you and your friend went out for dinner. Your friend just bought a new pair of authentic limited-edition Nike shoes and wore them to the dinner. This friend told you that this is the newest edition designed by a famous luxury brand designer, and you started to feel a little jealous. After dinner, you learned that your friend worked very hard to earn the money to buy this pair of shoes. You noticed that you admire your friend. At the same time, you found that the price of the authentic limited-edition Nike shoes is a little expensive to you, but it is easy to find a pair of counterfeited limited-edition Nike shoes on the Internet.

Malicious envy scenario:

Imagine that you and your friend went out for dinner. Your friend just bought a new pair of authentic limited-edition Nike shoes and wore them to the dinner. This friend told you that this is the newest edition designed by a famous luxury brand designer, and you started to feel a little jealous. After dinner, you learned that this is just one pair of luxury shoes that was given to your friend by your friend's father. You noticed that you begrudge your friend. At the same time, you found that the price of the authentic limited-edition Nike shoes is a little expensive to you, but it is easy to find a pair of counterfeited limited-edition Nike shoes on the Internet.

Control envy scenario:

Imagine that you and your friend went out for dinner. Your friend just bought a new pair of authentic limited-edition Nike shoes and wore them to the dinner. This friend told you that this is

the newest edition designed by a famous luxury brand designer, and you feel that you really like this pair of limited-edition Nike shoes. At the same time, you found that the price of the authentic limited-edition Nike shoes is a little expensive to you, but it is easy to find a pair of counterfeited limited-edition Nike shoes on the Internet.

Section B: Experiment 2

B1. Envy

Benign envy condition:

Imagine that you and your friend went out for dinner. Your friend just bought a new authentic Louis Vuitton bag and brought it to the dinner. This friend told you that this is the newest edition designed by a famous luxury brand designer, and you started to feel a little jealous. After dinner, you learned that your friend worked very hard to earn the money to buy this bag. You noticed that you admire your friend.

Malicious envy condition:

Imagine that you and your friend went out for dinner. Your friend just bought a new authentic Louis Vuitton bag and brought it to the dinner. This friend told you that this is the newest edition designed by a famous luxury brand designer, and you started to feel a little jealous. After dinner, you learned that this is just one of the luxury bags that was given to your friend by your friend's father. You noticed that you begrudge your friend.

Control envy scenario:

Imagine that you and your friend went out for dinner. Your friend just bought a new authentic Louis Vuitton bag and brought it to the dinner. This friend told you that this is the newest edition designed by a famous luxury brand designer, and you feel that you really like this Louis Vuitton bag.

B2. Counterfeit popularity

Popular condition: Many people use counterfeited Louis Vuitton bags in life.

Unpopular condition: Very few people use counterfeited Louis Vuitton bags in life.

Section C: Experiment 3

C1. Envy

Benign envy condition:

Imagine that you and your friend Taylor went out for dinner. Taylor just bought a new authentic

Rolex watch and wore it to the dinner. Taylor told you that this is the newest edition designed by

a famous luxury brand designer, and you started to feel a little jealous. After dinner, you learned

that Taylor worked very hard to earn the money to buy the watch. You noticed that

you admire Taylor.

Malicious envy condition:

Imagine that you and your friend Taylor went out for dinner. Taylor just bought a new authentic

Rolex watch and wore it to the dinner. Taylor told you that this is the newest edition designed by

a famous luxury brand designer, and you started to feel a little jealous. After dinner, you learned

that this is just one of the luxury watches that was given to your friend by your friend's

father. You noticed that you begrudge Taylor.

Control envy scenario:

Imagine that you and your friend Taylor went out for dinner. Taylor just bought a new authentic

Rolex watch and wore it to the dinner. Taylor told you that this is the newest edition designed by

a famous luxury brand designer, and you feel that you really like this watch.

C2. Relative social status

Higher status condition: You have a more respected job and is richer than Taylor.

Lower status condition: Taylor has a more respected job and is richer than you.

Equal status condition: Taylor has the same job and income as you.

APPENDIX 2 – SCALE MEASUREMENTS

Section A: Scale for dependent variable

A1. Purchase intention (Dodd's, Monroe, and Grewal, 1991):

(scale from 1 strongly disagree to 7 strongly agree)

- *Counterfeit purchase intention*

(1) The likelihood that I would buy the counterfeited limited-edition Nike shoes is high.

(2) The probability that I would consider buying the counterfeited limited-edition Nike shoes is high.

(3) My willingness to buy the counterfeited limited-edition Nike shoes is high.

(4) I will spend a lot of effort to acquire the counterfeited limited-edition Nike shoes.

- *Luxury product purchase intention*

(1) The likelihood that I would buy the authentic limited-edition Nike shoes is high.

(2) The probability that I would consider buying the authentic limited-edition Nike shoes is high.

(3) My willingness to buy the authentic limited-edition Nike shoes is high.

(4) I will spend a lot of effort to acquire the authentic limited-edition Nike shoes.

A2. Please imagine that you are the person in the scenario and indicate below which product you want to buy the most?

(1) A pair of same authentic limited-edition Nike shoes

(2) A pair of higher price authentic limited-edition Nike shoes

(3) A pair of lower price authentic limited-edition Nike shoes

(4) A pair of realistic counterfeited limited-edition Nike shoes

(5) A pair of lower quality counterfeited limited-edition Nike shoes

Section B: Scale items for mediator

B1. Achievement motive (Adapted from Lang & Fries, 2006):

Hope for success (HS)

(1) I like situations, in which I can find out how capable I am.

(2) When I am confronted with a problem, which I can possibly solve, I am enticed to start working on it immediately.

(3) I enjoy situations, in which I can make use of my abilities.

(4) II am appealed by situations allowing me to test my abilities.

(5) I am attracted by tasks, in which I can test my abilities.

Fear of failure (FF)

(6) I am afraid of failing in something if I am not sure of succeeding.

(7) Even if nobody would notice my failure, I'm afraid of tasks, which I' m not able to solve.

(8) Even if nobody is watching, I feel quite anxious in new situations.

(9) If I do not understand a problem immediately, I start feeling anxious.

Section C: Control variables

C1. Social comparison scale (Gibbons and Buunk, 1999)

<u>Likert Scale (1= Not at all, 7= Perfectly)</u>

(1)   I often compare how my loved ones (boy or girlfriend, family members, etc.) are doing

        with how others are doing.

(2)   I always pay a lot of attention to how I do things compared with how others do things.

(3)   If I want to find out how well I have done something, I compare what I have done with

        how others have done.

(4)   I often compare how I am doing socially (e.g., social skills, popularity) with other

        people.

(5)   I often like to talk with others about mutual opinions and experiences.

(6)   I often try to find out what others think who face similar problems as I face.

(7)   I always like to know what others in a similar situation would do.

(8)   If I want to like more about something, I try to find out what others think about it.

C2. Attitude toward the brand (Adapted from Sengupta et al., 2002)

(1)   I think the limited-edition Nike shoes are very good shoes.

(2)   I think the limited-edition Nike shoes are very valuable shoes.

(3)   My opinion of the limited-edition Nike shoes is very favorable.

C3. Attitudes toward counterfeit (Tom et al., 1998)

(1)   Counterfeits of luxury brands do not hurt our country's economy.

(2)   Counterfeits of luxury brands do not hurt the companies that manufacture the legitimate product.

(3)   I like buying counterfeits of luxury brands because it is like playing a practical joke on the manufacturer of luxury brands.

(4)   I buy counterfeits of luxury brands because counterfeiters are little guys who fight big business.

(5)   I would buy counterfeits of luxury brands even if I could easily afford to buy the real luxury brands.

(6)   Buying counterfeits of luxury brands demonstrates that I am a wise shopper.

(7)   I like counterfeit goods because they demonstrate imitative abilities and ingenuity on the part of the counterfeiters.

(8)   I buy counterfeits of luxury brands because the prices of designer products are unfair and overpriced.

(9)   Counterfeits of luxury brands are just as good as designer products.

(10)   People who sell counterfeits of luxury brands are committing a crime.

(11)   People who buy counterfeits of luxury brands are committing a crime.

(12)   People who manufacture counterfeits of luxury brands are committing a crime.

C4. Luxury product ownership (Yoo and Lee, 2012)

(1)   How often do you purchase luxury products?

(2)   How many do you own authentic luxury products (Louis Vuitton, Prada, Gucci, Chanel, etc.) total? (Please calculate excluding counterfeits).

Section D: Demographic Information

D1. Your gender is:

  (1) Female   (2) Male   (3) Other

D2. Your ethnicity is:

  (1) African American   (2) Caucasian   (3) Hispanic

  (4) Asian/Pacific Islander   (5) Native American   (6) Other

D3. Your income range is:

  (1) Less than $20,000   (2) 20,000 to $34,999   (3) $35,000 to $49,999

  (4) $50,000 to $74,999   (5) $75,000 to $99,999   (6) Over $100,000

D4. What is the highest level of formal education you have completed?

  (1) Less than high school   (2) High school diploma or GED

  (3) Some college, no degree   (4) Associate degree or other two-year degree

  (5) Bachelor's degree   (6) Graduate degree

D5. What is your current age?

  (1) <18   (2) 18-24

  (3) 25-29   (4) 30-34

  (5) 35-44   (6) 45-54

  (7) 55-64   (8) 65 and over

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