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**STRINGS ATTACHED:
PRODUCT RESTRICTION, BRAND PERCEPTION, AND DOWNSTREAM
CONSEQUENCES ON CONSUMER BEHAVIOR**

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Strings Attached:

Product Restriction, Brand Perception, and Downstream Consequences on Consumer
Behavior

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A Thesis Submitted
in Partial Fulfilment of the Requirements for
the Degree of Doctor of Philosophy

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CERTIFICATE OF ORIGINALITY

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ABSTRACT

Companies frequently communicate information to consumers about product restrictions in order to help them to store, use, and/or dispose of those products properly. However, little discussion has been devoted to how consumers respond to product restrictions. In the present research, I offer a clear definition of product restrictions and reveal how and why product restrictions shape consumers' brand perceptions and downstream purchase intention and behavior, showing that product restrictions bring not only usage inconvenience, but also heightened perception of brand status. Consequently, although in general product restrictions lead to negative purchase intentions, they can encourage purchase when the brand status is desirable in the consumption context. Specifically, product restrictions enhance consumers' purchase intention and behavior when consumers have a shopping goal for high-status products and when the brand is positioned as a high-status one. These findings shed light on the impact of product restrictions, contribute to the literature on brand status and brand power, and provide significant managerial implications.

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CHAPTER 1. INTRODUCTION

In our daily lives, we frequently encounter information about product restrictions on the package of products, in the user manual, or on the product website. This information outlines various restrictions and suggestions the company makes to customers about the consumption of the product, from its storage to its usage to its disposal. For example, storage locations or temperatures of food items are indicated on the packaging such as “Please store in a cool and dry place.” There are usage restrictions on cosmetic products such as “After using the mask, please do not expose skin to direct sunlight,” and storage and disposal requirements on medical products such as “Keep refrigerated” and “Medical waste should be disposed of by professionals.”

Some of the product restriction information is provided because of legal requirements. For example, color additives must be approved by the Food and Drug Administration (FDA) before being used in food, and any food containing an unapproved color additive must be withdrawn from the market (FDA 2022a). However, more companies now provide information about product restrictions not because of legal requirements, but because of their intention to promote corporate social responsibility, guarantee product efficacy, and reduce the risk of injuries when consumers use their products in order to build a positive image (Carroll 1991; CPSC 2022). Taking a look at Sephora.com (a worldwide retailer of personal care and beauty products), one sees that 81% of their best-selling products include a description of consumption restrictions on the product pages of the website. Similarly, based on data collected from Adnams (the leading UK wine merchant and retailer), 58% of the top-selling wines in the UK contain product restriction information on either the product’s label or webpage.

Information about product restrictions plays an important role in addressing the dangers of incorrect product consumption. Since the U.S. Consumer Product Safety Commission (CPSC) first requested companies to provide product restriction information to their customers in 1972 (CPSC 2022), companies pay more attention to minimizing the risk of consumer injuries and fatalities that may arise from the misuse of their products. Over the years, CPSC constantly mandates that manufacturers place warning labels or usage instructions on product packages, explaining the potential danger and how it can be avoided. This act significantly helps prevent injuries and death due to incorrect product consumption (e.g., Adler 1989; Argo and Main 2004; Bettman, Payne, and Staelin 1986; Block and Peracchio 2006; Cox et al. 1997; Dallas, Liu, and Ubel 2015; Purmehdi et al. 2017; Shuy 1990; Thomas 1988; Torres, Sierra, and Heiser 2007; U.S. Consumer Product Safety Commission 1996; Zuckerman and Chaiken 1998). The importance of product restriction information has been recognized by companies and governments worldwide, and its nuances are widely studied in the fields of law (e.g., Agaku, Egbe, and Ayo-Yusuf 2021; Kingsley et al. 2019), medicine (e.g., Lopes et al. 2014; Mazer-Amirshahi et al. 2013), and public policy (e.g., Botti et al. 2008; Harris, Henderson, and Williams 2005). But the extant literature is mostly silent on consumers' reaction to this type of information.

In order to fill this gap and to have a better understanding of how consumers react to product restriction information, in this research, I investigate whether the presence of information about “product restriction”—which I define as the precautionary and restrictive conditions or regulations provided by manufacturers to product end-users about the storage, usage, and disposal of the product—can affect consumers' perception of the brand or product and thus their subsequent purchasing behavior. In response to the recent call for research on marketing and public policy (Martin and Scott 2021; Scott, Hassler, and Martin 2022), and based on past literature on the influence of product information on consumer judgment of

products and brands (e.g., Baskin and Liu 2021; Bolton, Warlop, and Alba 2003; Dawar and Parker 1994; Elliott and Cameron 1994; Haws, Reczek, and Sample 2017; Kardes, Posavac, and Cronley 2004; Page and Herr 2002; Pena-Marín and Bhargava 2016; Stadler Blank and Bolton 2019), product usage convenience (e.g., Berry, Seiders, and Grewal 2002; Celik 2008; Cho, Lee, and Saini 2022; De Bondt, Van Kerckhove, and Geuens 2018; Kivetz and Simonson 2003; Lee 2012; Miller and Ginter 1979; Lim, Mi, Kim 2011; Ngobo 2004), as well as the literature on brand status (e.g., Amaral and Loken 2016; Dubois, Rucker, and Galinsky 2012; Dubois, Jung, and Ordabayeva 2021; Goor et al. 2020; Hagtvedt and Patrick 2009; Han, Nunes, and Drèze 2010; Hu et al. 2018; Kumagai and Nagasawa 2017; Lee 2021; Mandel, Petrova, and Cialdini 2006; McFerran, Aquino, and Tracy 2014; O’Cass and Siahtiri 2014; Park and Hadi 2020; Seo, Septianto, and Ko 2022; Torelli, Monga, and Kaikati 2012; Wang and Muehling 2012; Wang, Xu, and Zhang 2022), I predicted and found that product restriction information decreases consumers’ judgment of product usage convenience but enhances their perception of brand status. Consequently, I showed that although in general product restriction information leads to negative purchase intentions, it can encourage purchase when the brand status is desirable in the consumption context. Specifically, product restrictions enhance consumers’ purchase intention and behavior when consumers have a shopping goal for high-status products and when the brand is positioned as a high-status brand.

In addition to responding to the call for research on marketing and public policy (Scott, Hassler, and Martin 2022), the present research provides several important contributions. First, it adds to the extant literature on the impact of product information on shaping product or brand perceptions (e.g., Baskin and Liu 2021; Bolton, Warlop, and Alba 2003; Dawar and Parker 1994; Elliott and Cameron 1994; Haws, Reczek, and Sample 2017; Pena-Marín and Bhargava 2016; Stadler Blank and Bolton 2019) by showing that product

restriction information could decrease consumers' judgment of product usage convenience but enhance their perception of brand status. Second, different from prior research studying restriction information in the areas of medicine, law, social policy, and economics (e.g., Agaku, Egbe, and Ayo-Yusuf 2021; Botti et al. 2008; Kingsley et al. 2019; Lopes et al. 2014; Mazer-Amirshahi et al. 2013), this research identifies how restriction information associated with products can affect consumers' perception of brands and products and, thereby, their subsequent purchasing behavior. Third, this research offers new insight into the brand-status literature (e.g., Dubois, Jung, and Ordabayeva 2021; Hu et al. 2018; Kumagai and Nagasawa 2017; Wang and Muehling 2012) by demonstrating a novel antecedent (i.e., product restriction information) of brand-status perception and its downstream consequences. From a managerial perspective, my research holds strong marketing implications, enhancing managers' understanding of the impact of the presence of product restriction information on consumers' product and brand perceptions and their subsequent purchasing behavior. My work suggests potential tactics for utilizing product restriction information to a product's advantage—to boost consumers' purchase intentions and actions in a variety of situations, and also provides valuable guidance on whether, how, and where to provide product restriction information to consumers.

CHAPTER 2. CONCEPTUAL BACKGROUND

2.1. INFORMATION ABOUT PRODUCT RESTRICTIONS

In today's business world, companies are increasingly making product-related information available to their customers (Baskin and Liu 2021; Sun et al. 2022), from the proper places or temperatures to store the product, to the correct ways to use it or assemble it, to the recommended methods for disposal. Accordingly, there is also a wide range of research on how various types and presentations of product-related information influence consumers' judgment of products or brands (e.g., Biswas and Sherrell 1993; Bolton, Warlop, and Alba 2003; Brucks, Zeithaml, and Naylor 2000; Dawar and Parker 1994; Elliott and Cameron 1994; Haws, Reczek, and Sample 2017; Hillenbrand et al. 2013; O'Cass and Frost 2002; Kim, Spence, and Marshall 2018; Pena-Marín and Bhargava 2016; Huang, Schrank, and Dubinsky 2004; Schreier, Fuchs, and Dahl 2012; Stadler Blank and Bolton 2019; Zhang, Li, and Ng 2021). For example, consumers perceive products described as healthier to be more expensive (Haws, Reczek, and Sample 2017). Products described as consumer-designed increase perceptions of brand innovativeness (Schreier, Fuchs, and Dahl 2012). Putting an unfamiliar foreign language alongside a familiar native language on food menus or labels enhances perceptions of authenticity and quality (Banerjee and Urminsky 2020). Round numbers used in demonstrating product characteristics cause people to perceive products' performance as long-lasting (Pena-Marín and Bhargava 2016).

What seems to be missing in this stream of research, however, is the study of how consumers react to information about product restrictions. In daily life, we frequently see product restriction information on packages or labels stating limits, dangers, and/or recommended safe practices for the ways customers should use, store, or dispose of the

product. “Refrigerate after opening” is a common restriction. As another example, you may find information on a package of honey indicating that this product should not be fed to infants. Or there may be a warning sign on a bottle of red wine advising buyers to keep the bottle horizontal and avoid vibration. How might the presence of product restriction information influence consumers’ perception of the product and the brand, and their subsequent purchasing and consumption behaviors? The current research tries to answer these questions.

Restriction refers to something that restricts, such as a regulation that restricts or restrains (Merriam-Webster Dictionary 2022). Restriction establishes limits and boundaries. It is a topic that has been widely explored in many different research areas, such as medicine, law, social policy, and economics (e.g., Agaku, Egbe, and Ayo-Yusuf 2021; Botti et al. 2008; Kingsley et al. 2019; Lopes et al. 2014; Mazer-Amirshahi et al. 2013). In the field of medicine, most restriction research is concerned with reducing the abuse or misuse of certain drugs and foods to avoid adverse effects on consumers (e.g., Lopes et al. 2014; Mazer-Amirshahi et al. 2013), like preventing children from using over-the-counter cough and cold medications (Mazer-Amirshahi et al. 2013). In terms of the legal aspect, the relevant regulatory department imposes restrictions that limit both managerial activities and consumer consumption regarding specific products (Botti et al. 2008); for example, some governments have implemented a policy to prevent youth access to flavored tobacco (Kingsley et al. 2019), and tobacco sales have been restricted to combat the COVID-19 epidemic (Agaku, Egbe, and Ayo-Yusuf 2021). Social restrictions refer to social norms that regulate appropriate and acceptable behaviors (Botti et al. 2008; Harris, Henderson, and Williams 2005), and economic restrictions include restraints on different types of banking, investment, and other corporate activity, such as loyalty programs and inventory management (Botti et al. 2008).

Overall, restriction information is used to regulate how people consume items in order to lessen or prevent unintended consequences for themselves and society.

In this research, I define ‘product restriction’ as the precautionary and restrictive conditions or regulations provided by manufacturers to product end-users about the storage, usage, and disposal of the product. Similar to restrictions in other areas mentioned above, placing restriction-related information on product packages is intended to prevent product misuse problems that lead to decreased product efficacy (e.g., exposing leather products to direct sunlight causes the leather to fade and dry out) or serious injuries to individuals (e.g., don’t smoke while using gasoline-powered tools, don’t let children play with matches). Certain consequences of misuse may apply to society and/or the environment (e.g., drunk driving, pollution, and litter). Some of this information is provided because companies are legally required to do so. For example, cosmetics must have a list of ingredients before they go to the market, and each ingredient should be mentioned individually (FDA 2022b). However, in more cases, companies now provide this information voluntarily to promote corporate social responsibility and ensure product efficacy in an effort to achieve a positive image and boost customer satisfaction (Carroll 1991; CPSC 2022).

In our daily lives, we could see that product restriction information can be displaced on different places. This information can be displayed on a warning label (Argo and Main 2004; Block and Peracchio 2006; Cox et al. 1997; Dallas, Liu, and Ubel 2015; Zuckerman and Chaiken 1998), on the product package, on the user guide, or on the product itself. Websites, YouTube videos, etc., can also elaborate on aspects of product restriction that contribute to maximization of performance.

So, which kinds of product restriction information are most familiar to consumers? To answer this question, I conducted a pilot study (N = 301) on Amazon’s Mechanical Turk (MTurk). Participants who gave irrelevant answers (e.g., “no idea” or nonsense words) were

excluded from later data analyses, leaving a final sample of 283 (54.1% female, $M_{age} = 42.00$). In this study, I gave participants the definition of product restriction (i.e., precautionary and restrictive conditions or regulations provided by manufacturers to product end-users about the storage, usage, and disposal of the product) and asked them to recall and write down examples of product restriction information they have encountered before (See Appendix A for the questionnaire used). I then categorized these examples provided by participants and constructed the following grid table about the common types of product restriction information (Table 1).

Table 1
TYPES OF PRODUCT RESTRICTION INFORMATION RECALLED BY STUDY
PARTICIPANTS

		Restriction Stage		
		Product Storage	Product Usage	Product Disposal
Restriction Target	Time	1.06% <i>Example: Keep the dessert refrigerated for 3-4 hours before eating.</i>	8.83% <i>Example: Once opened, consume the lemonade within 24 hours.</i>	0.71% <i>Example: Dispose of the milk 2 weeks after opening.</i>
	Place	56.89% <i>Example: Store the product in a cool and dry place.</i>	10.60% <i>Example: Do not use the product near an open flame.</i>	0.71% <i>Example: Take used batteries to proper disposal locations.</i>
	People	2.47%	16.25%	0.35%

		<i>Example: Keep medicines away from your children.</i>	<i>Example: This product is not suitable for pregnant women.</i>	<i>Example: Medical waste should be disposed of by professionals.</i>
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Note: 2.12% of provided product restriction information cannot be categorized into these nine categories. Please see Appendix A for a list.

The pilot study shows that companies usually provide information about product restrictions at three different stages of product consumption: product storage, product usage, and product disposal. In each consumption stage, the restriction information can be about the time, the place, or the people involved in consumption. Among these different types of product restriction information, advice about the place and conditions for product storage is the most frequently encountered (reported by 56.89% of participants), followed by restrictions on the people using the product (16.25%) and the place of product usage (10.60%).

Does information about product restriction affect consumers' brand and product judgments and their subsequent purchasing and consumption behavior? If so, how and why? In the current research, I argue that the presence of product restriction information will influence consumers' perception of product usage convenience and brand status, which in turn leads to differential consequences on product evaluation and purchasing behavior in various consumption contexts.

2.2. PRODUCT RESTRICTION AND CONSUMER PERCEPTION

Past literature shows that most products have two important dimensions: feasibility and desirability (Baskin et al. 2014, Han et al. 2019; Irmak, Wakslak, and Trope 2013; Jia et al., 2012; Liu 2008; Ratneshwar 1999; Wan and Agrawal 2011; Yang and Zhang 2018). A product's feasibility refers to its convenience, ease of use, or other non-essential aspects, such as how easy it is to use a new computer or how convenient it is to go to a restaurant; whereas a product's desirability refers to its attractiveness, quality, and core features, such as the enjoyment a computer gives its users and the quality of the food in a restaurant (Baskin et al. 2014). Consumers typically make a trade-off between feasibility and desirability when making consumption choices (e.g., Baskin et al. 2014; Goodman and Malkoc 2012; Irmak, Wakslak, and Trope 2013; Lee and Zhao 2014; Thai and Yuksel 2022; Thompson, Hamilton, and Petrova 2009; Thompson, Hamilton, and Rust 2005; Wan and Agrawal 2011; Wang, You, and Yang 2020), and this consideration would differ depending on the context. For example, in the gift-giving context, givers tend to send highly desirable gifts, whereas receivers prefer highly feasible ones (Baskin et al. 2014). In the case of product buying and selling, sellers are likely to estimate selling prices that are higher than buyers' perceived prices when a product's desirability is valued more than its feasibility (Irmak, Wakslak, and Trope 2013).

In this research, I argue that product restriction information could influence both product feasibility and desirability. On the one hand, it may decrease product's feasibility. Product restriction information, as I defined previously, is used to guide consumers in the proper consumption of products. It stipulates specific guidelines for consumers to follow, which limits their ability to store, use, or dispose of the product randomly. This type of information thereby constrains consumers' freedom in using the product and could lead to a low level of perceived convenience (Raimundo, Batalha, and Sans 2020; Smutkupt, Krairit, and Esichaikul 2010). For example, most wool sweaters have instructions on their washing

labels stating that this product must be washed by hand in cold water, which may cause inconvenience to consumers. Similarly, consumers usually find it challenging to follow the instructions for using premium coffee beans because the process requires rigorous steps and restricts the water temperature to be used for preparation.

The decreased perception of product usage convenience may result in negative downstream consequences on the product. Past research demonstrates that consumption inconvenience leads to negative impacts on consumer attitudes and purchase behavior (Celik 2008; Kivetz and Simonson 2003; Lee 2012; Rim et al. 2019; Rugimbana 1995; Wang, Lewis, and Singh 2021). For example, consumers show negative attitudes towards internet banking when they perceive the features to be challenging to use (Celik 2008). People sometimes delay purchases and return purchased products due to the difficulty of using them (Lee 2012). Even in a gifting context, consumers are less likely to receive a gift that is lower in convenience and ease of use (Rim et al. 2019). Thus, it's reasonable to predict that usage inconvenience caused by product restrictions will decrease many consumers' purchase intention and behavior.

On the other hand, product restriction could also enhance product desirability. I posit that product restriction information may have positive effects on the perception of the brand, in a cascading manner as follows: When consumers encounter product restriction information, they may feel that the brand constrains their ways of consuming the product and thereby limits their freedom of consumption. Consequently, they may perceive that the brand has greater control since it determines the manner of consumption. Past literature on the relationship between control and power suggests a positive correlation between the two (Keltner, Gruenfeld, and Anderson 2003; Hui and Bateson 1991; Galinsky, Gruenfeld, and Magee 2003; Garbinsky, Klesse, and Aaker 2014; Goodstadt and Hjelle 1973; Lee and Shrum 2012; May and Monga 2014; Murali and Yang 2013; Rucker and Galinsky 2008;

Rucker, Galinsky, and Dubois 2012; Rucker, Hu, and Galinsky 2014). Following this logic, I predict that consumers may perceive the brand providing product restriction information as having high power.

Power is often positively correlated with status (e.g., Amaral and Loken 2016; Blieszner and Adams 1992; Dubois and Anik 2020; Dubois and Ordabayeva 2015; Fiske and Berdahl 2007; French and Raven 1959; Gao, Winterich, and Zhang 2016; Goor, Keinan, and Ordabayeva 2021; Kemper 1991; Koo and Im 2019; Mazzocco et al. 2012; Michaelidou, Christodoulides, and Presi 2021; Rucker and Galinsky 2008). In most cases, people with high status have the power to control, determine, and allocate resources within a group (Blieszner and Adams 1992). Thus, it is suggested that power contributes to social status, and that people normally perceive those who have high power as having high status (Fiske and Berdahl 2007). Therefore, I further predict that the presence of product restriction information increases consumers' perception of brand status.

The increased perception of brand status may lead to positive downstream consequences on the product. Past research demonstrates that high brand status results in enhanced consumer attitudes towards the brand (Dion and Borraz 2017; Eastman et al. 2018; Giovannini, Xu, and Thomas 2015; Hagtvedt and Patrick 2009; Han, Nunes, and Drèze 2010; Hudders 2012; Kim, Park, and Dubois 2018; Nunes, Drèze, and Han 2011; Park and Hadi 2020; Latter, Phau, and Marchegiani 2010; Liu et al. 2012; Mandel, Petrova, and Cialdini 2006; Peluso et al. 2017; Sun, Bellezza, and Paharia 2021; Wilcox, Kim, and Sen 2009). For example, high-end brands significantly increase consumers' purchase intention when consumers have a desire to promote their social status (Hudders 2012). Moreover, high brand status leads to more positive brand-extension evaluations when the brand's promise of pleasure is detected by consumers (Hagtvedt and Patrick 2009). Thus, it's reasonable to

predict that the perception of high brand status induced by product restrictions increases consumers' purchase intention and behavior in certain contexts.

To validate the assumptions that product restriction information induces perceptions of product usage inconvenience and high brand status, I conducted another pilot study ($N = 201$; 54.2% female; $M_{\text{age}} = 39.36$) on MTurk. In this study, participants were randomly assigned to one of the two (product restriction: restriction vs. no restriction) conditions. They were shown a print advertisement for red wine from a fictitious brand (see Appendix B for stimuli and measurements used). In addition to the basic product information that participants read in both conditions, in the *restriction* condition, participants were additionally presented with product restrictions (i.e., its serving temperature, storage humidity, place of storage, and storage position). A pretest ($N = 100$) on a separate group of participants from the same pool validated that this manipulation indeed affects participants' perception of product restriction significantly (see Appendix B for details of this pretest).

After reading the ad, participants indicated their perceived usage convenience of the product (1 = "very inconvenient," 9 = "very convenient"; Lee and Zhao 2014) and their perception of brand status (i.e., "To what extent do you think the brand of this product is prestigious/luxury/high status?" 1 = "not at all," 9 = "very much"; Ward and Dahl 2014; $\alpha = .96$). In addition, it is possible that the presence of product restriction could lead consumers to feel that the brand is caring and acts responsibly because the information it provides can guide consumers on how to consume the product appropriately and how to best maintain it, for example. To test this possibility, I also measured participants' perception of how caring the brand is (i.e., "To what extent do you think the brand of this product is caring/thoughtful/considerate?" 1 = "not at all," 9 = "very much"; Ho and O'Donohoe 2014; $\alpha = .97$). These three sets of measurements were obtained in a randomized order.

Consistent with the expectation, results of this pilot study show that participants in the restriction condition perceived the product as less convenient in usage ($M = 2.93$, $SD = 2.14$) than did those in the no-restriction condition ($M = 6.84$, $SD = 1.59$; $F(1, 199) = 213.05$; $p < .001$, $\eta_p^2 = .52$). Participants also reported higher perception of brand status in the restriction condition ($M = 7.03$, $SD = 1.46$) compared to those in the no-restriction condition ($M = 5.93$, $SD = 1.79$; $F(1, 199) = 22.83$; $p < .001$, $\eta_p^2 = .10$). However, I did not find any significant difference between the restriction condition and no-restriction condition regarding how caring the brand is ($M_{\text{restriction}} = 4.86$, $SD = 1.91$ vs. $M_{\text{no-restriction}} = 5.13$, $SD = 1.68$; $F(1, 199) = 1.11$; $p = .29$).

Through this preliminary test, I confirm that product restriction information indeed shapes consumers' perception of product usage convenience and brand status but not the perceived brand thoughtfulness aspect.

CHAPTER 3. THE CURRENT RESEARCH

3.1. POSITIVE AND NEGATIVE INFLUNCE OF PRODUCT RESTRICTION

In the current research, I propose two sets of competing hypotheses about product restriction. On the one hand, I argue that product restriction information constrains consumers' ways of consuming the product and leads to a low level of perceived product usage convenience (e.g., Raimundo, Batalha, and Sans 2020; Smutkupt, Krairit, and Esichaikul 2010), which can result in consumers' decreased purchase intention of the product. Stating the hypotheses formally:

H1A: Information about product restriction decreases consumers' intention to purchase the product.

H2A: The negative effect of product restriction on consumers' product-purchase intention is mediated by consumers' perception of product usage convenience.

On the other hand, the perception of high brand status induced by product restrictions (e.g., Blieszner and Adams 1992; Fiske and Berdahl 2007; Rucker and Galinsky 2008) could at the same time bring positive downstream consequences: consumers' enhanced purchase intention. Stated formally:

H1B: Information about product restriction increases consumers' intention to purchase the product.

H2B: The positive effect of product restriction on consumers' product-purchase intention is mediated by consumers' perception of brand status.

Moreover, I argued previously that product restriction information from a brand makes consumers regard the brand as having a greater sense of control since it controls the ways in which people consume the product, which leads consumers to perceive that the brand has relatively high power (Keltner, Gruenfeld, and Anderson 2003; Hui and Bateson 1991; Galinsky, Gruenfeld, and Magee 2003; Garbinsky, Klesse, and Aaker 2014; Goodstadt and Hjelle 1973; Lee and Shrum 2012; May and Monga 2014; Mourali and Yang 2013; Rucker and Galinsky 2008; Rucker, Galinsky, and Dubois 2012; Rucker, Hu, and Galinsky 2014). As power is often positively correlated with status (Amaral and Loken 2016; Blieszner and Adams 1992; Dubois and Anik 2020; Dubois and Ordabayeva 2015; Fiske and Berdahl 2007; French and Raven 1959; Gao, Winterich, and Zhang 2016; Goor, Keinan, and Ordabayeva 2021; Kemper 1991; Koo and Im 2019; Mazzocco et al. 2012; Michaelidou, Christodoulides, and Presi 2021; Rucker and Galinsky 2008), following this logic, I predict that product restriction causes consumers' perception of high brand power, which further leads to enhanced perception of brand status. Stating the hypothesis formally:

H3: The effect of product restriction on consumers' perception of brand status is mediated by perceived brand power.

3.2. MARKETING IMPLICATIONS OF THE BRAND STATUS FROM PRODUCT RESTRICTION

Although I predict both positive and negative impact of product restriction information on consumers' different perceptions, I believe that the positive impact on brand-status perception is more interesting and may potentially lead to important implications in certain consumption contexts. I argue that the perceived high brand status induced by product restriction information could boost consumers' product purchase intention in the following two situations.

First, consumers' purchasing goals may be an important factor determining the impact of product restriction on product purchase intention. When consumers have a specific shopping goal in mind, they focus on goal-consistent shopping behaviors (Aarts and Elliot 2012; Bonezzi, Brendl, and De Angelis 2011; Campbell and Warren 2015; Kruglanski et al. 2002; Nikolova and Nenkov 2022; Park and Hedgcock 2016; Poynor and Haws 2009; Shteynberg and Galinsky 2011; Sela and Shiv 2009; Slabu and Guinote 2010; Wilcox et al. 2009; Van Overwalle 2009). In this situation, the goal-relevant aspects of the product become more important, whereas the weight of goal-irrelevant product aspects drops in decision-making. For instance, when consumers have a goal in mind of purchasing gifts for others, their decisions focus more on relationship maintenance (i.e., a goal-relevant aspect) than on money-saving (i.e., a goal-irrelevant aspect; Manning and Sprott 2009). On many occasions, consumers are motivated to pursue high-status products—for example, when they want to signal their status and wealth (Han, Nunes, and Drèze 2010), deter rivals in a relationship (Wang and Griskevicius 2014), or impress others by demonstrating good taste (Hudders 2012). When people have a shopping goal for high-status products, their attention and basis for purchasing decisions should be shifted towards the goal-relevant product aspects (i.e., the brand status of the product) rather than the goal-irrelevant product aspects (e.g., the convenience). Hence, I predict that the heightened perception of brand status driven by

product restriction is likely to increase product purchase intention and behavior when consumers have a shopping goal for high-status products. Putting it formally:

H4: Product restriction increases consumers' product purchase intention/behavior when they have a shopping goal for high-status products.

Second, brand positioning could be another important factor here. Brand positioning is the act of conveying the product benefits to end-users, which could be viewed as how a company wants its target customers to feel about its brand. Successful brand positioning can shift people's attention to the positioned attribute rather than focusing on every product attribute (Alden, Steenkamp, and Batra 1999; Bronnenberg and Wathieu 1996; Chintagunta 1994; da Luz, Mantovani, and Nepomuceno 2020; Doyle 1975; Fuchs and Diamantopoulos 2010; Horsky and Nelson 1992; Kotler and Keller 2016; Knox 2004; Pechmann and Ratneshwar 1991; Suja and Bettman 1989). For example, a brand's global consumer culture positioning is more welcomed by consumers from different cultural backgrounds than a narrow positioning as a local brand (Alden, Steenkamp, and Batra 1999). Moreover, a match between a brand's positioned social role and the brand's visual representations enhances consumers' attitudes towards the brand (Huang, Li, and Zhang 2013). Therefore, I hypothesize that the heightened perception of brand status driven by product restriction is likely to increase consumers' product purchase intention and behavior when the brand is positioned as a high-status brand. Stating this hypothesis formally:

H5: Product restriction increases consumers' product purchase intention/behavior when the brand is positioned as a high-status brand.

3.3. SUMMARY OF STUDIES

Through different manipulations of product restriction information on various products in a series of six studies, I demonstrate that product restriction causes a potentially damaging perception of usage inconvenience but positively enhances the perception of brand status. In Study 1, I show that both usage inconvenience and brand status mediate the effect of product restriction on purchase intention, with the former overriding the latter; consequently, product restriction leads to an overall negative purchase intention for products. Later studies focus on the effect of product restriction on brand-status perception by replicating this effect in different contexts (Studies 2A and 2B) and demonstrating the mediational role of brand power (Study 3). I then show downstream consequences of this positive effect of product restriction in Studies 4 and 5—it encourages purchase when the brand status is desirable in the consumption context. Specifically, product restriction increases consumers' product purchase intention/behavior when they have a shopping goal for high-status products (Study 4), and it increases consumers' product purchase intention/behavior when the brand is positioned as a high-status brand (Study 5). See Appendix C for a conceptual model and Appendix D for a summary of studies.

I selected the target sample size in the current research conservatively according to previous research related to brand status and purchase behavior (e.g., Hagtvedt and Patrick 2009; Han, Nunes, and Drèze 2010). Power analysis via G*Power verified that the target sample sizes in all studies are sufficient to offer adequate power to detect moderate effects (Faul et al. 2009). I reported all manipulations, included all data in the analyses, and did not exclude any participants in all studies. In addition, I asked for basic demographic information (i.e., gender and age) at the end of each study, but since they did not have any impact on the results, I will not discuss them further. Please see Appendix E for data collection information

of each study. Detailed information about stimuli, measurements, and analyses of each study can be found in the Appendix.

CHAPTER 4. STUDIES

4.1. STUDY 1

Study 1 tests the two sets of competing hypotheses about the impact of product restriction on consumers' purchase intention. I predict that product restriction will lower consumers' purchase intention given the usage inconvenience it brings; however, at the same time, I also expect to see a positive effect of product restriction on consumers' perception of brand status.

4.1.1 Method

Four hundred and one US adults (51.6% female; $M_{\text{age}} = 38.48$) participated in this study on MTurk for a nominal payment. Participants were randomly assigned to one of the two (product restriction: restriction vs. no restriction) conditions.

Participants were shown the same stimuli as used in the second pilot study. Specifically, participants were presented with a print advertisement for red wine from a fictitious brand. In addition to the basic product information that participants read in both conditions, in the *restriction* condition, participants were given information about product restrictions (i.e., its serving temperature, storage humidity, place of storage, and storage position). After reading the ad, participants indicated their purchase intention of the product (1 = "very unlikely," 9 = "very likely"; Schreier, Fuchs, and Dahl 2012). They also reported the perceived usage convenience as well as their perception of brand status ($\alpha = .97$) in a counter-balanced order, using the same scales as used in the second pilot study (See Appendix F for measurements used).

4.1.2. Results

As predicted, I found that participants in the restriction condition showed a lower purchase intention ($M = 3.76$, $SD = 2.44$) than their counterparts in the no-restriction condition ($M = 4.74$, $SD = 2.37$; $F(1, 399) = 16.59$; $p < .001$, $\eta_p^2 = .04$). Participants in the restriction condition also reported perceiving the product as less convenient to use ($M = 3.15$, $SD = 2.24$) than did those in the no-restriction condition ($M = 6.29$, $SD = 1.96$; $F(1, 399) = 224.40$; $p < .001$, $\eta_p^2 = .36$). More importantly, although product restriction decreased usage convenience, I found that it also increased the perception of brand status. Participants reported a higher perception of brand status in the restriction condition ($M = 6.20$, $SD = 1.83$) than in the no-restriction condition ($M = 5.56$, $SD = 1.77$; $F(1, 399) = 12.83$; $p < .001$, $\eta_p^2 = .03$).

I then conducted mediation analyses to test whether the perceptions of usage convenience and brand status contribute to participants' purchase intention of the product. I found that both usage convenience (Index = -1.62, SE (boot) = .21; 95% CI: [-2.0457, -1.2269]) and brand status (Index = .25, SE (boot) = .08; 95% CI: [.1041, .4290]) mediated the effect of product restriction on purchase intention when put into the mediation model (PROCESS Model 4 with 5,000 samples; Hayes 2018) simultaneously, but in different directions. Moreover, the point estimate of the difference between the two indirect effects is 1.37 ($|\text{indirect effect through usage convenience}| - |\text{indirect effect through brand status}|$), and the 95% confidence interval excluded zero [.8784, 1.8631], which suggests that the indirect effect through usage convenience is larger than the indirect effect through brand status. For details of mediation analyses, see Appendix G.

4.1.3. Discussion

Study 1 shows that product restriction leads to both a lower perception of usage convenience and a higher perception of brand status, which in turn leads to negative product-purchase intentions. Interestingly, the mediational analyses show that whereas the perceptions of both usage convenience and brand status mediate the effect, the overall effect of product restriction on purchase intention is negative, suggesting that usage convenience may be a bigger concern in regular consumption contexts.

While the negative effect of product restriction on purchase intention is consistent with the prediction, I believe that the positive impact on brand-status perception is more interesting and may potentially lead to important implications in certain consumption contexts. I therefore focus on exploring this effect further in the following studies.

4.2. STUDY 2

In Study 2, I provide additional evidence that product restriction shapes consumers' perception of brand status. In this study, I use product restriction manipulations that differ from those used in Study 1. A limitation of the manipulations in Study 1 is that a different amount of product information is presented in the two conditions, so one could argue that the observed effect is driven by the extra amount of information shown in the restriction condition. To rule out this possibility, in Study 2A, I controlled the amount of product information in the restriction and no-restriction conditions, varying only the content. In Study 2B, I took one step further to investigate the difference between high (vs. low) product restriction conditions, controlling both the amount and nature of the information presented.

4.2.1. Study 2A

Two hundred and five Hong Kong undergraduates (65.9% female; $M_{\text{age}} = 20.36$) participated in this study for partial course credit. They were randomly assigned to one of the two (product restriction: restriction vs. no restriction) conditions.

Participants in both conditions read a watch ad (see Web Appendix H for the stimuli and measurements used). The total amount of information presented in both conditions was similar. However, in the *restriction* condition, the ad contains a basic product description plus information about product restriction (i.e., compulsory procedures to store and protect the watch); whereas in the *no-restriction* condition, the ad contains a basic product description plus additional product details. To validate this manipulation, a pretest ($N = 146$) on a separate group of participants from the same pool was conducted (for details of this pretest, see Appendix H). Using the same measurement as the pretests I conducted for previous studies, I found that participants perceived the product in the restriction ad as having higher level of product restriction ($M = 6.71$, $SD = 1.23$) compared to those in the no-restriction condition ($M = 4.23$, $SD = 2.19$; $F(1, 144) = 70.49$; $p < .001$). After reading the ad, participants indicated their perception of brand status on the same 3-item scale as used in Study 1 ($\alpha = .93$).

Consistent with my previous prediction, participants reported a higher perception of brand status in the restriction condition ($M = 5.90$, $SD = 1.59$) than in the no-restriction condition ($M = 4.65$, $SD = 1.53$; $F(1, 203) = 32.90$; $p < .001$, $\eta_p^2 = .14$).

4.2.2. Study 2B

Three hundred and one US adults (55.8% female; $M_{\text{age}} = 39.13$) participated in this study via MTurk for a nominal payment and were randomly assigned to one of the two (product restriction: high restriction vs. low restriction) conditions.

Participants in both conditions read a product review of a brand of red wine from a fictitious customer (see Appendix I for the stimuli and measurements used). In the *high-restriction* condition, in addition to providing an overall rating of the product, the customer talked about the strict restrictions of storing and consuming the product (e.g., “The producer suggests that this wine must be served at a temperature of 63°F to 66°F (17°C to 19°C) in order to maintain its taste” and “You must put this wine in a cool place and keep it away from windows or other sources of natural light as required by the producer”). In the *low-restriction* condition, the customer gave the same overall product rating; however, the restrictions of storing and consuming the product that the customer mentioned were less strict (e.g., “The producer suggests that this wine can be served at a temperature of 45°F to 84°F (7°C to 29°C) in order to maintain its taste” and “You can put this wine in a cool and dark place as recommended by the producer”). Validating this manipulation, a pretest ($N = 101$) using the same measurement as the pretests I conducted for previous studies showed that participants in the high-restriction condition indeed perceived a higher level of product restriction ($M = 7.71$, $SD = 1.08$) than did those in the low-restriction condition ($M = 6.82$, $SD = 1.80$; $F(1, 99) = 9.00$; $p = .003$; for details of this pretest, see Appendix I). After reading the product review, participants indicated their perception of brand status on the same 3-item scale as I used in previous studies ($\alpha = .95$).

As expected, participants reported a higher perception of brand status in the high-restriction condition ($M = 6.82$, $SD = 1.45$) than in the low-restriction condition ($M = 6.42$, $SD = 1.60$; $F(1, 299) = 5.17$; $p = .024$, $\eta_p^2 = .02$).

4.2.3. Discussion

Studies 2A and 2B provided convergent evidence for the positive impact of product restriction on brand-status perception via different manipulations of product restriction. Replicating results of the first study, I found that the presence of (high) product restriction information increases participants' perception of brand status, compared to the situation when no (low) product restriction information is presented.

I argued previously that product restriction information from a brand makes consumers regard the brand as having a greater sense of control since it controls the ways in which people consume the product, which leads consumers to perceive that the brand has relatively high power (Keltner, Gruenfeld, and Anderson 2003; May and Monga 2014; Rucker and Galinsky 2008). As power is often positively correlated with status (Blieszner and Adams 1992; Fiske and Berdahl 2007; French and Raven 1959), following this logic, I predict that product restriction causes consumers' perception of high brand power, which further leads to enhanced perception of brand status. I test this prediction in Study 3.

4.3. STUDY 3

In this study, I further replicate the effect of product restriction information on consumers' perception of brand status and test the mediating role of perceived brand power.

4.3.1. Method

Three hundred and two adults (63.6% female; $M_{\text{age}} = 35.54$) from Prolific Academic participated in this study for a nominal payment. They were randomly assigned to one of the two (product restriction: restriction vs. no restriction) conditions.

Participants in both conditions read a coffee ad (see Appendix J for the stimuli and measurements used). The total amount of information presented in both conditions was similar. However, in the *restriction* condition, the ad contains a basic product description and information about product restriction (i.e., compulsory procedures to store and brew the coffee); whereas in the *no-restriction* condition, the ad contains a basic product description along with some product details. Using the same measurement as the pretest I conducted for previous studies, a pretest ($N = 101$) conducted on a separate group of participants from the same pool confirmed that participants perceived the product in the restriction ad as having a higher level of product restriction ($M = 6.80$, $SD = 1.43$) than did those in the no-restriction condition ($M = 2.33$, $SD = 1.83$; $F(1, 99) = 186.54$; $p < .001$; for details of this pretest, see Appendix J).

After reading the ad, participants indicated their perception of brand status on the same 3-item scale as used in Study 1 ($\alpha = .94$). They also reported their perceived brand power on three 9-point scales (“If the brand in the ad were a human, in its relationships with others it would have a great deal of power,” “If the brand in the ad were a human, in its relationships with others it would get people to listen to what it says,” and “If the brand in the ad were a human, in its relationships with others it would get others to do what it wants”; 1 = “strongly disagree,” 9 = “strongly agree”; Anderson and Galinsky 2006; $\alpha = .95$).

4.3.2. Results

As expected, participants reported a higher perception of brand status in the restriction condition ($M = 6.00$, $SD = 1.63$) than in the no-restriction condition ($M = 5.07$, $SD = 1.87$; $F(1, 300) = 21.13$; $p < .001$, $\eta_p^2 = .07$). Participants in the restriction condition also perceived

the brand as having a higher power ($M = 5.21$, $SD = 1.73$) than did those in the no-restriction condition ($M = 4.42$, $SD = 1.90$; $F(1, 300) = 14.33$; $p < .001$, $\eta_p^2 = .05$).

Importantly, bootstrapping procedures (with 5,000 samples, PROCESS Model 4; Hayes 2018) with product restriction as the independent variable, perceived brand power as the mediator, and consumers' judgment of brand status as the dependent variable yielded a significant mediation (Index = .53, SE (boot) = .15; 95% CI: [.2501, .8316]), implying that perceived brand power mediated the impact of product restriction on consumers' perception of brand status. Please see Appendix K for detailed mediation analysis.

4.3.3. Discussion

Thus, Study 3 confirmed the hypothesis 3 that the effect of product restriction on the perception of brand status was indeed driven by consumers' perceived brand power. In the following studies, I will further investigate the downstream consequences of this effect.

4.4. STUDY 4

So far, I have provided convergent evidence that the presence of information about product restriction can increase consumers' perception of brand status. What are the marketing implications of this finding? Studies 4 and 5 are designed to test the downstream consequences of this effect. In Study 4, I look at the impact of shopping goal on the effect of product restriction on consumers' purchase intention. I expect that consumers will be more interested in purchasing a product with (vs. without) restriction information when they have a shopping goal to purchase high-status products.

4.4.1. Method

Six hundred US adults (44.2% female; $M_{\text{age}} = 40.17$) participated in this study via MTurk for a nominal payment. Participants were randomly assigned to one of the four conditions under a 2 (product restriction: restriction vs. no restriction) \times 2 (shopping goal: status goal vs. control) between-subjects factorial design.

I first manipulated product restriction with a similar set of stimuli as in Study 1, while controlling the amount of information in the ads (see Appendix L for the stimuli and measurement used). In the *restriction* condition, I used exactly the same red wine ad as in Study 1; in the *no-restriction* condition, participants read the basic description of the red wine with extra product details instead of restriction information. A pretest ($N = 100$) conducted on a separate group of participants from the same pool confirmed that participants perceived the product in the restriction ad as having a higher level of product restriction ($M = 7.66$, $SD = .98$) compared to those in the no-restriction condition ($M = 4.36$, $SD = 2.82$; $F(1, 98) = 61.09$; $p < .001$; for details of this pretest, see Appendix L).

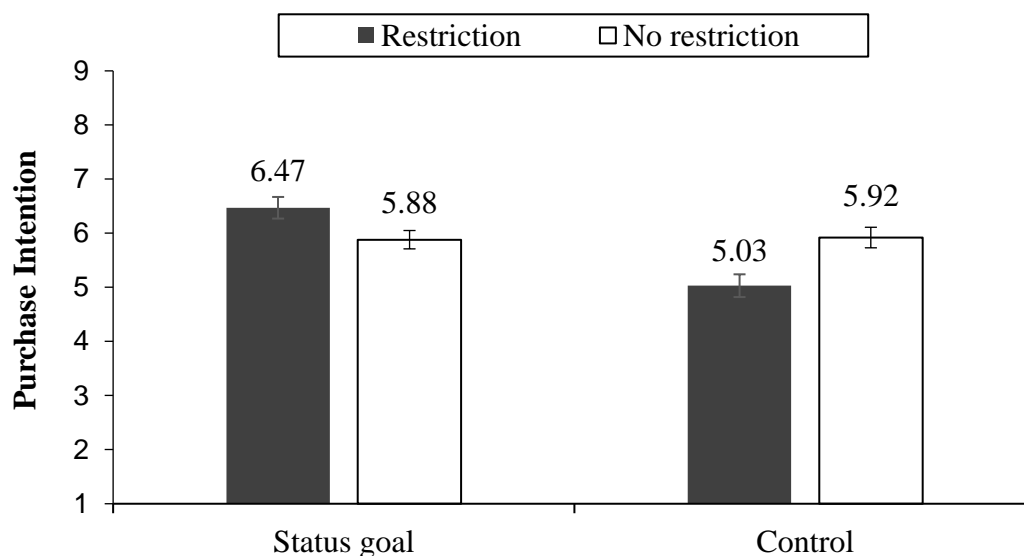
Then, to manipulate the shopping goal, in the *status-goal* condition, participants were instructed to imagine that they were planning to buy a bottle of red wine as a birthday gift for a friend, described as a person who wants to be considered as having status, wants other people to look up, and prefers products that are high-status and premium. In the *control* condition, participants were simply told to imagine that they were planning to buy a bottle of red wine as a birthday gift for a friend, with no details about the friend (see Appendix L). With this shopping goal in mind, participants indicated their intention to purchase this product on the same 9-point scale as used in Study 1.

4.4.2. Results

A 2×2 ANOVA on purchase intention yielded a significant main effect of shopping goal ($F(1, 596) = 13.25, p < .001$), qualified by a significant restriction \times goal interaction ($F(1, 596) = 14.74; p < .001, \eta_p^2 = .02$; see Figure 1). Consistent with findings in Study 1, planned contrasts revealed that in the control condition, participants reported lower intention to purchase the product when information about restrictions is presented ($M = 5.03, SD = 2.65$) than when there is no information about product restrictions ($M = 5.92, SD = 2.24; F(1, 596) = 10.79; p = .001, \eta_p^2 = .02$). More importantly, I observed a reversed effect in the status-goal condition. That is, when participants have a shopping goal for high-status products, they indicated higher intention to purchase the product when information about product restrictions is presented ($M = 6.47, SD = 2.42$) than when there is no information about product restrictions ($M = 5.88, SD = 2.08; F(1, 596) = 4.60; p = .032, \eta_p^2 = .01$).

Figure 1

STUDY 4: MEAN PURCHASE INTENTION AS A FUNCTION OF PRODUCT RESTRICTION AND SHOPPING GOAL



4.4.3. Discussion

Consistent with the expectation, Study 4 demonstrated the downstream consequence of the observed effect of product restriction on the perception of brand status. I found that consumers with a shopping goal to purchase high-status products showed a higher intention to purchase the product with information about restrictions than when there is no information about product restriction.

4.5. STUDY 5

In Study 5, I looked at another context in which the observed effect of product restriction on the perception of brand status is likely to impact consumers' product purchase intention, that is, when the brand positions itself as a high-status brand. I expect consumers to have a higher intention to purchase the product with information about product restrictions than when there is no such information, when the product comes from a high-status brand.

In Study 5, I test this possibility with participants' incentive-compatible real behavior. Given that I used a female-specific facial mask as the focal product in this study, only female participants were recruited.

4.5.1. Method

Three hundred and seventy-nine female Chinese undergraduates ($M_{\text{age}} = 19.88$) took part in this study for a nominal payment. They were randomly assigned to one of the four

conditions under a 2 (product restriction: high restriction vs. low restriction) \times 2 (brand positioning: status positioning vs. control) between-subjects factorial design.

Participants were told that they were participating in a marketing survey conducted by a purported skincare brand from New Zealand: SYRENE. Participants were presented with a facial mask ad from the brand. I manipulated both product restriction and brand positioning in the ad (see Appendix M for translated stimuli and brand-positioning manipulation used). To manipulate brand positioning, in the *status-positioning* condition, the brand was described in the ad as a high-end skincare brand comparable to market leaders such as La Mer and Chanel, whereas in the *control* condition, the ad offered no additional information about the brand status. In the *high-restriction* condition, the ad contained a basic product description and information about product restrictions (e.g., “store the mask in the refrigerator and keep the temperature within 4–10°C” and “use the mask once a week”); whereas in the *low-restriction* condition, the ad contained a basic product description and less strict information about restrictions on storing and consuming the product (e.g., “store the mask in a cool place” and “use the mask when you need to moisturize your face”). A pretest (N = 177) conducted on a separate group of participants from the same pool confirmed that they perceived the product in the high-restriction condition as having a higher level of product restriction (M = 6.02, SD = 1.26) than in the low-restriction condition (M = 5.23, SD = 1.87; $F(1, 175) = 10.99$; $p = .001$; for details of this pretest, see Appendix M).

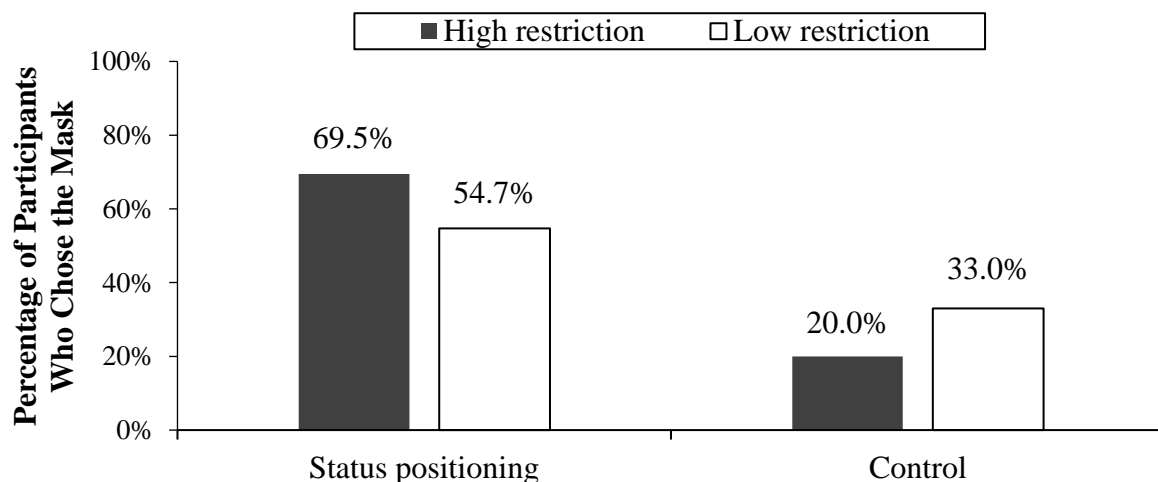
After reading the ad and writing down their thoughts about the product in the ad, participants were told that as a token of thanks for their participation, they would be put into a lucky draw with an opportunity to win either a free box of facial masks as shown in the ad, or a cash gift of RMB100 (approx. USD15). Participants then indicated which prize they would like to receive if they won; winners of the lucky draw received their selected prizes after the study (see Appendix M for detailed instructions).

4.5.2. Results

A binary logistic regression on participants' choice yielded a significant main effect of brand positioning ($b = 1.52$, $SE = .22$, Wald $\chi^2(1) = 46.40$, $p < .001$; $OR = 4.56$), qualified by a significant restriction \times positioning interaction ($b = -1.31$, $SE = .45$, Wald $\chi^2(1) = 8.32$, $p = .004$; $OR = .27$; see Figure 2). Consistent with findings in previous studies, in the control condition, participants in the high-restriction condition were less likely to choose the product (20.0%) over cash, compared to their counterparts in the low-restriction condition (33.0%; $b = -.68$, $SE = .34$, Wald $\chi^2(1) = 4.03$, $p = .045$; $OR = .51$). More importantly, I observed a reversed effect in the status-positioning condition. That is, when the brand was positioned as a high-end brand, participants in the high-restriction condition were more likely to choose the product (69.5%) over cash, compared to their counterparts in the low-restriction condition (54.7%; $b = .63$, $SE = .30$, Wald $\chi^2(1) = 4.34$, $p = .037$; $OR = 1.88$).

Figure 2

STUDY 5: PRODUCT CHOICE AS A FUNCTION OF PRODUCT RESTRICTION AND BRAND POSITIONING



4.5.3. Discussion

With incentive-compatible real behavior, Study 5 again demonstrated the downstream consequence of the observed effect of product restriction on the perception of brand status. In a lucky draw, I found that consumers were more likely to choose the product with high-restrictive information about product restrictions (over cash) than when there was low-restrictive information about product restrictions, when the brand is positioned as high-end.

CHAPTER 5. GENERAL DISCUSSION

5.1. SUMMARY

Overall, the prevalence of product restriction information aims to regulate consumers' proper consumption of products in order to mitigate or avoid unintended consequences. As policymakers create rules for marketers to follow, marketers also do their best to place restriction information on product packages or labels to get consumers' attention. The present research serves to provide a comprehensive understanding of how consumers react to information about product restrictions and why. Through six studies, including an incentive-compatible choice study, my premise is supported by convergent evidence. I first demonstrate that product restriction leads to a perception of reduced usage convenience as well as a perception of increased brand status; however, product restriction information evokes an overall negative response from consumers (Study 1). As I am more interested in the impact of product restriction information on brand-status perception, I further replicate this effect with different products and different product restriction manipulations in Studies 2A and 2B. Study 3 verifies that the impact of product restriction on a perception of heightened brand status is mediated by the perception of high brand power. Furthermore, the positive effect of product restriction on brand-status perception enhances consumers' purchase intention and behavior when they have a shopping goal to purchase status-oriented products (Study 4), and when the brand is positioned as a high-status brand (Study 5).

5.2. THEORETICAL CONTRIBUTIONS

I believe that this research makes several significant contributions to existing research. Past literature has shown that product information on packaging or labels can influence product or brand perceptions (e.g., Banerjee and Urminsky 2020; Baskin and Liu 2021; Bolton, Warlop, and Alba 2003; Elliott and Cameron 1994; Haws, Reczek, and Sample 2017; Pena-Marin and Bhargave 2015; Schreier, Fuchs, and Dahl 2012; Stadler Blank and Bolton 2019), such as consumers' price judgments (Baskin and Liu 2021), the perception of brand innovativeness (Schreier, Fuchs, and Dahl 2012), and the perception of product authenticity and quality (Banerjee and Urminsky 2020). The current research enriches this stream by showing how product restriction information shapes consumers' perceptions of product usage convenience and brand status. I further demonstrate the mechanism and downstream consequences of the impact of product restriction information on brand-status perception.

Different from prior research in which restriction information was examined in the areas of medicine, law, social policy, and economics (e.g., Agaku, Egbe, and Ayo-Yusuf 2021; Botti et al. 2008; Kingsley et al. 2019; Lopes et al. 2014; Mazer-Amirshahi et al. 2013), in the current research, I explore how restriction information associated with products can affect consumers' judgments and downstream purchase behaviors. To the best of my knowledge, I am the first to introduce the concept of restriction into the marketing context. In this paper, I investigate consumers' understanding of product restriction information by categorizing such information into restrictions about different consumption stages, such as product storage, usage, and disposal. Furthermore, at each consumption stage, restriction information may be about the time, the place, and/or the user. Through these efforts, the current research provides a comprehensive and analytical grid to facilitate our understanding of this relevant construct. I offer a complete picture by demonstrating negative as well as positive impacts of product restriction information on consumers. That is, I find that product

restriction leads to both a perception of usage inconvenience and a perception of high brand status.

The current research enhances our understanding of the broad literature on brand status (e.g., Dion and Borraz 2017; Dubois, Jung, and Ordabayeva 2021; Dubois and Ordabayeva 2015; Eastman et al. 2018; Giovannini, Xu, and Thomas 2015; Hagtvedt and Patrick 2009; Han, Nunes, and Drèze 2010; Hu et al. 2018; Hudders 2012; Kim, Park, and Dubois 2018; Kumagai and Nagasawa 2017; Nunes, Drèze, and Han 2011; Park and Hadi 2020; Latter, Phau, and Marchegiani 2010; Lee 2021; Liu et al. 2012; Mandel, Petrova, and Cialdini 2006; Peluso et al. 2017; Rucker and Galinsky 2008; Sun, Bellezza, and Paharia 2021; Wang and Muehling 2012; Wilcox, Kim, and Sen 2009). Prior literature in this area has shown that consumers' perception of brand status could be influenced by many factors, such as brand emotionality (Lee 2021), store location (Kumagai and Nagasawa 2017), and consumers' level of involvement (O'Cass and Choy 2008). This research reveals another novel antecedent of consumers' perception of brand status: information about product restriction. The present research also adds to the literature on brand power (e.g., Beck, Rahinel, and Bleier 2020; Dubois and Anik 2020; Kirmani and Shiv 1998; Sundar and Noseworthy 2014), by identifying it as an important mechanism in explaining why brand status can be shaped by product restriction.

Last but not least, my research augments the research on the influence of brand status on consumers' purchase intention and behavior (e.g., Hagtvedt and Patrick 2009; Wang and Muehling 2012; Ward and Dahl 2014). Prior studies have shown that some contextual factors could trigger consumers' motivations to purchase a product that elicits a perception of elevated brand status (e.g., Han, Nunes, and Drèze 2010; Wang and Griskevicius 2014; Ward and Dahl 2014)—for example, social rejection encourages people to pursue and purchase high-status brands (Ward and Dahl 2014)—and the willingness to signal wealth and status

enhances people's desire to buy luxury products (Han, Nunes, and Drèze 2010). The current research adds to this field of study by showing that the perception of high brand status coupled with product restriction information boosts consumers' purchase intention and behavior when they have a status-oriented shopping goal or when the brand is positioned as a high-status brand.

5.3. MANAGERIAL IMPLICATIONS

This research offers strong practical implications for policymakers and marketers. As shown in the current set of studies, information about product restriction in general leads to negative effects on the product. Thus, companies may want to think carefully about whether, when, and where they provide product restriction information to their customers. Specifically, for the product restriction information required by the law or the regulations that must be indicated on the product, the current research guides marketers on how to reveal such information to avoid negative outcomes. Whereas, for the information that is voluntarily provided by the company, my research may guide marketers on how to frame the product restriction information to increase sales.

One good practice that companies could learn from the leading fashion brands Hermès and Chanel is that they usually do not place restriction information about how to store or protect their products on the product package. Instead, they provide such information in user manuals or customer emails. Thus, the product restriction information is still delivered to customers, but it may not lead to the detrimental perception of usage inconvenience during consumer decision-making.

Product restriction information may help high-end brands more than low-end brands, as consumers are more willing to sacrifice usage convenience when they seek high-status

products (Hudders 2012). For example, the luxury cookware brand Le Creuset has a huge following, though the brand has many restrictions on the cleaning and washing of their products, such as “Do not plunge a hot pan into cold water” or “Fill the pan with warm water and let soak for 15 to 20 minutes.” Similarly, washing labels such as “Do not wring” or “Gently hand wash garment inside out” on a Dior skirt may not deter consumers’ strong desire to buy it, but the same labels on a Uniqlo skirt might.

As suggested in Study 4, consumers are more likely to purchase products with restriction information when they have a specific shopping goal for high-status products. Inspired by this finding, companies might consider creating a context to arouse consumers’ motivation to purchase high-status products or selling their products in places where people intend to buy high-end products. As discussed in past research, people have a desire for high-status products when they want to reward themselves for significant achievements or to signal status (Desmichel, Ordabayeva, and Kocher 2020; Mandel, Petrova, and Cialdini 2006). Brands could consider endowing their products with sentimental value (Yang and Galak 2015) to signal achievement or status—for example, emphasizing that their products are specially designed for circumstances like “celebrating the first job” or “best gift for your beloved” or highlighting the product as specially designed for a particular group of people is beneficial for marketers to promote products with restriction information. Moreover, choosing the right outlet like selling high-end products in the business center where people desire to purchase high-end products is another feasible approach.

The current research mainly looks at the impact of product restriction information at the product choice and purchasing stages of consumer behavior. At these stages, I show that adding product restriction information or making it salient could increase perceptions of usage inconvenience and brand status, which have consequences on consumers’ choice and purchase of the product. However, product restriction information may have further impacts

on consumers even after using the products. For instance, after consumers have purchased the product, it is likely that the concerns about product usage convenience will loom larger than brand status, because the former is more strongly related to daily usage of the product. Given that product restriction information reduces product usage convenience, it's possible this may have negative long-term impacts as well, such as on repeated purchase and brand loyalty. I suggest that companies consider these long-term impacts when designing the marketing strategies related to product restrictions.

5.4. LIMITATIONS AND FUTURE RESEARCH

Some of the control conditions used in the studies may introduce potential confounds. For instance, one can argue that in the second pilot study and Study 1, the restriction and no-restriction conditions provided different amounts of information in the stimuli. In Studies 2A, 3, and 4, the restriction and no-restriction conditions differ in information content (but not length). However, in this research I used a variety of control conditions across studies to demonstrate the robustness of the impact of product restriction information. For example, I controlled the amount of information presented in the stimuli in Studies 2A, 2B, 3, and 4. I also controlled the information content in Studies 2B and 5. Thus, it's difficult to attribute the effect I observed to any particular confound across studies.

In most of the studies (except for Study 2B), I used sentences in imperative form to present the product restriction information. It is possible to argue that the assertive tone of the stimuli may lead to the perception of high brand power and status rather than the product restriction information itself. However, in this research, different combinations of tones were used across our studies. For example, in the second pilot study, Study 1, and Study 4, I used the word "must" in the product restriction information, while in Studies 2A, 2B, and 3, I

mixed the words like “must” and “should” with terms such as “need” and “suggest”.

Moreover, in Study 5, the tone of the restriction information was controlled; the only difference between the two (high restriction vs. low restriction) conditions was the content of the restriction information. Therefore, I believe that the effect of language tone should be independent of the effect driven by product restriction information.

In the current research, the manipulations of product restrictions focus mostly on the storage and usage of the product, given that the pretest showed that they are the major types of product restrictions that consumers encounter in daily life (together they account for 96.10% of the cases in our pilot study). However, product restriction can also occur at the product-disposal stage, especially for medical and chemical products. For example, hospitals require disposal of used needles at assigned collection sites. Or the user guide of many laptop brands such as Apple indicates that an old battery of the laptop should be sent to proper disposal locations. Similarly, the manipulations of product restrictions focus mostly on restrictions related to time and place, although product restrictions may also involve the product users. For example, many dietary supplements indicate on their packages that the product is not suitable for pregnant women. And we often see a caution on the package of medical products saying, “Keep out of the reach of children.” Future research may want to explore whether different types of consumer restriction information lead to different impacts.

In this research, I only used a prevention-focused way (i.e., avoiding negative outcomes) to manipulate product restriction. However, in reality, a promotion-focus way (i.e., achieving positive outcomes) is also commonly seen in our daily lives. Although I predict that the ways to manipulate product restriction could not influence the observed effect, future research may want to test both ways to provide a more rigorous design.

Besides the moderators that I mentioned in this research, some other potential moderators are also worth exploring. For example, the source of information may be a

potential moderator. This effect may be attenuated when the product restriction information comes from the retailer not the manufacturer. In this case, consumers will not attribute the perception of brand status to the brand, which may turn off the observed effect.

Moreover, individual differences may also moderate this effect. The effect of product restriction on the perception of brand status may be more salience for people with less (vs. more) product-related knowledge, as they are more likely to be influenced by the product restriction information. In addition, product restriction is more likely to result in enhanced purchase intention and behavior for people who have a high (vs. low) need for status, and for those who focus on product desirability (vs. feasibility). Future studies may want to test these possibilities.

The subject of product restriction is an intriguing topic that has important implications but is rarely investigated in the marketing field. There is still much to discover regarding the consequences of product restriction, and the current work ideally will serve as a foundation for fruitful future research in this direction.

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APPENDICES

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APPENDIX A

STUDY DETAILS IN THE FIRST PILOT STUDY

1. Questionnaire

Product restriction is defined as the precautionary and restrictive conditions or regulations provided by manufacturers to product end-users about the storage, usage, and disposal of the product.

In our daily lives, we often see product restrictions on the package of product, in the user manual, or on the product website. For example, on the honey jar, we often see instructions like this “please store it in a cool and dry place”. On the coffee bean bags, we usually see instructions such as “the brewer should maintain a water temperature between 195 to 205°F for extraction”.

Now, please write down one example of product restriction information that you occurred in your daily life other than the two examples mentioned before. Please indicate both specific product restriction information and on what product you saw this restriction information.

2. Types of Product Restriction Information



Restriction Target	Restriction Stage	N (total = 283)	Percentage	Information Provided
Time	Product Storage	3	1.06%	Example: Keep the dessert refrigerated for 3-4 hours before eating.
	Product Usage	25	8.83%	Example: Once opened, consume the lemonade within 24 hours.
	Product Disposal	2	0.71%	Example: Dispose of the milk 2 weeks after opening.
Place	Product Storage	161	56.89%	Example: Store the product in a cool and dry place.
	Product Usage	30	10.60%	Example: Do not use the product near an open flame.
	Product Disposal	2	0.71%	Example: Take used batteries to proper disposal locations.
People	Product Storage	7	2.47%	Example: Keep medicines away from your children.

	Product Usage	46	16.25%	Example: This product is not suitable for pregnant women.
	Product Disposal	1	0.35%	Example: Medical waste should be disposed of by professionals.
Others	Information that cannot be categorized into the above nine categories	6	2.12%	<ol style="list-style-type: none"> 1. Do not consume without mixing with water. 2. Particular blend of higher-ethanol fuel is only for road vehicles. 3. Do not mix with other household products. 4. Do not place items more than 400°F on the surface. 5. Use only premium-grade fuel. 6. Take multivitamins daily with food.

APPENDIX B

STIMULI, MEASUREMENTS, AND PRETEST IN THE SECOND PILOT STUDY

1. Stimuli Used in the Second Pilot Study

<p>Restriction Condition</p>	<p style="text-align: center;">DAMJANIĆ®</p> <p>Full-bodied red wine blend with a rich bouquet of black cherries, tobacco and cocoa.</p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; margin: 10px 0;"> <p>Attention:</p> <ul style="list-style-type: none"> ❖ Must be served at a temperature of 63°F to 66°F (17°C to 19°C). ❖ Must be stored at the humidity level between 60 to 62 percent. ❖ Must keep this wine away from windows or other sources of natural light. ❖ Must keep this wine bottle horizontally and protect it from vibration. </div> 
<p>No-restriction Condition</p>	<p style="text-align: center;">DAMJANIĆ®</p> <p>Full-bodied red wine blend with a rich bouquet of black cherries, tobacco and cocoa.</p> 

2. Measurements Used in the Second Pilot study

- Perceived usage convenience (Lee and Zhao 2014)

To what extent do you think this product is convenient to use (including storage and usage)?

(1 = very inconvenient, 9 = very convenient)

- Perceived brand status (Ward and Dahl 2014)

To what extent do you think the brand of this product is prestigious/luxury/high status?

(1 = not at all, 9 = very much)

- Perceived brand thoughtfulness (Ho and O'Donohoe 2014)

To what extent do you think the brand of this product is caring/thoughtful/considerate?

(1 = not at all, 9 = very much)

3. Pretest Questions and Results in the Second Pilot Study

Question:

Product restriction is defined as the precautionary and restrictive conditions or regulations provided by manufacturers to product end-users about the storage, usage, and disposal of the product.

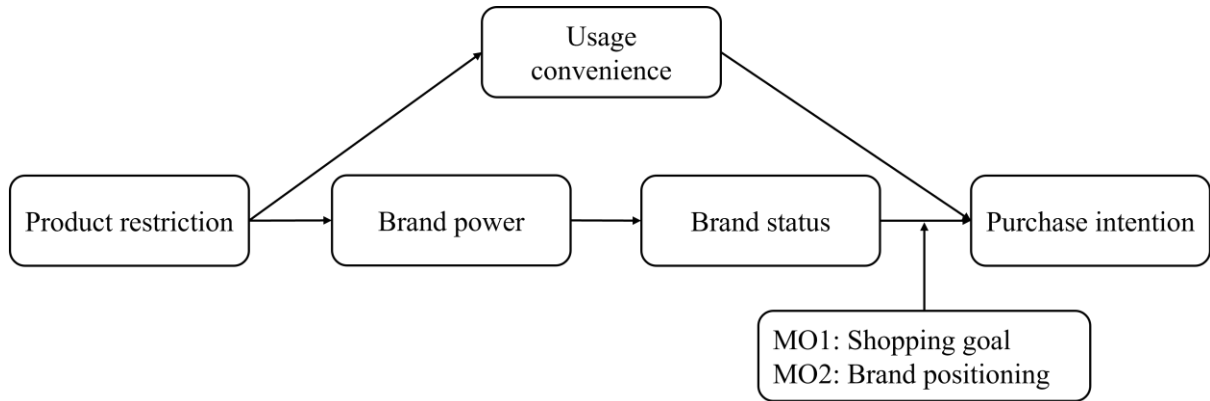
Based on the definition given above, please rate the level of restriction of this product.

(1 = “very low,” 9 = “very high”)

Results:

	Condition	Mean	SD	F-Value	<i>P</i> -Value
The Second Pilot	Restriction	7.82	1.17	F(1, 98) = 269.18	<i>p</i> < .001
Study	No restriction	2.40	2.02		
N = 100					

APPENDIX C
CONCEPTUAL MODEL



APPENDIX D
SUMMARY OF STUDIES

Study	Main Purposes	Product Type	Study Design	DV(s)	Main Results
1	Testing competing hypotheses	Red wine	2-cell (product restriction: restriction vs. no restriction)	Purchase intention	<p>Purchase intention: $F(1, 399) = 16.59; p < .001$</p> <p>Usage convenience: $F(1, 399) = 224.40; p < .001$</p> <p>CI: -2.0457 to -1.2269</p> <p>Brand status: $F(1, 399) = 12.83; p < .001$</p> <p>CI: .1041 to .4290</p>
2A	Demonstrating the main effect that product restriction increases	Watch	2-cell (product restriction: restriction vs. no restriction)	Brand status	$F(1, 203) = 32.90; p < .001$

2B	perception of brand status	Red wine	2-cell (product restriction: high restriction vs. low restriction)	Brand status	$F(1, 299) = 5.17; p = .024$
3	Demonstrating the mediating role of brand power	Coffee grounds	2-cell (product restriction: restriction vs. no restriction)	Brand status	Brand status: $F(1, 300) = 21.13; p < .001$ Brand power: $F(1, 300) = 14.33; p < .001$ CI: .2501 to .8316
4	Examining downstream consequence on purchase intention	Red wine	2 (product restriction: restriction vs. no restriction) \times 2 (shopping goal: status goal vs. control)	Purchase intention	In status-goal condition: $F(1, 596) = 4.60; p = .032$ In control condition: $F(1, 596) = 10.79; p = .001$ Interaction: $F(1, 596) = 14.74; p < .001$

5	Examining downstream consequence on real product choice	Facial mask	2 (product restriction: high restriction vs. low restriction) \times 2 (brand positioning: status positioning vs. control)	Real product choice	<p>In status-positioning condition: $b = .63$, $SE = .30$, $Wald \chi^2(1) = 4.34$, $p = .037$</p> <p>In control condition: $b = -.68$, $SE = .34$, $Wald \chi^2(1) = 4.03$, $p = .045$</p> <p>Interaction: $b = -1.31$, $SE = .45$, $Wald \chi^2(1) = 8.32$, $p = .004$</p>
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APPENDIX E

DATA COLLECTION INFORMATION

Data for the two pilot studies were collected via Amazon's Mechanical Turk (MTurk) in the spring of 2022. Data in Study 1 was collected on MTurk in the winter of 2021. Data in Study 2A was collected at a major university in Hong Kong in the Autumn of 2020. Data in Study 2B was collected on MTurk in the winter of 2020. Data in Study 3 was collected via Prolific Academic (Prolific) in the winter of 2020. Data used in Study 4 was collected via MTurk in the winter of 2020. And finally, data used in Study 5 was collected at a major Chinese university in the winter of 2021.

I reported all manipulations, included all data in the analyses, and did not exclude any participants in all studies. In addition, I asked for basic demographic information (such as gender and age) at the end of each study.

APPENDIX F
MEASUREMENTS USED IN STUDY 1

- Purchase intention (Schreier, Fuchs, and Dahl 2012)

If you had the opportunity, how likely do you want to buy this bottle of wine?

(1 = very unlikely, 9 = very likely)

- Perceived usage convenience (Lee and Zhao 2014)

To what extent do you think this product is convenient to use (including storage and usage)?

(1 = very inconvenient, 9 = very convenient)

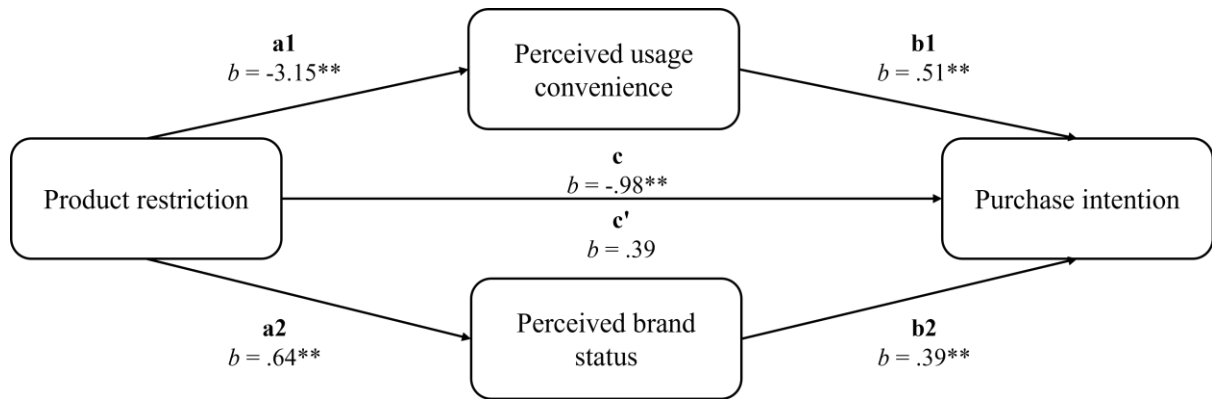
- Perceived brand status (Ward and Dahl 2014)

To what extent do you think the brand of this product is prestigious/luxury/high status?

(1 = not at all, 9 = very much)

APPENDIX G

MEDIATION ANALYSES IN STUDY 1





Note: $*p < .05$, $**p < .01$

APPENDIX H

STIMULI, MEASUREMENTS, AND PRETEST IN STUDY 2A

1. Stimuli Used in Study 2A

<div>Restriction</div> <div>Condition</div>	<div>UNIZO®</div> <div><div>❖ Black Leather Wrist Automatic Watch</div><div>❖ Minimalist And Ultra Thin Design</div></div> <div><div>ATTENTION</div><div><div>❖ Need to be stored in a streamlined box with separated compartment.</div><div>❖ Must keep the watch in a watch winder when not in use.</div><div>❖ Should apply leather cream to the strap every two weeks.</div></div></div> <div></div>
<div>No-restriction</div> <div>Condition</div>	<div>UNIZO®</div> <div><div>❖ Black Leather Wrist Automatic Watch</div><div>❖ Minimalist And Ultra Thin Design</div></div> <div><div>PRODUCT DETAILS</div><div><div>❖ The model number of this watch is 2150 in a round shape.</div><div>❖ The color of the strap is black and its strap width is 22mm.</div><div>❖ The case size of this watch is 42mm with 12mm thickness.</div></div></div> <div></div>

2. Measurements Used in Study 2A

- Perceived brand status (Ward and Dahl 2014)

To what extent do you think the brand of this product is prestigious/luxury/high status?

(1 = not at all, 9 = very much)

3. Pretest Questions and Results in Study 2A

Question:

Product restriction is defined as the precautionary and restrictive conditions or regulations provided by manufacturers to product end-users about the storage, usage, and disposal of the product.

Based on the definition given above, please rate the level of restriction of this product.

(1 = “very low,” 9 = “very high”)







Results:

	Condition	Mean	SD	F-Value	<i>P</i> -Value
Study 2A	Restriction	6.71	1.23	F(1, 144) = 70.49	<i>p</i> < .001
N = 146	No restriction	4.23	2.19		

APPENDIX I

STIMULI, MEASUREMENTS, AND PRETEST IN STUDY 2B

1. Stimuli Used in Study 2B

<p>High-restriction Condition</p>	<div data-bbox="555 546 651 568">DAMJANIĆ®</div> <div data-bbox="544 613 655 1043">  </div> <div data-bbox="740 539 900 577">   </div> <div data-bbox="740 591 842 613">★★★★☆</div> <div data-bbox="740 627 1324 678"> <p>Reviewed in the United States on August 27, 2020 Full-bodied red wine Rich bouquet of black cherries, tobacco and cocoa</p> </div> <div data-bbox="740 707 1358 763"> <p>I purchased this wine online in August. In general, I think it is a very nice wine. The producer is very specific about how to store the wine:</p> </div> <div data-bbox="740 775 1358 822"> <p>The producer suggests that this wine must be served at a temperature of 63°F to 66°F (17°C to 19°C) in order to maintain its taste.</p> </div> <div data-bbox="740 833 1358 880"> <p>You must put this wine in a cool place and keep it away from windows or other sources of natural light as required by the producer.</p> </div> <div data-bbox="740 891 1358 963"> <p>The producer also highlights that this wine must be stored at a humidity level between 60 to 62 percent because the humidity is another important aspect of wine storage.</p> </div> <div data-bbox="740 974 1358 1046"> <p>In addition, the producer says that the right orientation for this wine bottle is at a slight angle, rather than completely horizontal, and it must be protected from vibration.</p> </div>
<p>Low-restriction Condition</p>	<div data-bbox="555 1180 651 1202">DAMJANIĆ®</div> <div data-bbox="544 1247 655 1677">  </div> <div data-bbox="740 1227 900 1265">   </div> <div data-bbox="740 1279 842 1301">★★★★☆</div> <div data-bbox="740 1314 1324 1366"> <p>Reviewed in the United States on August 27, 2020 Full-bodied red wine Rich bouquet of black cherries, tobacco and cocoa</p> </div> <div data-bbox="740 1395 1358 1451"> <p>I purchased this wine online in August, generally, I think this wine tastes good. The producer is very specific about how to store the wine:</p> </div> <div data-bbox="740 1462 1358 1509"> <p>The producer suggests that this wine can be served at a temperature of 45°F to 84°F (7°C to 29°C) in order to maintain its taste.</p> </div> <div data-bbox="740 1520 1295 1565"> <p>You can put this wine in a cool and dark place as recommended by the producer.</p> </div> <div data-bbox="740 1576 1331 1648"> <p>The producer also suggests that this wine can be stored at a humidity level between 50 to 72 percent because the humidity is another aspect of wine storage.</p> </div> <div data-bbox="740 1659 1347 1682"> <p>In addition, the producer says that normally keep this wine bottle horizontal.</p> </div>

2. Measurements Used in Study 2B

- Perceived brand status (Ward and Dahl 2014)

To what extent do you think the brand of this product is prestigious/luxury/high status?

(1 = not at all, 9 = very much)

3. Pretest Questions and Results in Study 2B

Question:

Product restriction is defined as the precautionary and restrictive conditions or regulations provided by manufacturers to product end-users about the storage, usage, and disposal of the product.

Based on the definition given above, please rate the level of restriction of this product.

(1 = “very low,” 9 = “very high”)

Results:

	Condition	Mean	SD	F-Value	<i>P</i> -Value
Study 2B	High restriction	7.71	1.08	F(1, 99) = 9.00	<i>p</i> = .003
N = 101	Low restriction	6.82	1.80		

APPENDIX J

STIMULI, MEASUREMENTS, AND PRETEST IN STUDY 3

1. Stimuli Used in Study 3

<p>Restriction Condition</p>	 <p>SENSORY LAB®</p> <p>This coffee is rich in aroma, and tastes like orange blossom and caramel.</p> <div> <p>ATTENTION</p> <ul style="list-style-type: none"> ❖ Need to be stored in an airtight opaque (light blocking) container. ❖ Keep away from light and heat. ❖ The brewer should maintain a water temperature between 195 to 205 °F (about 90 to 96 °C) for extraction. </div>
<p>No-restriction Condition</p>	 <p>SENSORY LAB®</p> <p>This coffee is rich in aroma, and tastes like orange blossom and caramel.</p> <div> <p>PRODUCT INFORMATION</p> <ul style="list-style-type: none"> ❖ Product dimensions: 5.9 x 3.5 x 7.9 inches ❖ Package size: 500g coffee grounds ❖ Roast degree: balanced, full-bodied medium roast ❖ Brewing method: espresso machine, French press, electric brewer, pour over and cold brew </div>

2. Measurements Used in Study 3

- Perceived brand status (Ward and Dahl 2014)

To what extent do you think the brand of this product is prestigious/luxury/high status?

(1 = not at all, 9 = very much)

- Perceived brand power (Anderson and Galinsky 2006)
 - If the brand in the ad were a human, in its relationships with others it would have a great deal of power.
 - If the brand in the ad were a human, in its relationships with others it would get people to listen to what it says.
 - If the brand in the ad were a human, in its relationships with others it would get others to do what it wants.

(1 = strongly disagree, 9 = strongly agree)

3. Pretest Questions and Results in Study 3

Question:

Product restriction is defined as the precautionary and restrictive conditions or regulations provided by manufacturers to product end-users about the storage, usage, and disposal of the product.

Based on the definition given above, please rate the level of restriction of this product.

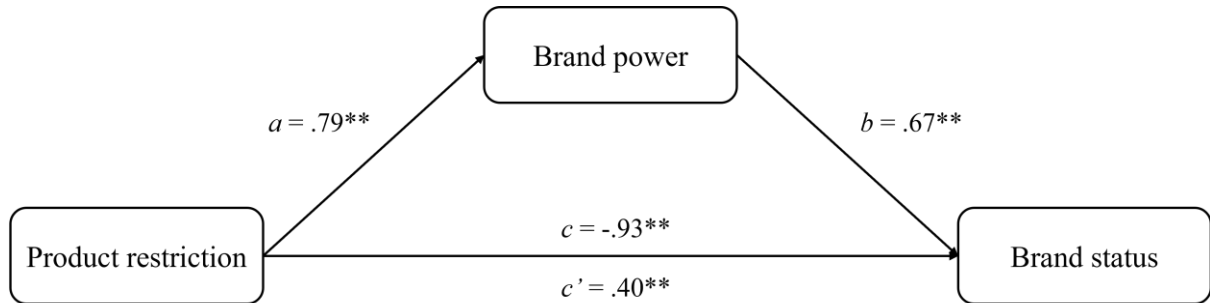
(1 = “very low,” 9 = “very high”)

Results:

	Condition	Mean	SD	F-Value	<i>P</i> -Value
Study 3	Restriction	6.80	1.43	F(1, 99) = 186.54	<i>p</i> < .001
N = 101	No restriction	2.33	1.83		

APPENDIX K

MEDIATION ANALYSIS IN STUDY 3





Note: $*p < .05$, $**p < .01$

APPENDIX L

STIMULI, SHOPPING-GOAL MANIPULATION, MEASUREMENT, AND PRETEST IN STUDY 4

1. Stimuli Used in Study 4

<p>Restriction Condition</p>	<p style="text-align: center;">DAMJANIĆ®</p> <p>Full-bodied red wine blend with a rich bouquet of black cherries, tobacco and cocoa.</p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; margin: 10px auto; width: 80%;"> <p style="text-align: center;">ATTENTION</p> <ul style="list-style-type: none"> ❖ Must be served at a temperature of 63°F to 66°F (17°C to 19°C). ❖ Must be stored at the humidity level between 60 to 62 percent. ❖ Must keep this wine away from windows or other sources of natural light. ❖ Must keep this wine bottle horizontal and protect it from vibration. </div> 
<p>No-restriction Condition</p>	<p style="text-align: center;">DAMJANIĆ®</p> <p>Full-bodied red wine blend with a rich bouquet of black cherries, tobacco and cocoa.</p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; margin: 10px auto; width: 80%;"> <p style="text-align: center;">PRODUCT INFORMATION</p> <ul style="list-style-type: none"> ❖ The type of this wine is red wine. ❖ The bottle size is 75cl. ❖ The alcohol content of this wine is about 13.2 to 14.5 vol %. ❖ The total acidity of this wine is about 5.00 to 6.00 g/l and the residual sugar in this wine is around 2.0 to 4.5 g/l. </div> 

2. Shopping-Goal Manipulation Used in Study 4

Status-goal Condition	<p>Now imagine that you are looking for a bottle of wine to send to one of your friends as a birthday gift.</p> <p>You know that your friend always wants to be considered as someone who has status and people would look up to. He/she is keen on high-status and premium products. When he/she makes the purchase, he/she always seeks branded and luxury products to show his/her good taste, no matter how inconvenient or troublesome to use and protect them.</p>
Control Condition	<p>Now imagine that you are looking for a bottle of wine to send to one of your friends as a birthday gift.</p>

3. Measurement Used in Study 4

- Purchase intention (Schreier, Fuchs, and Dahl 2012)

If you had the opportunity, how likely do you want to buy this bottle of wine for your friend?

(1 = very unlikely, 9 = very likely)

4. Pretest Questions and Results in Study 4

Question:

Product restriction is defined as the precautionary and restrictive conditions or regulations provided by manufacturers to product end-users about the storage, usage, and disposal of the product.

Based on the definition given above, please rate the level of restriction of this product.

(1 = “very low,” 9 = “very high”)

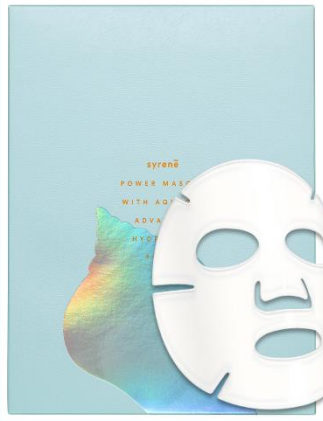
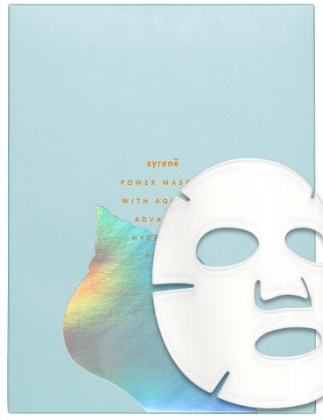
Results:

	Condition	Mean	SD	F-Value	<i>P</i> -Value
Study 4	Restriction	7.66	.98	F(1, 98) = 61.09	<i>p</i> < .001
N = 100	No restriction	4.36	2.82		

APPENDIX M

STIMULI, BRAND-POSITIONING MANIPULATION, INSTRUCTIONS, AND PRETEST IN STUDY 5

1. Stimuli Used in Study 5 (Translated version)

<p>High-restriction Condition</p>	<div>  <p>syrenë</p> <p><i>Hydrating, diminishing signs of dark spots, brightening</i></p> <div> <p>ATTENTION</p> <ul style="list-style-type: none"> ■ Store the mask in the refrigerator and keep the temperature within 4 - 10°C. ■ Use the mask once a week. ■ After using the mask, please do not expose to direct sunlight. ■ After using the mask, please do not use any skincare products that are rich in chemical ingredients. </div> </div>
<p>Low-restriction Condition</p>	<div>  <p>syrenë</p> <p><i>Hydrating, diminishing signs of dark spots, brightening</i></p> <div> <p>ATTENTION</p> <ul style="list-style-type: none"> ■ Store the mask in a cool place. ■ Use the mask when you need to moisturize your face. ■ After using the mask, you can conduct other skincare procedures. </div> </div>

2. Brand-Positioning Manipulation Used in Study 5 (Translated version)

Status- positioning Condition	<p>Compared with the products of ordinary skincare brands, the products of high-end skincare brands have higher efficacy, more expensive ingredients, and more refined categories. Some famous high-end skincare brands on the current market include La Mer, Chanel, Dior, SK-II, and so on.</p> <p>Now, we are showing you the ad of the brand Syrene, which is a high-end skincare brand from New Zealand.</p>
Control Condition	<p>Now, we are showing you the ad of the brand Syrene which is a skincare brand from New Zealand.</p>

3. Instructions Used in Study 5

As a token of thanks for your participation, we will conduct a lucky draw after collecting all the responses. We will select three winners based on your student ID, and the winners could win either a free box of facial masks as shown in the ad or a cash gift of RMB100.

Please indicate which prize you would like to receive if they won the lucky draw.

A. a box of facial mask from syrene

B. a cash gift of RMB100

4. Pretest Questions and Results in Study 5

Question:

Product restriction is defined as the precautionary and restrictive conditions or regulations provided by manufacturers to product end-users about the storage, usage, and disposal of the product.

Based on the definition given above, please rate the level of restriction of this product.

(1 = “very low,” 9 = “very high”)

Results:

	Condition	Mean	SD	F-Value	<i>P</i> -Value
Study 5	High restriction	6.02	1.26	F(1, 175) = 10.99	<i>p</i> = .001
N = 177	Low restriction	5.23	1.87		