When Are Consumers Willing to Choose Brands Associated with Dissociative Groups?

Authors: Yang Defeng, Jiang Xia, Song Qianwen, Jiang Xia

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Abstract

When are consumers willing to choose brands associated with dissociative groups? The influence mechanism of dissociative groups on consumers requires further investigation. Based on psychological reactance theory, this paper investigates the impact of freedom threat on consumers' choice of brands associated with dissociative groups through three experiments. The results reveal that when consumers perceive high freedom threat, their willingness to choose brands associated with dissociative groups increases, with psychological reactance playing a mediating role, and narrative and self-esteem levels moderating the aforementioned relationship. Narrative information reduces the psychological reactance generated by freedom threat among subjects, thereby decreasing their willingness to choose brands associated with dissociative groups. For individuals with high self-esteem, they are more willing to choose brands associated with dissociative groups under high freedom threat; whereas for individuals with low self-esteem, there is no significant difference in preference for dissociative group-associated brands under high/low freedom threat conditions. This study explores the impact of freedom threat on consumer brand preferences, enriching research on dissociative groups and brand choice; it verifies the mediating role of psychological reactance between freedom threat and preference for dissociative group-associated brands, thereby deepening psychological reactance theory. This paper offers valuable guidance for enterprises on how to attract out-group consumers while retaining their existing customer base.

Full Text

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further investigation. Based on psychological reactance theory, this paper explores the effect of freedom threat on consumers' choice of brands associated with dissociative groups through three experiments. The results show that when consumers perceive high freedom threat, their willingness to choose brands associated with dissociative groups increases, with psychological reactance playing a mediating role. Narrative and self-esteem level moderate this relationship. Narrative information reduces the psychological reactance generated by freedom threat, thereby decreasing consumers' preference for brands associated with dissociative groups. For individuals with high self-esteem, high freedom threat increases preference for brands associated with dissociative groups; for those with low self-esteem, there is no significant difference in preference for such brands under high versus low freedom threat. This research explores the impact of freedom threat on consumer brand preferences, enriching the literature on dissociative groups and brand choice; it verifies the mediating role of psychological reactance between freedom threat and preference for dissociative group-associated brands, deepening psychological reactance theory. The findings offer practical guidance for companies seeking to attract out-group consumers while retaining their existing customer base.

Keywords: dissociative groups; freedom threat; psychological reactance; narrative; self-esteem

Introduction

In marketing practice, based on the positive influence of reference groups on consumer purchase decisions, companies often appeal to or position themselves toward specific groups, establishing brand connections to highlight brand positioning and benefits. When selecting associated groups for their brands, companies typically choose consumers'membership groups (groups to which individuals belong) or aspirational groups (groups individuals wish to join), while avoiding dissociative groups (out-groups individuals wish to avoid association with) as brand associations (White & Dahl, 2006).

Compared to brands associated with dissociative groups, individuals hold more positive attitudes toward brands associated with their membership or aspirational groups (Escalas & Bettman, 2003, 2005). Consumers are more willing to use brands consistent with their membership or aspirational groups to construct, strengthen, or express self-image (Alvarez & Fournier, 2016). To avoid having the image and negative associations of dissociative groups transferred to them (White & Dahl, 2007), consumers often avoid purchasing brands adopted by dissociative groups (Escalas & Bettman, 2005). For example, male consumers typically avoid purchasing products associated with female consumers out of concern for self-image (White & Dahl, 2006). Previous research has examined consumers'positive attitudes toward membership group brands and negative attitudes toward dissociative groups, as well as how individuals may adopt behaviors consistent with dissociative groups to repair self-evaluation and maintain group image (Shalev & Morwitz, 2012; White, Simpson, & Argo, 2014). However, the

conditions under which consumers are willing to choose brands associated with dissociative groups and the underlying mechanism of how dissociative groups influence consumer choice intentions require further investigation.

We propose that when individuals' freedom is restricted by certain factors, they may be willing to choose brands associated with dissociative groups. In real life, people often experience restricted freedom—for example, middle school students must wear uniforms, employees must comply with company regulations. When certain freedoms are restricted, individuals' perceived freedom threat generates a motivation to restore the threatened or deprived freedom, a motivational state known as "psychological reactance" (S. S. Brehm & J. W. Brehm, 2013). To restore threatened freedom, individuals engage in unconventional behaviors. For instance, students under strict discipline prefer unusual hairstyles or clothing; consumers in confined spaces restore freedom through diversified choices (Levav & Zhu, 2009).

Consumers typically avoid using brands associated with dissociative groups to signal their lack of association with those groups (Escalas & Bettman, 2005). When individual freedom is threatened, the motivational state of psychological reactance may prompt consumers to adopt unconventional consumption behaviors (such as adopting brands associated with dissociative groups) to cope with freedom threat. In practice, many brands target specific consumer groups, but in expanding their customer base, out-group consumers may view the brand' s target group as a dissociative group. How to reduce consumers' negative attitudes toward such brands and expand the customer base are challenges brand managers face (Erdem & Sun, 2002). Based on this, this paper examines the effect of freedom threat on consumer brand preferences, the mediating role of psychological reactance, and the moderating roles of narrative and self-esteem.

2.1 Brands Associated With Dissociative Groups

Brands possess not only functional value but also attributes that satisfy consumers' social identity needs and help them express themselves. For example, brands can serve as identity signals (Berger & Heath, 2008) and convey self-concept (Escalas & Bettman, 2003). Previous research shows that to demonstrate what type of person they are, consumers adopt brands whose image is consistent with their membership or aspirational groups (Alvarez & Fournier, 2016), while typically evaluating brands or behaviors associated with dissociative groups more negatively (Berger & Heath, 2008). When consumption of a product can be used to infer individual identity, consumers' avoidance attitude is stronger (Berger, 2008). Additionally, when individuals are concerned about self-image (White & Dahl, 2006) or when their group identity is activated (White & Dahl, 2007), consumers' negative attitudes toward brands associated with dissociative groups are also stronger.

Under certain circumstances, scholars have found that consumers may also adopt behaviors consistent with dissociative groups. For example, Choi and Winterich

(2013) found that activating individuals' moral identity significantly improves attitudes toward out-group brands. Shalev and Morwitz (2012) discovered the "low-status user effect," where when observers unexpectedly discover a person of low socioeconomic status using a product not positioned for that group, influenced by "comparison-driven self-evaluation," observers' purchase intention for that product significantly increases. White, Simpson, and Argo (2014) also found that when consumers learn in public that dissociative groups perform excellently in certain positive behaviors, their group image is threatened, leading them to actively participate in those behaviors. Thus, consumers adopt behaviors consistent with dissociative groups for different reasons, either to restore personal self-evaluation or based on group motivations.

2.2 Freedom Threat and Its Effects

Freedom threat refers to any force consciously imposed by others or organizations that makes it difficult for individuals to exercise a certain freedom. In daily life, we often experience restricted freedom—wanting to do something but being unable to due to certain constraints. For example, employees must wear uniforms, certain areas of restaurants are not open to ordinary customers. People believe they have the freedom to engage in certain activities; if this freedom is deprived or threatened, individuals will generate a motivational state to restore that freedom, namely "psychological reactance" (S. S. Brehm & J. W. Brehm, 2013). Psychological reactance generally triggers three types of freedom-restoring behaviors: first, directly engaging in behavior opposite to the threat direction, called "boomerang effects" ; second, engaging in other freedom behaviors similar to the threatened freedom to indirectly restore the sense of freedom, namely "related-boomerang effects" ; and third, indirectly restoring freedom by observing others, namely "vicarious-boomerang effects" (S. S. Brehm & J. W. Brehm, 2013; Quick & Stephenson, 2008). In different situations, to restore their threatened freedom, individuals will adopt direct or indirect behaviors. Which behavior individuals ultimately adopt depends on the cost and feasibility of restoring freedom and the intensity of psychological reactance (Quick & Stephenson, 2007).

Previous research has found that people are more willing to establish associations with positive groups and tend to avoid contact with dissociative groups (White & Dahl, 2006, 2007). We argue that in situations where freedom is threatened, consumers' preference for brands associated with dissociative groups is caused by conscious imposition from others or organizations that threatens individual freedom. When the difficulty or loss of direct resistance is substantial, individuals often do not directly engage in behavior opposite to the freedom threat but instead restore freedom through indirect means, namely "related-boomerang effects" (S. S. Brehm & J. W. Brehm, 2013). The generation of psychological reactance prompts consumers to attempt to cope with freedom threat through specific product choices or purchase decisions (Kivetz, 2005). For example, when relatively narrow spaces make consumers feel restricted, consumers

perceive their uniqueness and freedom as being violated, generating psychological reactance. However, since changing the physical space size is too difficult, consumers instead seek diversified and unique choices for self-expression to indirectly restore freedom (Levav & Zhu, 2009).

Under freedom threat situations, the attractiveness of previously avoided choices/behaviors significantly increases (Buboltz, Thomas, & Donnell, 2002). Choosing products associated with dissociative groups can serve as a powerful resistance to group norms of one' s own group and as a means of self-expression and indirect freedom acquisition. Additionally, research finds that the stronger individuals perceive freedom threat, the higher the degree of psychological reactance generated (LaVoie, Quick, Riles, & Lambert, 2017). Therefore, when individuals perceive high freedom threat, they prefer brands associated with dissociative groups to restore freedom. Accordingly, we propose hypothesis H1:

H1: Compared with low freedom threat situations, under high freedom threat, individuals prefer brands associated with dissociative groups.

2.3 The Mediating Role of Psychological Reactance

As previously discussed, when individuals perceive freedom threat in daily life, they generate an aversive motivational state aimed at restoring threatened or deprived freedom, namely psychological reactance (S. S. Brehm & J. W. Brehm, 2013). The generation of psychological reactance leads individuals to adopt a series of measures at the cognitive and behavioral levels to restore freedom (Quick & Stephenson, 2008), including expressing positions opposite to the threat or practicing opposite behaviors, practicing other freedoms related to the threatened freedom, or denigrating the threat source. For example, receiving persuasive information about the harms of smoking makes individuals perceive freedom threat, leading them to adopt opposite positions on smoking behavior (LaVoie et al., 2017).

The generation of psychological reactance enhances individuals' motivation to restore freedom, increasing the perceived attractiveness of prohibited or discouraged behaviors while decreasing the attractiveness of encouraged or recommended behaviors (Buboltz et al., 2002). When individuals' freedom is threatened, psychological reactance significantly increases the attractiveness of behaviors opposed by group norms that individuals previously avoided. At this time, compared with brands associated with membership groups that are usually more favored, although brands associated with dissociative groups carry certain negative meanings, they become more attractive to individuals whose freedom is threatened. In freedom threat situations, due to psychological reactance, consumers prefer brands associated with dissociative groups to restore threatened freedom. We argue that when individuals' freedom is threatened, they tend to choose brands associated with dissociative groups, and this "related-boomerang effect" occurs because freedom threat triggers psychological reactance. Accordingly, we propose hypothesis H2:

H2: Individuals under high (vs. low) freedom threat prefer products associated with dissociative groups because high (vs. low) freedom threat triggers higher levels of psychological reactance. Psychological reactance mediates the relationship between freedom threat and preference for brands associated with dissociative groups.

2.4 The Moderating Role of Narrative

To further verify H2 regarding the mediating role of psychological reactance, this paper introduces a variable that can reduce psychological reactance: narrative. Narrative refers to describing coherent events or experiences in story form, including the beginning, process, and ending in the description (Hinyard & Kreuter, 2007). Non-narrative methods present information based on arguments and propositions without narrative characteristics (Kreuter et al., 2007; Murphy, Frank, Chatterjee, & Baezconde-Garbanati, 2013). Previous research shows that narrative can reduce the degree of "resistance" to information (Bilandzic & Busselle, 2013). For example, compared with defensive advertising, narrative advertising leads to more positive consumer evaluations and attitudes toward brands (Dunlop, Wakefield, & Kashima, 2010). This is because narrative affects information recipients through both cognitive and emotional aspects (Van Laer, De Ruyter, Visconti, & Wetzels, 2013). Narrative draws the audience's attention "into" the narrative world and elicits emotional reactions (Green & Brock, 2000). As a positive emotional experience, narrative weakens anger emotions associated with reactance (Green, Chatham, & Sestir, 2012).

Additionally, during the process of receiving narrative information, people consume more cognitive resources for resistance or critical thinking (Chang, 2009), making it difficult for information recipients to raise opposing viewpoints (Van Laer et al., 2013). When people focus on narrative information, their ability to resist that information is hindered (Bilandzic & Busselle, 2013), effectively reducing individuals' resistance psychology to information (Moyer-Gusé & Nab, 2010; Quick, Shen, & Dillard, 2013). Non-narrative methods present information to individuals primarily based on rational arguments and factual evidence (Durkin, Biener, & Wakefield, 2009). Compared with narrative, non-narrative methods cannot generate positive emotions in information recipients but instead prompt individuals to systematically process information, making them more likely to develop resistance psychology to persuasive information (Hinyard & Kreuter, 2007). Therefore, compared with narrative individuals, freedom threat makes non-narrative individuals less accepting of information, leading them to make more unconventional responses after experiencing freedom threat.

For the narrative group, after experiencing freedom threat, the ability to resist information is hindered (Bilandzic & Busselle, 2013), making brands associated with dissociative groups less attractive (Buboltz et al., 2002). For the non-narrative group, the non-narrative information transmission method makes individuals more resistant to freedom threat information, more inclined to restore threatened freedom through unconventional behaviors. Compared with brands

associated with membership groups that are usually more favored, choosing brands associated with dissociative groups is considered relatively unconventional behavior. Freedom threat makes non-narrative group individuals prefer brands associated with dissociative groups to cope with freedom threat. Therefore, for narrative group individuals, high (vs. low) freedom threat does not affect preference for brands associated with dissociative groups; conversely, for non-narrative group individuals, high (vs. low) freedom threat leads to greater preference for brands associated with dissociative groups.

Furthermore, narrative moderates the level of psychological reactance individuals experience after freedom threat. Compared with non-narrative transmission methods, narrative effectively reduces individuals' resistance psychology by consuming resistant cognitive resources (Moyer-Gusé & Nab, 2010; Quick, Shen, & Dillard, 2013), and even replaces negative emotions with positive emotions through emotional involvement, thereby reducing reactance (Green, Chatham, & Sestir, 2012), resulting in lower levels of psychological reactance and lacking stronger motivation to choose brands associated with dissociative groups. For non-narrative group individuals, high (vs. low) freedom threat triggers stronger psychological reactance, giving individuals higher motivation to reduce psychological reactance caused by freedom threat and restore freedom by choosing brands associated with dissociative groups. Therefore, non-narrative individuals have higher preference for brands associated with dissociative groups. Accordingly, we propose hypotheses H3 and H4:

H3: Narrative moderates the effect of freedom threat on preference for brands associated with dissociative groups. For narrative group individuals, high (vs. low) freedom threat does not significantly increase preference for brands associated with dissociative groups; for non-narrative group individuals, high (vs. low) freedom threat leads to greater preference for brands associated with dissociative groups.

H4: The mediating effect of psychological reactance between freedom threat and preference for brands associated with dissociative groups is moderated by narrative. For narrative group individuals, the mediating effect of psychological reactance is not significant; for non-narrative group individuals, the mediating effect of psychological reactance is significant.

2.5 The Moderating Role of Self-Esteem

Will consumers' preference for brands associated with dissociative groups under freedom threat differ due to individual differences? Freedom in psychological reactance theory is interpreted as "a subjective perception of reality that develops over time," indicating that individuals' perceptions of freedom regarding specific behaviors and their importance vary (Quick & Stephenson, 2008). Research shows that psychological reactance varies due to individual personality traits, leading people to engage in different freedom-restoring behaviors (Brown, Finney, & France, 2011). This paper introduces the variable of self-esteem to

further examine the effect of individual differences on preference for brands associated with dissociative groups.

Self-esteem is an important component of self-concept, representing individuals' evaluation and judgment of themselves, which influences how individuals respond to their surrounding environment (Kernis, 2003). When facing self-threat, individuals with different self-esteem levels adopt different attribution styles and behavior patterns. High self-esteem individuals tend to make external attributions when encountering self-threat and actively adopt compensation strategies to reduce harm from the threat; low self-esteem individuals tend to make internal attributions for negative factors and adopt compliance strategies after encountering self-threat (Vandellen, Campbell, Hoyle, & Bradfield, 2011).

When facing freedom threat, self-esteem level will moderate individuals' responses to freedom threat. Compared with low self-esteem individuals, high self-esteem individuals experience higher threats to their self-esteem under high (vs. low) freedom threat, leading them to engage in more unconventional responses. After experiencing freedom threat, high self-esteem individuals tend to adopt certain strategies to restore freedom; low self-esteem individuals tend to comply. Brands associated with dissociative groups carry certain negative meanings but help high self-esteem individuals whose freedom is threatened to restore freedom, making such brands more attractive to high self-esteem individuals but less attractive to low self-esteem individuals. Therefore, for high self-esteem individuals, high (vs. low) freedom threat leads to greater preference for brands associated with dissociative groups; conversely, for low self-esteem individuals, high (vs. low) freedom threat does not affect preference for brands associated with dissociative groups.

Furthermore, high self-esteem individuals possess higher self-concept clarity and certainty (Heimpel, Wood, Marshall & Brown, 2002), a trait that makes them value freedom more. After experiencing freedom threat, high self-esteem individuals have stronger reactance to freedom threat; brands associated with dissociative groups can alleviate psychological reactance caused by freedom threat and help individuals restore freedom. Therefore, after experiencing freedom threat, high self-esteem individuals have higher levels of psychological reactance and consequently prefer brands associated with dissociative groups. Low self-esteem individuals are more likely to show compliance or approval attitudes when facing freedom threat (Wood & Forest, 2016), resulting in lower levels of psychological reactance and lacking motivation to reduce psychological reactance by choosing brands associated with dissociative groups. Accordingly, we propose hypotheses H5 and H6:

H5: Individual self-esteem level moderates the effect of freedom threat on preference for brands associated with dissociative groups. For high self-esteem individuals, high (vs. low) freedom threat leads to greater preference for brands associated with dissociative groups; for low self-esteem individuals, high (vs. low) freedom threat does not significantly increase preference for brands associated with dissociative groups.

H6: The mediating effect of psychological reactance between freedom threat and preference for brands associated with dissociative groups is moderated by self-esteem level. For high self-esteem individuals, the mediating effect of psychological reactance is significant; for low self-esteem individuals, the mediating effect is not significant.

Pilot Study

Before the main experiments, a pilot study was conducted to determine the associated groups used in the formal experiments. The pilot study consisted of two parts: first, to obtain nominations of associated groups; second, to determine the associated groups for the formal experiments.

3.1 Screening of Associated Groups

A questionnaire survey was administered to university students. A total of 45 questionnaires were distributed, and after excluding incomplete and unqualified responses, 39 valid questionnaires were obtained, including 18 males and 21 females. Following the method of Escalas and Bettman (2005), participants were first asked to read supplementary explanations about "membership groups," "dissociative groups," and "neutral groups," then fill in one "membership group," one "dissociative group," and one "neutral group."

First, participants were asked to fill in a membership group. For membership groups, the explanation provided was: "You currently belong to this group and consider yourself a member of it. You think you are this type of person, get along well with members of this group, and find other members of this group very similar to you." Next, participants were asked to fill in a dissociative group. For dissociative groups, the explanation was: "You currently do not belong to this group. You do not think you are this type of person, do not want to be associated with members of this group, and do not want others to associate you with this group. However, this group is a closely-knit group with high similarity among members." Finally, participants were asked to fill in a neutral group. For neutral groups, the explanation was: "You currently do not belong to this group and do not consider yourself a member of it. You do not think you are this type of person and get along moderately with members of this group. However, this group is a closely-knit group with high similarity among members." The most nominated membership group was student group; dissociative groups were, in order, homosexual group, "sissy" group, and migrant worker group; neutral groups were, in order, vegetarian group, housewife group, and outdoor travel group.

3.2 Determining Brand Associated Groups for Formal Experiments

A questionnaire survey was administered to university students. A total of 55 questionnaires were distributed, and after excluding incomplete and unqualified responses, 48 valid questionnaires were obtained, including 23 males and 25

females. Participants were asked to complete scales measuring belongingness and desirability of the aforementioned groups (Escalas & Bettman, 2003, 2005). Belongingness items included: "I think I am this type of person" ; "I belong to this group" ; "I feel relaxed and natural when interacting with people in this group." Desirability items included: "I admire this type of person" ; "I wish to become a member of this group." A 7-point scale was used (1 = strongly disagree; 7 = strongly agree).

The average of the three belongingness items represented participants' belongingness score (= 0.87), and the average of the two desirability items represented participants' desirability score (= 0.92). In terms of belongingness, participants' belongingness to the three groups differed significantly (F(2, 141) = 212.52, p < 0.001, ^{2} = 0.75). Belongingness to the student group (M_student = 6.09) was significantly higher than to the vegetarian group (M_vegetarian = 3.46, t(95) = 28.33, p < 0.001, Cohen' s d = 2.63); student group belongingness was significantly higher than to the homosexual group (M_student = 6.09, M_homosexual = 1.94, t(95) = 17.25, p < 0.001, Cohen' s d = 4.51), and vegetarian group belongingness (M_vegetarian = 3.46) was significantly higher than homosexual group belongingness (M_homosexual = 1.94, t(95) = 20.60, p < 0.001, Cohen' s d = 1.46). In terms of desirability, participants' desirability for the three groups differed significantly (F(2, 141) = 157.38, p < 0.001, ^{2} = 0.67). Desirability for the student group (M_student = 5.27) was significantly higher than for the vegetarian group (M_vegetarian = 3.75, t(95) = 33.69, p < 0.001, Cohen' s d = 1.42) and the homosexual group (M_homosexual = 1.59, t(95) = 16.02, p < 0.001, Cohen' s d = 3.87), and vegetarian group desirability (M_vegetarian = 3.75) was significantly higher than homosexual group desirability (M_homosexual = 1.59, t(95) = 17.51, p < 0.001, Cohen' s d = 2.08). Therefore, we ultimately selected the student group as the membership group, the homosexual group as the dissociative group, and the vegetarian group as the neutral group.

Experiment 1

Experiment 1 aimed to test how freedom threat influences consumer preference for brands associated with dissociative groups (H1). In Experiment 1, we simultaneously measured participants' psychological reactance and tested its mediating role (H2). Additionally, the effect of freedom threat on preference for brands associated with dissociative groups might be due to threatened individuals seeking power or status, emotional changes, or need for uniqueness. Therefore, Experiment 1 measured and ruled out the influence of these variables.

4.1 Experimental Design

This experiment adopted a 2 (freedom threat: low vs. high) × 3 (associated group: dissociative group vs. membership group vs. neutral group) between-subjects design. The dependent variable was participants' evaluation of brands

associated with dissociative/membership/neutral groups. The participants were 220 university students, including 101 males (45.9%) and 119 females (54.1%).

4.2 Experimental Manipulation and Measurement

According to reactance theory, reactance occurs when the freedom to express attitudes is threatened (S. S. Brehm & J. W. Brehm, 2013; Nail, Van Leeuwen, & Powell, 1996). This experiment manipulated the independent variable of freedom threat by asking participants to express their views on "whether food delivery should be allowed on campus."The level of freedom threat was presented through different language expressions: the high freedom threat group used pressuring commands with absolute claims, such as "You must agree with me" and "You cannot deny this fact…"; the low freedom threat group used expressions stating personal positions without threat, such as "I personally think…"

In the high freedom threat group, participants read: "I absolutely believe that food delivery should not be allowed on campus. You must agree with my viewpoint! The food in university cafeterias is quite good now, much safer and more reliable than takeout, which is a fact you cannot deny. Food delivery riders speeding through campus pose traffic safety hazards. Additionally, small vendors entering and leaving campus at any time seriously affect normal teaching and living order. So you must agree with my viewpoint; we must oppose food delivery on campus!"

In the low freedom threat group, participants read: "I personally somewhat disagree with allowing food delivery on campus. I disagree only because I personally think the food in university cafeterias is quite good now, much safer and more reliable than takeout. Food delivery riders speeding through campus also pose traffic safety hazards. Additionally, small vendors entering and leaving campus at any time affect normal teaching and living order. Of course, these are just my personal thoughts; you have the right to express your viewpoint without being influenced by me, and I will respect your viewpoint."

The freedom threat manipulation check scale consisted of 4 items (Dillard & Shen, 2005) using a 7-point scale (1 = strongly disagree, 7 = strongly agree). Items included: "After reading the communication content, I feel my freedom to make decisions is threatened" ; "After reading the communication content, I feel my freedom to support or oppose this matter is restricted" ; "I think my partner' s communication content aims to control my freedom" ; "I feel pressured to comply with my partner' s ideas."

Brand evaluation was measured using the scale from Van Horen and Pieters (2017). The 5 brand evaluation items included: "This brand' s product is interesting" ; "This brand' s product is attractive" ; "Would consider purchasing this brand/product," etc. All other relevant variables were measured using established scales on 7-point scales (1 = strongly disagree, 7 = strongly agree). Psychological reactance was measured using the scale from Hong and Page (1989), consisting of 11 items such as: "The idea of depending on others annoys me"

; "When I cannot make decisions freely and independently, I feel frustrated," etc. Power was measured using a 6-item scale (Stapel & Van der Zee, 2006), including: "I feel I am persuasive now" ; "I feel I am domineering now" ; "I feel I am dominant now," etc. The emotion scale (Levav & Zhu, 2009) consisted of 6 items, including: "I feel happy now" ; "I feel sad now" ; "I feel pessimistic now," etc. Uniqueness was measured using the uniqueness scale developed by Lynn and Harris in 1997, consisting of 3 items: "Being unique is important to me" ; "I deliberately do things to make myself different from people around me" ; "I have a need for uniqueness." Complete experimental materials are provided in the Appendix.

4.3 Experimental Procedure

Following the experimental procedure of Nail et al. (1996), the first page of the questionnaire informed participants that the purpose of this experiment was to study the role of communication methods. Participants needed to express their views on the topic "whether food delivery should be allowed on campus," then read and comment on their randomly assigned partner' s viewpoint on this topic. Participants had 5-8 minutes to write down their personal views on the matter and submit them to the system. The system then presented viewpoints from other experimental participants for participants to read (in fact, the system pushed the freedom threat manipulation materials).

After reading one of the high/low freedom threat manipulation materials (which were believed to be other experimental participants' views on "whether food delivery should be allowed on campus"), participants filled out their evaluation of that viewpoint.

Next, participants entered a seemingly unrelated product opinion survey, where they were asked to evaluate brands associated with different groups. In this section, participants first read a brief material about watch brand Mardi, informing them that Mardi brand watches would soon launch a new model. For the upcoming new watch, the spokesperson would be the homosexual group (dissociative group condition)/vegetarian group (neutral group condition)/university student group (membership group condition). Participants in different associated group conditions evaluated the watch endorsed by the corresponding associated group.

After completing brand evaluation, participants were asked to fill out measurement scales for psychological reactance, uniqueness, power, emotions, belongingness and desirability to associated groups, and demographic information including age and gender, before receiving compensation and leaving.

4.4 Results

4.4.1 Manipulation Check for Freedom Threat The mean of the 4 freedom threat manipulation check items represented participants' perceived freedom threat score (= 0.85). One-way ANOVA results showed that participants in the high freedom threat group perceived significantly higher freedom threat

(M_high = 5.25) than those in the low freedom threat group (M_low = 2.96, F(1, 218) = 159.67, p < 0.01, ^{2} = 0.43). This indicates successful freedom threat manipulation.

The average of the first 3 manipulation check items represented participants' belongingness to the associated group. Participants' belongingness to membership, neutral, and dissociative groups differed significantly (F(2, 215) = 85.62, p < 0.01). Pairwise comparisons showed that belongingness to the dissociative group (M_dissociative = 1.92) was significantly lower than to the membership group (M_membership = 5.29, p < 0.01) and neutral group (M_neutral = 3.13, p < 0.01). The average of the last 2 manipulation check items represented participants' desirability of the associated group. Desirability for membership, neutral, and dissociative groups differed significantly (F(2, 215) = 45.77, p < 0.01). Desirability for the dissociative group (M_dissociative = 2.33) was significantly lower than for the membership group (M_membership = 4.88, p < 0.01) and neutral group (M_neutral = 3.01, p < 0.01). This indicates successful brand associated group manipulation.

Furthermore, participants' belongingness and desirability for "dissociative group," "membership group," and "neutral group" did not differ significantly between high (vs. low) freedom threat situations (p > 0.50). This indicates that the freedom threat manipulation did not change participants' belongingness and desirability for associated groups.

4.4.2 Hypothesis Testing A 2 (freedom threat: low vs. high) × 3 (associated group: dissociative vs. membership vs. neutral) ANOVA was conducted with brand evaluation as the dependent variable. Results showed that the main effect of freedom threat on brand evaluation was not significant (F(1, 214) = 1.02, p > 0.50), the main effect of associated group was not significant (F(2, 214) = 0.68, p > 0.50), but the interaction between freedom threat and associated group was significant (F(2, 214) = 15.68, p < 0.01, ^{2} = 0.22). The high freedom threat group evaluated the brand associated with the dissociative group (M = 5.28, SD = 1.24) significantly higher than the low freedom threat group (M = 4.11, SD = 1.44, F(1, 214) = 20.33, p < 0.01). The high freedom threat group evaluated the brand associated with the membership group (M = 4.41, SD = 1.15) significantly lower than the low freedom threat group (M = 5.36, SD = 1.35, F(1, 214) = 10.87, p < 0.01). The high freedom threat group' s evaluation of the brand associated with the neutral group (M = 4.78, SD = 1.31) did not differ significantly from the low freedom threat group (M = 4.71, SD = 1.21, F(1, 214) = 0.18, p > 0.50) (see Figure 1 [Figure 1: see original paper]). Thus, H1 is supported.

Additionally, analysis showed that under low freedom threat, participants evaluated the brand associated with the dissociative group (M = 4.11, SD = 1.44) significantly lower than the brand associated with the membership group (M = 5.36, SD = 1.35, F(1, 214) = 10.17, p < 0.01) and the neutral group (M = 4.71, SD = 1.21, F(1, 214) = 3.11, p < 0.05). Under high freedom threat, participants

evaluated the brand associated with the dissociative group (M = 5.28, SD = 1.24) significantly higher than the brand associated with the membership group (M = 4.41, SD = 1.15, F(1, 214) = 7.21, p < 0.01) and the neutral group (M = 4.78, SD = 1.31, F(1, 214) = 4.01, p < 0.05).

4.4.3 Mediation Test for Psychological Reactance The mean of the 11 psychological reactance items represented participants' psychological reactance score (= 0.95). The Bootstrap procedure was used to test the mediating role of psychological reactance (Hayes, 2013; Model 7) with 5,000 samples. Analysis showed that under the 95% confidence interval, the mediation test result for psychological reactance did not contain 0 (LLCI = -1.67, ULCI = -0.81), indicating significant mediation with an effect size of 0.55. Further analysis examined the mediating effect of psychological reactance in the effect of freedom threat on product preference under different associated group conditions.

Results showed that for the dissociative group condition, the mediating effect of psychological reactance was significant, with the 95% confidence interval not containing 0 (LLCI = 0.53, ULCI = 1.46). For the membership group and neutral group conditions, the mediating effects were not significant, with Bootstrap confidence intervals of (LLCI = -0.91, ULCI = 0.12) and (LLCI = -0.47, ULCI = 0.03) respectively, both containing 0. This supports H2.

4.4.4 Ruling Out Alternative Explanations To rule out possible explanations such as uniqueness, power, and emotions, further data analysis was conducted. Results showed that the freedom threat manipulation did not affect uniqueness (M_high = 4.61, M_low = 4.22, F(1, 218) = 1.01, p > 0.10) or power (M_high = 4.55, M_low = 4.03, F(1, 218) = 0.43, p > 0.10). The mean of the first 3 emotion scale items represented positive emotion score (= 0.85), and the mean of the last 3 items represented negative emotion score (= 0.90). Analysis showed that freedom threat manipulation did not affect positive emotion (M_high = 4.23, M_low = 4.61, F(1, 218) = 1.21, p > 0.10) or negative emotion (M_high = 5.11, M_low = 4.92, F(1, 218) = 0.88, p > 0.10).

Then, with uniqueness, power, emotions, gender, and age as covariates, freedom threat and associated group as independent variables, and brand evaluation as the dependent variable, ANCOVA was conducted. Results showed that the main effect of freedom threat on brand evaluation was not significant (F(1, 206) = 0.63, p > 0.50), the main effect of associated group was not significant (F(2, 206) = 1.12, p > 0.50), the interaction between freedom threat and associated group remained significant (F(2, 206) = 14.23, p < 0.01, ^{2} = 0.21), while covariates including uniqueness, power, positive emotion, negative emotion, gender, and age had no significant effects on the dependent variable (ps > 0.10). Moreover, the high freedom threat group evaluated the brand associated with the dissociative group (M = 5.28, SD = 1.24) significantly higher than the low freedom threat group (M = 4.11, SD = 1.44, F(1, 206) = 18.694, p < 0.01). Thus, alternative explanations such as power, emotion, uniqueness, gender, and age were ruled

out.

Experiment 1 preliminarily verified the effect of freedom threat on preference for brands associated with dissociative groups and the mediating role of psychological reactance, supporting hypotheses H1 and H2. Compared with low freedom threat, participants under high freedom threat preferred brands associated with dissociative groups because they experienced psychological reactance. This experiment ruled out the effects of uniqueness, power, emotion, gender, and age. To strengthen the robustness of our findings, Experiment 2 used different product stimuli and added analysis of the moderating effect of narrative to further explore the mediating role of psychological reactance in the relationship between freedom threat and preference for brands associated with dissociative groups.

Experiment 2

Experiment 2 primarily examined whether consumers' preference for brands associated with dissociative groups under freedom threat changes when narrative information transmission is added (H3 & H4). Based on Experiment 1, we made several adjustments: first, to expand the applicability of our findings, we changed the brand information for the dependent variable; second, we used different experimental stimulus materials to manipulate the independent variable of freedom threat; third, we used product choice as the dependent variable.

5.1 Experimental Design

The participants were 130 university students, including 57 males (43.3%) and 73 females (56.7%), all recruited voluntarily. The experiment adopted a 2 (freedom threat: low vs. high) × 2 (narrative: narrative vs. non-narrative) between-subjects design.

5.2 Experimental Manipulation and Measurement

For manipulating freedom threat, based on the freedom threat manipulation materials used by Dillard and Shen (2005) and relevant reactance research (Quick & Stephenson, 2007), this experiment manipulated participants' voting freedom as being under high/low threat. The freedom threat manipulation information consisted of two paragraphs, mainly informing students that the university was considering banning the sale and consumption of alcoholic beverages on campus. For the high freedom threat group, the first paragraph used obvious freedom-threatening information, emphasizing that only the university administration, academic affairs office, and street office had decision-making power, while students had no right to speak or vote. For the low freedom threat group, the manipulation information contained no obvious freedom-threatening information and informed students they had voting rights on this matter. The freedom threat manipulation check scale was the same as in Experiment 1.

For narrative manipulation, based on previous scholars' explanations, the narrative condition described events in story form, including beginning, middle, ending, and problem resolution (Kreuter et al., 2007). The non-narrative condition used a more objective tone, relying on reasoned arguments and factual descriptions as supporting evidence (Gardner & Leshner, 2016), lacking specific story information. The narrative manipulation check item was: "I think this information is presented in a narrative way" (1 = strongly disagree, 7 = strongly agree) (Kreuter et al., 2007; Gardner & Leshner, 2016).

Measurements of psychological reactance, uniqueness, power, and emotions were the same as in Experiment 1.

5.3 Experimental Procedure

Participants were randomly assigned to 4 experimental groups. First, participants read the freedom threat (low vs. high) and narrative (narrative vs. non-narrative) manipulation materials, then entered an unrelated product choice session. Participants first read brief material about brand Mardi, which was about to launch new products. For its new product, one version was promoted by the homosexual group and the other by the university student group. We selected two backpacks similar in color, material, and price but with slight appearance differences as product stimuli. Participants needed to make within-subject choices between the two backpacks promoted by different groups after viewing product pictures and descriptions.

Finally, participants were asked to complete scales measuring psychological reactance, uniqueness, power, emotions, attitudes toward associated groups, and freedom threat manipulation check, followed by demographic information, before receiving compensation and leaving.

5.4 Results

5.4.1 Manipulation Checks for Freedom Threat and Narrative The mean of the four freedom threat manipulation check items represented participants' perceived freedom threat score (= 0.88). One-way ANOVA with freedom threat as the independent variable and perceived freedom threat as the dependent variable showed that the high freedom threat group perceived significantly higher freedom threat (M_high = 5.37) than the low freedom threat group (M_low = 2.62; F(1, 128) = 127.06, p < 0.01, ^{2} = 0.50). Therefore, the freedom threat manipulation was successful.

The mean of the narrative manipulation check item represented participants' score for narrative manipulation check. One-way ANOVA with narrative as the independent variable and narrative manipulation check mean as the dependent variable showed that participants in the narrative group perceived the information as significantly more narrative (M_narrative = 5.17) than those in the non-narrative group (M_non-narrative = 3.64, F(1, 128) = 26.98, p < 0.001, ^{2} = 0.26). Therefore, the narrative manipulation was successful.

Additionally, we tested whether narrative manipulation affected participants' freedom threat perception. ANOVA showed that narrative manipulation had no significant effect on freedom threat perception ($F(1, 128) = 1.09$, $p > 0.10$), and the interaction between freedom threat and narrative on freedom threat perception was also not significant ($F(1, 128) = 1.71$, $p > 0.10$). This indicates that narrative manipulation did not significantly affect participants' freedom threat perception.

5.4.2 Hypothesis Testing In the brand choice task for different associated groups, participants who chose the product associated with the dissociative group were coded as 1, and those who chose the product associated with the membership group were coded as 0. The high freedom threat manipulation was coded as 1, low freedom threat as 0; narrative group was coded as 1, non-narrative group as 0.

To test the moderating role of narrative in the effect of freedom threat on choice of brand associated with dissociative groups, logistic regression analysis was conducted with freedom threat (high vs. low), narrative (narrative vs. non-narrative), and their interaction as independent variables, and brand choice for different associated groups as the dependent variable. Results showed a significant main effect of freedom threat on brand choice: compared with the low freedom threat group (20.6%), the high freedom threat group (51.2%) was more likely to choose the brand associated with the dissociative group (= 1.45, Wald $^2 = 7.27$; $p < 0.01$), further verifying H1. The interaction between narrative and freedom threat was significant (= -1.92, Wald $^2 = 5.41$, $p < 0.05$). For the narrative group, the difference in proportion choosing the dissociative group-associated brand between high (13.4%) and low (11.1%) freedom threat groups was not significant (Wald $^2 = 0.13$, $p = 0.75$). In the non-narrative group, the high freedom threat group' s proportion choosing the dissociative group-associated brand (38.8%) was significantly higher than the low freedom threat group (9.50%, Wald $^2 = 8.22$, $p < 0.01$), supporting H3 (see Figure 2 [Figure 2: see original paper]).

5.4.3 Mediating Role of Psychological Reactance The Bootstrap procedure was used to test the moderated mediation effect of psychological reactance (Hayes, 2013; Model 7). With brand choice for different associated groups as the dependent variable, freedom threat as the independent variable, narrative as the moderator, and psychological reactance as the mediator, 5,000 samples were used. Under the 95% confidence interval, the moderated mediation analysis showed that the interaction effect between freedom threat and narrative on psychological reactance was significant (= -2.12, $z = -2.19$, $p < 0.05$). For non-narrative participants, the mediation effect of psychological reactance in the effect of freedom threat on brand preference was significant, with the 95% confidence interval not containing 0 (LLCI = 0.39, ULCI = 2.72), and the effect size was -1.06. However, for narrative participants, the mediation effect of psychological reactance was not significant, with the 95% confidence interval

containing 0 (LLCI = -2.07, ULCI = 0.93). Therefore, the effect of freedom threat on brand preference was mediated by psychological reactance, and this mediating effect was moderated by narrative, supporting H4.

5.4.4 Ruling Out Alternative Explanations In this experiment, freedom threat manipulation did not affect individuals' uniqueness, power, or positive/negative emotions (ps > 0.50). Then, with uniqueness, power, emotions, gender, and age as control variables, freedom threat, narrative, and their interaction as independent variables, and brand choice for different associated groups as the dependent variable, logistic regression analysis was conducted. Results showed a significant main effect of freedom threat on brand choice (= 0.78, Wald ^{2} = 5.03; p < 0.01), no significant main effect of narrative (= -0.19, Wald ^{2} = 0.58; p > 0.50), and a significant interaction between freedom threat and narrative on brand choice (= -1.97, Wald ^{2} = 6.06, p < 0.05), while uniqueness, power, emotions, gender, and age had no significant effects (ps > 0.10). This again ruled out alternative explanations such as uniqueness, power, emotion, gender, and age.

5.5 Discussion

Under narrative information conditions, individuals in both high and low freedom threat conditions tended to choose brands associated with membership groups. This is because narrative information reduces the psychological reactance generated by freedom threat, thereby decreasing preference for brands associated with dissociative groups. Under non-narrative information conditions, participants under high (vs. low) freedom threat experienced stronger psychological reactance, thus preferring brands associated with dissociative groups. Therefore, Experiment 2 not only strongly supported H3 and H4 but also further verified the mediating role of psychological reactance, supporting the robustness of our findings.

Additionally, research shows that personality traits affect the generation of reactance, and differences in consumer self-esteem are related to psychological reactance. Does the mechanism of psychological reactance depend on individual self-esteem level? Experiment 3 further explored this question.

Experiment 3

Experiment 3 adopted a between-subjects design with freedom threat (low vs. high). Since self-esteem was measured by scale, participants were randomly assigned to two experimental groups with low and high freedom threat. The participants were 136 university students, including 61 males (44.9%) and 75 females (55.1%).

6.2 Experimental Manipulation and Measurement

The freedom threat manipulation information in this experiment consisted of two paragraphs. The content mainly asked participants to imagine they had just joined a company that made some regulations for new employees. Freedom threat level was presented through different language expressions: the high freedom threat group used pressuring commands with absolute claims, such as "You must comply" and "Absolutely not allowed" ; the low freedom threat group used more gentle and polite expressions, such as "It is recommended that everyone ..."

This experiment used a different freedom threat manipulation check scale from Experiment 1, selecting 3 items from Rains and Turner (2007): "In the above event, I think I have no choice" ; "In the above event, I think I have no freedom" ; "In the above event, I think my freedom is restricted." A 7-point scale was used (1 = strongly disagree, 7 = strongly agree).

The self-esteem measurement scale consisted of 6 items: "I am dissatisfied with myself" ; "At this moment, I feel inferior to others" ; "I worry about others' impressions of me" ; "I worry about looking stupid" ; "I worry about whether others see me as successful or a failure" ; "I feel uncomfortable" (Heatherton & Polivy, 1991). A 7-point scale was used (1 = strongly disagree, 7 = strongly agree). Measurements of psychological reactance, uniqueness, power, and emotions were the same as in Experiment 1.

6.3 Experimental Procedure

Participants were randomly assigned to high or low freedom threat experimental groups. After reading the experimental materials for their group, participants completed the freedom threat manipulation check scale and the self-esteem measurement scale.

Subsequently, participants completed a brand choice task for different associated groups. The product selected in Experiment 3 was casual shoes. Two casual shoes differed only slightly in style: one was described as designed for the homosexual group, and the other for university students. Participants were asked to check which shoe they would prefer to choose. During the experiment, the presentation order of these two shoes was alternated between the two groups to eliminate result bias caused by product presentation order.

After completing the product choice task, participants filled out measurement scales for psychological reactance, uniqueness, power, and emotions. Finally, participants completed demographic information and received compensation before leaving.

6.4 Results

6.4.1 Manipulation Check for Freedom Threat The mean of the three freedom threat manipulation check items represented participants' perceived

freedom threat score (= 0.82). One-way ANOVA showed a significant main effect of freedom threat: the high freedom threat group perceived significantly higher freedom threat (M_high = 4.95) than the low freedom threat group (M_low = 2.64; F(1, 134) = 138.54, p < 0.01, ^{2} = 0.50). Therefore, the freedom threat manipulation was successful.

6.4.2 Hypothesis Testing In the brand choice task for different associated groups, participants who chose the product associated with the dissociative group (homosexual group) were coded as 1, and those who chose the product associated with the membership group (student group) were coded as 0.

To test the moderating role of self-esteem in the effect of freedom threat on choice of brand associated with dissociative groups, logistic regression analysis was conducted with freedom threat (low vs. high), self-esteem (low vs. high), and their interaction as independent variables, and brand choice for different associated groups as the dependent variable. Analysis showed a significant main effect of freedom threat on brand choice: compared with the low freedom threat group (16.5%), participants in the high freedom threat group (49.3%) were more likely to choose the brand associated with the dissociative group (= -1.59, Wald ^{2} = 15.10; p < 0.01), supporting the robustness of H1.

The interaction between self-esteem and freedom threat was significant (= -0.77, Wald ^{2} = 5.08, p < 0.05). Participants with self-esteem scores greater than the mean plus one standard deviation were classified as the low self-esteem group, and those with scores less than the mean minus one standard deviation as the high self-esteem group. For high self-esteem participants, high freedom threat (53.5%) led to significantly greater preference for the dissociative group-associated brand than low freedom threat (7.0%, = -3.42, Wald ^{2} = 18.68, p < 0.01). For low self-esteem participants, there was no significant difference in preference for the dissociative group-associated brand between high (19.0%) and low (31.0%) freedom threat conditions (= 0.79, Wald ^{2} = 0.95, p > 0.05) (see Figure 3 [Figure 3: see original paper]), supporting H5.

6.4.3 Mediating Role of Psychological Reactance The Bootstrap procedure was used to test the moderated mediation effect of psychological reactance (Hayes, 2013; Model 7). With freedom threat as the independent variable, self-esteem as the moderator, psychological reactance as the mediator, and brand choice for different associated groups as the dependent variable, 5,000 samples were used. Under the 95% confidence interval, the moderated mediation analysis showed that the interaction effect between freedom threat and self-esteem on psychological reactance was significant (= -0.81, z = -2.89, p < 0.05). For high self-esteem participants, the mediating effect of psychological reactance in the effect of freedom threat on brand preference was significant, with the 95% confidence interval not containing 0 (LLCI = 0.32, ULCI = 3.41), and the effect size was 1.31. However, for low self-esteem participants, the mediating effect was not significant, with the 95% confidence interval containing 0 (LLCI = -0.55,

ULCI = 0.99). Therefore, the effect of freedom threat on brand choice was mediated by psychological reactance, and this mediating effect was moderated by individual self-esteem level, supporting H6.

6.4.4 Ruling Out Alternative Explanations In this experiment, freedom threat manipulation did not affect individuals' uniqueness, power, or positive/negative emotions (ps > 0.50). Additionally, with uniqueness, power, emotions, gender, and age as control variables, freedom threat, self-esteem, and their interaction as independent variables, and brand choice for different group-associated brands as the dependent variable, logistic regression was conducted. Results showed a significant main effect of freedom threat on brand choice (= -0.94, Wald ^{2} = 13.35; p < 0.01), no significant main effect of self-esteem (= -0.26, Wald ^{2} = 1.12; p > 0.50), and a significant interaction between freedom threat and self-esteem on brand choice (= -0.81, Wald ^{2} = 5.47, p < 0.05), while uniqueness, power, emotions, gender, and age had no significant effects (ps > 0.10). This again ruled out alternative explanations such as uniqueness, power, emotion, gender, and age.

Experiment 3 successfully verified H5 and H6, demonstrating that self-esteem plays a moderating role in the effect of freedom threat on group-associated brand preference. For high self-esteem participants, high freedom threat (vs. low) more easily generated psychological reactance, leading to greater preference for brands associated with dissociative groups. For low self-esteem participants, when facing imposed requirements, they were more likely to adopt compliance strategies and show acceptance and approval behaviors. Therefore, for low self-esteem participants, there was no significant difference in preference for brands associated with dissociative groups under high versus low freedom threat conditions. This shows that participants with different self-esteem levels have different preferences for brands associated with dissociative groups when experiencing different levels of freedom threat.

General Discussion

7.1 Conclusions

This paper conducted three experiments to explore the effect of freedom threat on preference for brands associated with dissociative groups, explaining its internal mechanism and the moderating roles of narrative and self-esteem in this relationship. Results show that freedom threat positively affects preference for brands associated with dissociative groups; that is, individuals experiencing freedom threat prefer products associated with dissociative groups (Experiment 1), with the internal mechanism being psychological reactance triggered by freedom threat (Experiments 2 and 3). Meanwhile, narrative information transmission can reduce psychological reactance. Under non-narrative conditions, participants under high (vs. low) freedom threat prefer brands associated with dissociative groups; under narrative conditions, there is no significant difference in preference for such brands between high and low freedom threat participants

(Experiment 2). Additionally, individual trait differences affect preference for brands associated with dissociative groups. For high self-esteem individuals, high freedom threat (vs. low) leads to greater preference for brands associated with dissociative groups; for low self-esteem individuals, there is no significant difference in preference for such brands under high versus low freedom threat (Experiment 3).

This research enhanced validity and robustness through rigorous experimental design. First, we used different product stimuli across three experiments to rule out effects of product usage, usage time, and price. Second, we manipulated the independent variable of freedom threat using different scenarios to enhance the robustness of our findings.

7.2 Theoretical Contributions

The theoretical contributions of this paper are mainly reflected in three aspects:

First, it enriches research on reference groups, particularly regarding dissociative groups. Previous research has focused more on the influence of positive reference groups on consumer attitudes and decisions. For example, consumers express themselves by consuming brands adopted by membership or aspirational groups (White et al., 2014; Dahl, Argo, & Morales, 2012) and give lower evaluations to brands associated with dissociative groups (Berger & Heath, 2008; White & Dahl, 2006). Under certain conditions, consumers can also show approach responses to dissociative groups, engaging in behaviors consistent with dissociative groups or following what dissociative group members do (White et al., 2014). Shalev and Morwitz (2012) found that under certain conditions, low-status users can also influence high-status users. White et al. (2014) showed that when consumers learn in public that dissociative groups excel in positive behaviors (such as addressing sustainability issues and waste recycling), they have higher intention to participate in such positive behaviors in public versus private settings. This study finds that under freedom threat, consumers facing high freedom threat (vs. low) tend to choose brands associated with dissociative groups to restore threatened freedom, further enriching research on dissociative groups.

Second, it deepens research on psychological reactance. Previous research has categorized individuals'freedom-restoring behaviors into three types: boomerang effects, related-boomerang effects, and vicarious-boomerang effects. Consumer psychological reactance research has mainly focused on boomerang effects—directly engaging in behavior opposite to the threat direction (S. S. Brehm & J. W. Brehm, 2013; Quick & Stephenson, 2008). Most previous psychological reactance research has focused on psychotherapy and counseling (Chesler, Harris, & Oestreicher, 2009), health and education (Shen, 2010), and information dissemination (Gardner & Leshner, 2016). For example, how to reduce people' s resistance to persuasive information (such as anti-smoking, health checkup, and donation messages) and legal information, and increase accep-

tance of healthy behaviors and donation intentions. This study focuses on indirect freedom-restoring behaviors consumers may adopt when psychological reactance is aroused, examining how freedom threat affects choice behavior in the consumption domain. We verified the mediating role of psychological reactance between freedom threat and preference for brands associated with dissociative groups. This represents a different research perspective from previous studies, not only extending psychological reactance theory but also providing new strategies for coping with freedom threat.

Third, it expands relevant applied research on self-esteem theory. As a core issue in psychological research, self-esteem has received continuous attention from scholars. Researchers have been committed to discovering and studying the effects of self-esteem as an individual characteristic on various aspects of consumers, revealing its role in attribution styles (Vandellen et al., 2011) and consumption habits (Aguirre-Rodriguez, Bosnjak, & Sirgy, 2012). Although scholars have extensively studied the application of self-esteem, it has been less involved in the reference group domain. Building on previous research, this paper elaborates on the moderating role of self-esteem in the effect of freedom threat on choice of brands associated with dissociative groups. For high self-esteem individuals, high freedom threat more easily generates psychological reactance, leading to greater preference for brands associated with dissociative groups, providing a new research angle for the application of self-esteem theory.

7.3 Managerial Implications

In consumer markets, some brands may be viewed as associated with dissociative groups, and consumers often avoid association with them (White & Dahl, 2006, 2007). This study' s findings reveal conditions under which consumers accept brands associated with dissociative groups, providing managerial reference value for brand managers.

How can brands attract out-group consumers while retaining their existing customer base? This study' s conclusion suggests that companies can activate out-group consumers' freedom threat perception through marketing stimuli such as advertising and information push, thereby increasing this group' s purchase behavior toward the brand/product. For example, if a brand' s original target group is middle-aged people, and young people typically view middle-aged people as a dissociative group, how can the brand attract young people's purchases? By activating young people's unique freedom threat through advertising. Under freedom threat, young people may increase their preference for brands associated with middle-aged people, thus achieving the company' s goal of expanding the brand' s customer base.

Meanwhile, we found the interaction between freedom threat and self-esteem. For high self-esteem individuals, when facing freedom threat, they prefer products associated with dissociative groups. Companies could consider simultaneously activating participants' self-esteem levels in advertisements.

7.4 Limitations

First, there are limitations of the experimental environment. This research used experimental methods, a simulated real-scenario experimental design that differs somewhat from real shopping environments and scenarios, limiting the generalizability of our conclusions. Future research could use higher-authenticity experimental environments or field experiments. Second, in this study' s experimental design, in Experiment 3, the manipulation check was conducted immediately after manipulating the independent variable. Although we informed participants that each study was unrelated, we may not have completely eliminated the issue of double priming.

Additionally, variable measurement needs improvement. When testing whether consumers with different self-esteem levels differ in their choice of brands associated with dissociative groups, this paper used questionnaire measurement of participants' self-esteem levels. Since self-esteem has certain subjectivity, using questionnaire measurement may cause participants to be influenced by social desirability when evaluating themselves, either exaggerating their self-evaluation or intentionally being modest. Future research could measure consumers' self-esteem levels through scenario settings.

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Appendix: Experiment 2 Materials

(1) Freedom Threat Manipulation Materials

High Freedom Threat Group:

Recently, a university' s student affairs office proposed banning the sale and consumption of alcoholic beverages on and around campus. The university administration, academic affairs office, and street office will send representatives to formally discuss this proposal soon, mainly exploring the pros and cons of banning alcoholic beverage sales and consumption on campus and surrounding areas, and making a final decision on this issue. Regarding the final decision on this matter, students will have no right to speak or vote, and the final decision will not consider students' thoughts and opinions.

If this proposal passes, the alcohol ban will take effect next semester, affecting all student dormitories across campuses and all residences on campus. The university administration, education department, and street office will formulate rules and punishment measures for this proposal. Any student found purchasing, consuming, or possessing alcoholic beverages on campus will be punished. Retailers will also be prohibited from selling alcoholic beverages on and around campus.

Low Freedom Threat Group:

Recently, a university' s student affairs office proposed banning the sale and consumption of alcoholic beverages on and around campus. The university administration, academic affairs office, and street office will send representatives to formally discuss this proposal soon, mainly exploring the pros and cons of banning alcoholic beverage sales and consumption on campus and surrounding areas, and making a final decision on this issue. Regarding the final decision on this matter, students' voting results will be referenced, and the university administration, academic affairs office, and street office will not have unilateral final decision-making power.

If this proposal passes, the alcohol ban will take effect next semester, affecting

all student dormitories across campuses and all residences on campus. The university administration, education department, and street office will formulate rules and punishment measures for this proposal. Any student found purchasing, consuming, or possessing alcoholic beverages on campus will be punished. Retailers will also be prohibited from selling alcoholic beverages on and around campus.

(2) Narrative Manipulation Materials

Narrative Group:

The university' s student affairs office proposed the "Alcohol Ban Proposal" because recent incidents of university students causing disturbances and damaging public facilities after drinking have occurred frequently, making universities pay great attention to alcohol sales and consumption on campus.

Some universities have already implemented alcohol bans. University S' s ban was decided directly by the university office and academic affairs office without student voting. After implementation, University S has not had any alcohol-related disturbances. However, University H allowed students to vote on implementation, resulting in the ban not being implemented. Subsequently, in early June, a group fight after drinking occurred at University H, leaving 3 people from the School of Engineering and School of Economics seriously injured and hospitalized, 4 with minor injuries, and campus public facilities severely damaged. The 7 students involved then received serious disciplinary action from University H.

Therefore, considering our university' s location in the city center with complex surrounding environment, to ensure student safety during school, the university proposed implementing an alcohol ban on campus. The university decided not to involve students in voting; the final result of this proposal will be decided through discussion among the university administration, academic affairs office, and street office.

Non-Narrative Group:

The university' s student affairs office proposed the "Alcohol Ban Proposal" because recent incidents of university students causing disturbances and damaging public facilities after drinking have occurred frequently, making universities pay great attention to alcohol sales and consumption on campus.

Data shows that excessive consumption of alcoholic beverages damages the central nervous system, and severe poisoning can even lead to respiratory and cardiac suppression causing death. In alcoholic beverages, ethanol most easily causes cancer, and animal research results also confirm this conclusion. Mixtures in alcoholic beverages cause cancer, especially in the mouth and throat. Additionally, excessive alcohol intake may cause individuals to engage in more extreme and destructive social behaviors, such as drunk driving, aggressive behavior, unsafe sexual behavior, etc., which not only cause loss of life and property

to oneself or others but also endanger social safety.

Students drinking alcoholic beverages not only affects their physical health but also affects the university' s ethos. As students, they have the obligation to comply with university regulations. Even without the right to speak, students should comply with university rules and discipline.

Note: Figure translations are in progress. See original paper for figures.