Nature's Double-Edged Sword: The Influence of Nature Awe on Consumer Luxury Choice

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Abstract

In the luxury consumption process, companies often construct nature-related scenes in promotional videos and launch events, thereby evoking consumers' feelings of awe. However, academic research is currently lacking on how consumers' awe experiences influence their luxury consumption behavior. Adopting an emotional experience perspective, this paper investigates the impact of awe on consumers' luxury interest and its underlying mechanisms through five experiments. The findings reveal that awe inspired by beautiful nature reduces consumers' choice of luxury goods, whereas awe inspired by threatening nature enhances consumers' choice of luxury goods. Further analysis demonstrates that when consumers experience awe in response to beautiful nature, they perceive their own insignificance, which subsequently induces a psychological state of self-transcendence and decreases their choice of luxury goods; conversely, when awe is elicited by threatening nature scenarios, it results in a loss of perceived control, which stimulates consumers' self-enhancement motivation and increases their choice of luxury goods. Additionally, nature connectedness and threat sensitivity respectively serve as moderators in different indirect effects. This paper enriches the investigation into antecedents of luxury purchase behavior, provides a novel perspective for luxury-related research, and offers marketing practice insights for the sizable luxury industry.

Full Text

Preamble

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Response: First, this study enriches research on antecedents of luxury consumption. Given that emotions serve as crucial catalysts shaping consumer behavior, we investigate how awe influences luxury purchasing from an emotional perspective. Second, as a complex emotion, awe can be both positive and contain elements of fear and threat. Therefore, this study examines both "awe" and "fear," exploring how two distinct types of awe affect the same phenomenon, thereby extending current awe research through a categorized and systematic approach.

2. Have you published or submitted any articles using the same data as this study? If yes, please attach them for review.

(We do not approve of authors publishing multiple articles with the same variables from the same dataset, nor do we support splitting a series of related studies into multiple publications.)

Response: No.

3. For non-experimental, non-intervention studies in management, clinical, personality, and social psychology that rely solely on self-report (questionnaire) methods, you must check for common method bias. What methods did you use to control for or demonstrate that such bias does not affect the validity of your conclusions? (Relevant literature on common method bias can be found at: http://journal.psych.ac.cn/xlkxjz/CN/abstract/abstract894.shtml). Studies based on cross-sectional data with only self-reports and convenient samples are easy to conduct but typically lack innovative value and have low acceptance rates.

Response: First, this study reduces common method bias through multiple experiments and diverse manipulation methods. Second, we ensured participant

anonymity during questionnaire administration to reduce subjective response tendencies. Finally, during questionnaire design, we used reverse scoring for some items and interspersed items measuring different variables to reduce order-related biases.

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Response: We reported and analyzed effect sizes, reported 95% CIs for statistical analyses, and created visualizations.

5. Please state your planned sample size and actual sample size. If they differ, please explain why. Previous psychological research has suffered from low statistical power due to insufficient sample sizes. We recommend explaining your sample size determination in the Methods section, using justified effect sizes and desired power, and reporting the software/program used. Guidance on sample size planning is available at https://osf.io/5awp4/

Response: The actual sample size in all five experiments exceeded the planned sample size. Before each experiment, we first used G*Power software to calculate the minimum sample size required to achieve a medium effect size. Second, to ensure robust results, we…

6. Does your paper report exact p-values (e.g., p = .046) rather than merely p < .05 or p < .01? (For p < .001, report as p < .001; otherwise report exact p-values). Does your paper meet this requirement? If using Bayes factors, have you reported their sensitivity to prior distribution assumptions?

Response: Yes. For null hypothesis significance testing (NHST), we report exact p-values.

7. To ensure completeness of data reporting, if you excluded any data during statistical analysis, did you report this in the paper? What were the reasons? How would results change if included? How were missing data handled? When using scales, were any individual items deleted? Why? How would results change if included? Were any measured items or variables not reported? Why? Please indicate where in the paper this is addressed.

Response: To ensure completeness, we reported data exclusions in the paper. Excluded data primarily involved participants who failed attention checks or screening questions. No individual scale items were deleted.

8. Are experimental materials, scales, or questionnaires that have not undergone peer review attached at the end of the file for examination? If not, please explain. If published, are you willing to share these materials with other researchers?

Response: All experimental materials, scales, and questionnaires are attached for review. If published, we are willing to share these materials with other researchers.

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10. Is your study a clinical intervention or laboratory experiment? Yes (√) No ( )

If yes, please provide pre-registration number. If no, please explain why. Future studies will address this issue. Note: Clinical interventions or laboratory experiments should be pre-registered before data collection. Other experimental studies are also encouraged to pre-register. Pre-registration requires stating all hypotheses and their rationales, plus detailed experimental/intervention procedures. Our pre-registration sites are https://os.psych.ac.cn/preregister (see instructions in the "Download Center" on our website), https://osf.io/, or https://aspredicted.org/. Pre-registration significantly increases acceptance chances. Importance of pre-registration: https://osf.io/5awp4/

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The Double-Edged Sword of Nature: How Awe of Nature Influences Consumers' Luxury Choices

Abstract

In luxury consumption, companies frequently create nature-related scenes in promotional videos and product launches, thereby evoking consumer awe. However, how consumers' awe experiences influence their luxury consumption behavior remains understudied. From an emotional experience perspective, this paper investigates the impact of awe on consumers' interest in luxury goods and its underlying mechanisms through five experiments. Results show that awe inspired by beautiful nature decreases luxury choice, whereas awe elicited by threatening nature increases it. Further analysis reveals that when experiencing awe toward beautiful nature, consumers perceive their own smallness, which induces a self-transcendent psychological state and reduces luxury choice. Conversely, when experiencing awe toward threatening nature, consumers suffer from a loss of control, which activates self-enhancement motivation and increases luxury choice. Additionally, nature connectedness and threat sensitivity moderate the respective indirect effects. This research enriches investigation into antecedents of luxury purchasing behavior, provides a new perspective for luxury-related research, and offers marketing insights for the substantial luxury industry.

Keywords: awe of beautiful nature; awe of threatening nature; luxury consumption

1.1 Problem Statement

A shimmering lake reflecting enchanting mountains, picturesque in its beauty; a roaring tsunami rushing forward, striking fear into hearts… All these natural scenarios can evoke a special emotion: awe (Zhao et al., 2023). Awe is a complex emotion that individuals experience when encountering vast, grand phenomena that transcend existing cognitive templates (Keltner & Haidt, 2003). Consumers frequently experience awe in daily consumption contexts (Liu, 2022). Impor-

tantly, luxury brands often create nature-related scenes in advertisements, promotional videos, and product launches to inspire awe. Sometimes consumers are immersed in nature's artistic beauty, experiencing its elegance and grandeur—such as LV's early spring "sunset" show or Gucci's immersive forest launch. Other times, consumers are plunged into fear of natural disasters, experiencing nature's threat and destructive power, as seen in Chanel's "Icelandic volcano" show or Balenciaga's "snowstorm" show. Do these two distinct types of awe experiences differentially impact consumer luxury behavior? Which nature-awe marketing practice better stimulates consumer interest in luxury goods?

No systematic research on this important topic exists in the literature. Although awe experiences are common in luxury consumption, academic attention to the relationship between awe and luxury purchasing remains limited. Existing luxury research primarily examines brand-internal and external factors such as art experiences (Wang et al., 2022), product scarcity (Shi & Li, 2020), logo prominence (Jiang et al., 2022), and social jet lag (Yin & Huang, 2022), while neglecting the role of emotional factors. In fact, emotions play a crucial role in consumer decision-making (Lazarus & Folkman, 1984). As an emotional experience, awe can regulate individual responses and behaviors (Crick & Dodge, 1994). Therefore, consumers' awe experiences inevitably influence their shopping decisions and judgments.

Based on this, our study adopts an emotional perspective, examining both "awe" and "fear" to systematically investigate how different types of nature awe influence luxury purchasing behavior and the underlying mechanisms. Specifically, we find that when experiencing awe toward beautiful nature, individuals feel small, which induces a self-transcendent state and reduces interest in luxury goods. Conversely, when experiencing awe toward threatening nature, individuals perceive a loss of control, which activates self-enhancement motivation and increases interest in luxury goods.

1.2.1 Awe

Awe, as a psychological response, is an emotional experience that occurs when individuals encounter vast, grand phenomena beyond their current understanding, encompassing complex emotions such as shock, curiosity, terror, confusion, submission, and humility (Keltner & Haidt, 2003). As a stimulus-response pattern, awe can be triggered by different factors, producing different types (Keltner & Haidt, 2003; Zhao et al., 2023). Keltner categorized awe into five types: threat, beauty, extraordinary ability, virtue, and supernatural power. Among these, beauty and threat are commonly experienced in nature interactions and have attracted scholarly attention. Building on this, Liu (2022) divided nature awe into awe of beautiful nature and awe of threatening nature. Awe of beautiful nature refers to awe experienced when encountering beautiful, spectacular, and magnificent natural landscapes (e.g., mountains, waterfalls, sunsets). Awe of threatening nature refers to awe experienced when confronting fearful, destructive, and threatening natural phenomena (e.g., earthquakes, tsunamis,

sandstorms). Both types appear in luxury marketing, yet prior research has not addressed whether and how these different nature-induced awe emotions differentially affect consumer behavior. Therefore, a systematic and in-depth investigation of how different types of nature awe function in luxury choice and purchase processes is necessary.

1.2.2 Mechanism of Beautiful Nature Awe's Effect on Luxury Choice

The "small self" hypothesis posits that when individuals focus attention on awe-inspiring stimuli like mountains and starry skies, they experience "smallness"—a feeling of insignificance (Bai et al., 2017; Piff et al., 2015). This smallness makes individuals feel diminished and 微不足道, shifting attention toward grand phenomena (Tyson et al., 2022). Research indicates that compared to other positive emotions like love and gratitude, only positive awe is associated with smallness (Campos et al., 2013). Thus, awe toward beautiful nature increases feelings of smallness.

This smallness shifts individuals' focus away from self-goal achievement toward the external world, forcing them to detach from mundane daily life (van Cappellen & Saroglou, 2012) and ascend to a spiritual state where they prioritize others' and nature's welfare over self and worldly concerns (Wang et al., 2023). Beardsley (1966) defined this spiritual state as "self-transcendence." As humanity's highest spiritual pursuit, self-transcendence reduces desires and diminishes craving for money and material possessions (Haidt & Morris, 2009). Luxury goods symbolize power, status, and wealth (Fuchs et al., 2013; Wang et al., 2022; Maslow, 1971). Therefore, the material desire-centered pursuit of luxury conflicts with a self-transcendent state that reduces worldly concerns. We thus hypothesize that self-transcendence decreases consumers' desire for luxury goods.

Hypothesis 1: Awe of beautiful nature (vs. neutral) decreases consumers' luxury choice.
Hypothesis 2: The small self and self-transcendence serially mediate this effect.

1.2.3 Mechanism of Threatening Nature Awe's Effect on Luxury Choice

Control is an indispensable driver in pursuing human happiness (Whitson & Galinsky, 2008) but is not always stable—it fluctuates with environmental changes (Cutright & Samper, 2014). Changes in natural or sociocultural environments threaten individuals' sense of control; for example, pandemics, natural disasters, and loneliness all cause control loss (Chen et al., 2017; Cutright & Samper, 2014). Therefore, when facing threatening natural phenomena like earthquakes, tsunamis, and tornadoes, individuals feel fear, uncertainty, and powerlessness, leading to control loss.

Control loss is an aversive psychological state where individuals perceive themselves as lacking influence over external events (Whitson & Galinsky, 2008). According to compensatory control theory, when control is threatened, individuals develop strong motivation to restore it (Landau et al., 2015). Self-enhancement brings progress, growth, and hope while strengthening perceived control and certainty (Kay & Eibach, 2012). Thus, control loss activates self-enhancement motivation. The "motivation-action" logic in self-enhancement theory suggests that when self-enhancement motivation is activated, individuals adopt effective actions to maintain their status (Alicke & Sedikides, 2009). In consumer behavior research, scholars find that when self-enhancement motivation is activated, consumers prefer products that enhance or prove the self, such as self-improvement products, symbolic products, or leading brands to demonstrate capability (Chen et al., 2017; Beck et al., 2020). As symbols of capability, status, and power, luxury goods are self-enhancement products (Park, 2019). When threatened, consumers use luxury brands as symbolic products to help realize and proclaim self-worth and status, thereby compensating for threat and low control. Therefore, when experiencing awe toward threatening nature and lacking control, consumers driven by self-enhancement motivation attempt to use luxury goods to convey capability and power (Anastasia & George, 2019) and restore control.

Hypothesis 3: Awe of threatening nature (vs. neutral) increases consumers' luxury choice.
Hypothesis 4: Control loss and self-enhancement motivation serially mediate this effect.

1.2.4 Moderating Role of Nature Connectedness

The biophilia hypothesis posits that through long-term interaction with nature, humans develop a psychological need and inherent tendency to maintain connection and unity with nature (Wilson, 1986). Accordingly, Mayer and Frantz (2004) proposed the concept of nature connectedness, defining it as the perceived intimacy with nature in emotional experience, reflecting belonging and emotional attachment to nature (Wang et al., 2021). Individuals high in nature connectedness view the self-nature relationship more equally, integrate self with nature, see themselves as part of broader nature, and reduce self-focus (Dermody et al., 2018). Conversely, those low in nature connectedness place self above nature, are self-centered, and lack attention to the natural environment (Frantz et al., 2005). Therefore, when facing awe from beautiful nature, high nature-connected individuals more easily perceive the "vastness" of natural phenomena, place self in a broader natural world, and become more aware of their smallness (Davis et al., 2009). Low nature-connected individuals, self-centered and lacking environmental attention (Frantz et al., 2005), fail to feel small even when facing vast natural phenomena. We thus propose:

Hypothesis 5: Nature connectedness moderates the relationship between beautiful nature awe and smallness.

1.2.5 Moderating Role of Threat Sensitivity

In complex natural environments, all biological groups constantly encounter and cope with various threats (Li et al., 2014). The ability to sense, evaluate, and respond to threats is essential for survival (Schmidt-Daffy, 2011). Threat sensitivity refers to the level of behavioral, physiological, and emotional reactions individuals produce when facing threatening stimuli (Smillie et al., 2006). Individuals differ in threat sensitivity. High threat-sensitive individuals are more vigilant to environmental stimuli, keenly detect threats (Duckitt & Fisher, 2003), more easily experience anxiety and aversion, and are more inclined to reduce threat or anxiety (Park et al., 2007). Low threat-sensitive individuals have weaker threat perception and defense (Craske et al., 2009). Therefore, when facing threatening nature, high threat-sensitive individuals show stronger reactions to threatening stimuli, perceive greater control loss, activate threat defense behaviors, enhance self-enhancement motivation, and show stronger luxury purchase intentions. Low threat-sensitive individuals perceive less threat, experience less control loss, and have weaker self-enhancement motivation. We thus propose:

Hypothesis 6: Threat sensitivity moderates the relationship between threatening nature awe and control loss.

The theoretical model is shown in Figure 1 [Figure 1: see original paper].

1.3 Research Overview

Figure 1: Research Model

This study tests hypotheses through five experiments. Experiments 1a and 1b preliminarily examine how different valences of nature awe affect luxury choice (Hypotheses 1 and 3). Study 2 further explores the underlying mechanisms (Hypotheses 2 and 4). Finally, Study 3a tests the moderating role of nature connectedness in the beautiful nature awe-luxury interest relationship (Hypothesis 5), and Study 3b tests the moderating role of threat sensitivity in the threatening nature awe-luxury interest relationship (Hypothesis 6).

Experiment 1a

Experiment 1a aimed to validate the main effect, investigating whether different types of nature awe influence luxury purchasing behavior.

2.1.1 Design and Participants

Experiment 1a used a single-factor between-subjects design (beautiful nature awe vs. threatening nature awe vs. control). Using G*Power 3.1, with power = 0.80, significance level $\alpha = 0.05$, and medium effect size = 0.50, the minimum required sample size was 159. We recruited 300 participants via Credamo (38.3% male,* M*age = 31.84,* SD* = 12.2).

2.1.2 Procedure

Participants were randomly assigned to three conditions. Following Piff et al. (2015) and Gordon et al. (2017), we manipulated nature awe through situational recall. The beautiful nature awe group was instructed: "Please spend a few minutes recalling a recent natural situation you found extremely beautiful and awe-inspiring, such as watching a sunrise, viewing nature from high above, or any situation where you felt nature's beauty and awe." The threatening nature awe group recalled: "Please spend a few minutes recalling a recent threatening natural situation that inspired awe, such as lightning, thunder, sandstorms, tornadoes, earthquakes, or any threatening and awe-inspiring situation." The control group recalled: "Please recall a recent ordinary activity, such as shopping or studying for an exam." All participants wrote detailed descriptions of the time, place, process, and feelings.

Next, participants completed manipulation check items (Gordon et al., 2017): "How much awe of nature do you feel inside?" "How beautiful does nature feel to you?" "How threatening does nature feel to you?" (1 = strongly disagree, 7 = strongly agree). Then, participants completed an ostensibly unrelated task: "Imagine you have sufficient budget to shop for clothing at a mall. Mall A mainly features luxury brands like Prada, Gucci, and Bulgari; Mall B features regular brands like Zara, Uniqlo, and Nike. Please indicate your choice (0 = Mall A, 1 = Mall B)." Finally, participants completed demographic questions and received compensation.

2.1.3 Results

Manipulation Checks. One-way ANOVA showed a significant main effect of awe induction ($F(1, 297) = 19.53$, $p < .001$). Beautiful nature awe participants reported significantly higher awe than controls (Mbeautiful = 6.13, SDbeautiful = 0.86 vs. Mneutral = 4.38, SDneutral = 1.50; $t = 5.09$, $df = 198$, $p < .001$). Threatening nature awe participants also reported higher awe than controls (Mthreat = 5.87, SDthreat = 0.95 vs. Mneutral = 4.38, SDneutral = 1.50; $t = 4.73$, $df = 197$, $p < .001$). Awe levels did not differ between beautiful and threatening nature conditions ($t = 0.19$, $df = 197$, $p = .85$), confirming successful awe induction.

We also tested valence. Beautiful nature awe participants reported significantly more positive emotion than neutral and threatening conditions (Mbeautiful = 6.16, SDbeautiful = 0.87 vs. Mneutral = 5.52, SDneutral = 1.65 vs. Mthreat = 3.29, SDthreat = 1.70; $F(1, 297) = 137.12$, $p < .001$). Threatening nature awe participants reported significantly more negative emotion (Mbeautiful = 2.33, SDbeautiful = 0.99 vs. Mneutral = 2.50, SDneutral = 1.54 vs. Mthreat = 6.26, SDthreat = 0.95; $F(1, 297) = 296.19$, $p < .001$), confirming successful valence manipulation.

Finally, independent samples t-tests confirmed the mall luxury manipulation: Mall B was perceived as more luxurious than Mall A (MA = 1.98, SDA = 0.81

vs. MB = 6.23, SDB = 0.79; $t = 64.89$, $df = 598$, $p < .001$).

Hypothesis Testing. Chi-square analysis of mall choice revealed a significant effect of awe on luxury preference (Pearson $^2(2) = 49$, $p < .01$). Beautiful nature awe participants chose the regular mall more frequently (59%) than threatening (38%) and neutral (49%) groups. Threatening nature awe participants chose the luxury mall more frequently (62%) than beautiful (41%) and neutral (51%) groups. These results support Hypothesis 1.

Table 1 : Choice Frequencies Across Nature Awe Conditions (N = 300)

Figure 2 [Figure 2: see original paper]: Effect of Nature Awe on Luxury Brand Choice

2.1.4 Discussion

Study 1 used a forced-choice method between two mall types. Results show that different awe types have opposite effects: beautiful nature awe reduces luxury mall interest, while threatening nature awe increases it. However, Experiment 1a's situational recall method may lack immersion, and we did not measure trait awe to rule out its influence.

Experiment 1b

To ensure robustness, Experiment 1b used virtual reality (VR) technology to provide immersive experiences and re-examined the awe-luxury choice relationship while measuring and controlling for trait awe.

2.2.1 Design and Participants

Experiment 1b used a single-factor between-subjects design (beautiful nature awe vs. threatening nature awe vs. control). Conducted at a Chinese university over 10 days, we recruited 100 students. Ten failed attention checks, leaving 90 valid participants (55.5% male, Mage = 23.29, $SD = 1.49$).

2.2.2 Procedure

Participants wore VR headsets to watch videos inducing awe. Beautiful nature awe participants viewed footage of sunrises, oceans, and mountains; threatening nature awe participants viewed tsunamis, blizzards, and volcanic eruptions; controls viewed everyday life recordings. All videos were ~4 minutes.

Participants then completed the same manipulation checks as Study 1a, followed by a product choice task: "Imagine you have sufficient budget to shop for clothing. Mall A features regular brands (Zara, Uniqlo, Nike); Mall B features luxury brands (Prada, Gucci, Bulgari). Which would you prefer? (1 = regular brands, 7 = luxury brands)." Next, they completed the trait awe scale (α = 0.934): "I often feel awe in daily life," "I feel wonder almost every day," "I often appreciate beauty around me," "I often seek natural patterns," "I have many

opportunities to see nature's beauty," "I often have experiences challenging my worldview." Finally, demographics and compensation.

2.2.3 Results

Manipulation Checks. One-way ANOVA showed beautiful and threatening nature groups reported significantly higher awe than controls (Mbeautiful = 6.24, SDbeautiful = 0.83 vs. Mthreat = 6.21, SDthreat = 0.84 vs. Mneutral = 2.53, SDneutral = 1.11; $F(2, 87) = 201.71$, $p < .001$, $^2 = 0.82$), confirming successful induction.

Valence checks showed beautiful nature participants reported more positive emotion (Mbeautiful = 6.54, SDbeautiful = 0.66 vs. Mneutral = 1.47, SDneutral = 1.11 vs. Mthreat = 3.03, SDthreat = 1.35; $F(2, 87) = 135.15$, $p < .001$, $^2 = 0.76$). Threatening nature participants reported more negative emotion (Mbeautiful = 2.31, SDbeautiful = 1.32 vs. Mneutral = 1.13, SDneutral = 0.34 vs. Mthreat = 5.97, SDthreat = 0.72; $F(2, 87) = 137.09$, $p < .001$, $^2 = 0.89$), confirming valence manipulation.

Hypothesis Testing. One-way ANOVA revealed significant differences in luxury choice across conditions ($F(2, 87) = 97.17$, $p < .001$, $^2 = 0.69$). Beautiful nature participants preferred regular malls more than controls (Mbeautiful = 2.47, SDbeautiful = 1.14 vs. Mneutral = 4.30, SDneutral = 1.15; $F(1, 58) = 38.59$, $p < .001$, $^2 = 0.40$). Threatening nature participants preferred luxury malls more than controls (Mthreat = 6.17, SDthreat = 0.74 vs. Mneutral = 4.30, SDneutral = 1.15; $F(1, 58) = 55.66$, $p < .001$, $^2 = 0.49$).

Trait Awe Control. We divided trait awe scores (range 17-40, $M = 29.7$, $SD = 5.72$) into high ($\geq M + 1SD = 36$), medium (24-36), and low ($\leq M - 1SD = 24$) groups. Multiple regression with trait awe group, experimental condition, and their interaction predicting luxury choice showed the interaction was non-significant ($t = 1.15$, $p = .252$), indicating situational nature awe effects are not moderated by trait awe. A 3 (trait awe) × 3 (nature awe condition) ANOVA showed only a main effect of trait awe on awe perception ($F(2, 81) = 53.10$, $p < .001$), with no main effect of condition ($F(2, 81) = 0.51$, $p = .60$) or interaction ($F(4, 81) = 0.87$, $p = .48$), confirming that trait awe does not affect manipulation effectiveness.

2.2.4 Discussion

Experiment 1b replicated Experiment 1a using immersive VR technology, again supporting Hypothesis 1: beautiful nature awe decreases luxury choice while threatening nature awe increases it. Importantly, we ruled out trait awe effects. Next, Experiment 2 examines the underlying mechanisms.

Experiment 2

Experiment 2 used a single-factor between-subjects design (beautiful nature awe vs. threatening nature awe vs. control). Using G*Power 3.1 with the same parameters, minimum required* N* = 159. We recruited 300 participants via Credamo. Twelve failed attention checks or completed too quickly, leaving 288 valid participants (41.3% male, *M*age = 29.13, *SD* = 8.95).

3.2 Procedure

Participants were randomly assigned to three conditions. We induced awe through videos: beautiful nature awe participants watched a BBC "Blue Planet" excerpt (Piff et al., 2015); threatening nature awe participants watched footage of floods, tsunamis, and tornadoes (Vohs et al., 2003); controls watched a bookshelf installation video. All videos were 3-4 minutes.

After viewing, participants completed manipulation checks as in previous studies, then mediating variables: smallness (Piff et al., 2015; $\alpha = 0.92$: "I feel insignificant," "I feel something greater exists," "I feel part of a larger whole," "I feel in a vast world"), self-transcendence (Wang et al., 2022; $\alpha = 0.95$: "I care less about others' opinions," "My life feels more meaningful," "I find more joy," "My personal life exists in a larger whole," "My views depend less on others"), control loss (Conatha et al., 2008; $\alpha = 0.91$: "I feel helpless," "I feel powerless," "Many things feel out of my control"), and self-enhancement motivation (Thomas et al., 2015; $\alpha = 0.87$: "Right now, I want to improve myself," "I have strong self-improvement motivation," "I really hope to enhance myself"). All used 7-point scales.

Participants then completed an unrelated consumption choice task: "Imagine you have sufficient budget for clothing. Two brand ads are available: 'high-quality regular brand' and 'luxury designer brand.' Which would you prefer? (1 = high-quality regular brand, 7 = luxury designer brand)." Finally, demographics and compensation.

3.3 Results

Manipulation Checks. One-way ANOVA showed a significant main effect ($F(2, 285) = 163.69$, $p < .001$, $^2 = 0.54$). Beautiful and threatening nature groups reported higher awe than controls (*M*beautiful = 6.32, *SD*beautiful = 1.94 vs. *M*neutral = 3.28, *SD*neutral = 1.77 vs. *M*threat = 6.26, *SD*threat = 0.95), with no difference between beautiful and threatening conditions ($F(1, 191) = 0.155$, $p = .69$, $^2 = 0.001$).

Valence checks confirmed beautiful nature participants felt more positive emotion (*M*beautiful = 6.62, *SD*beautiful = 0.64 vs. *M*neutral = 5.35, *SD*neutral = 1.60 vs. *M*threat = 2.99, *SD*threat = 1.82; $F(2, 285) = 157.47$, $p < .001$, $^2 = 0.53$), while threatening nature participants felt more negative emotion

(Mbeautiful = 3.26, SDbeautiful = 1.96 vs. Mneutral = 3.26, SDneutral = 1.83 vs. Mthreat = 6.29, SDthreat = 0.72; $F(2, 285) = 113.73$, $p < .001$, $^2 = 0.44$).

Hypothesis Testing. One-way ANOVA revealed significant differences in ad preference across conditions ($F(2, 285) = 93.23$, $p < .001$, $^2 = 0.39$). Beautiful nature participants preferred regular brand ads more than controls (Mbeautiful = 2.15, SDbeautiful = 1.54 vs. Mneutral = 3.61, SDneutral = 1.81; $F(1, 190) = 35.98$, $p < .001$, $^2 = 0.16$). Threatening nature participants preferred luxury brand ads more than controls (Mthreat = 5.25, SDthreat = 1.33 vs. Mneutral = 3.61, SDneutral = 1.81; $F(1, 189) = 50.68$, $p < .001$, $^2 = 0.21$). These results support Hypothesis 1.

Mediation Analysis. We tested the mechanisms using Model 6 with 5,000 bootstrap samples and 95% CIs. For beautiful nature awe (coded 0 = neutral, 1 = beautiful), the serial mediation through smallness and self-transcendence was significant (Indirect Effect = 0.018, 95% CI [0.008, 0.045]), supporting Hypothesis 2. The control loss and self-enhancement path was non-significant (Indirect Effect = 0.0008, 95% CI [-0.07, 0.084]).

For threatening nature awe (coded 0 = neutral, 1 = threatening), the serial mediation through control loss and self-enhancement was significant (Indirect Effect = 0.03, 95% CI [0.03, 0.073]), as was the direct path through control loss (Indirect Effect = 0.37, 95% CI [0.27, 0.47]), supporting Hypothesis 3. The smallness and self-transcendence path was non-significant (Indirect Effect = -0.02, 95% CI [-0.007, 0.003]).

Figure 3 [Figure 3: see original paper]: Serial Mediation of Smallness and Self-Transcendence in Beautiful Nature Awe Effect
Figure 4 [Figure 4: see original paper]: Serial Mediation of Control Loss and Self-Enhancement in Threatening Nature Awe Effect

3.4 Discussion

Experiment 2 carefully examined the underlying mechanisms. Results show that beautiful nature awe's effect on luxury choice is driven by smallness and self-transcendence, while threatening nature awe's effect is driven by control loss and self-enhancement motivation.

Experiment 3a

Experiment 3a used a 2 (beautiful nature awe vs. control) between-subjects design. G*Power 3.1 indicated a minimum* N* = 128 for medium effect size. We recruited 200 participants via Credamo. Eight failed attention checks, leaving 192 valid participants.

4.1.2 Procedure

Following Piff et al. (2015) and Gordon et al. (2017), we manipulated nature awe through situational recall. Participants then completed manipulation checks and the same mediators as Experiment 2 (smallness and self-transcendence). Next, they evaluated an LV product described as a versatile bag. Participants rated: "My feeling toward this product: dislike = 1, like = 7; negative = 1, positive = 7; unpleasant = 1, pleasant = 7."

Nature connectedness was measured using Mayer (2004): "I feel connected to nature," "Nature feels like home," "I feel kinship with plants and animals," "I feel part of a broader natural world," "I am part of nature's larger cycles," "I belong to Earth as Earth belongs to me" (7-point scale). Demographics followed.

4.1.3 Results

Manipulation Checks. One-way ANOVA confirmed successful awe induction ($F(1, 189) = 172.02$, $p < .001$, $^2 = 0.54$): Mbeautiful = 5.84, SDbeautiful = 1.06 vs. Mneutral = 3.08, SDneutral = 1.64. Positive emotion was higher in the beautiful nature condition (Mbeautiful = 6.59, SDbeautiful = 0.64 vs. Mneutral = 3.17, SDneutral = 1.81; $F(1, 189) = 122.41$, $p < .001$, $^2 = 0.47$).

Hypothesis Testing. Beautiful nature participants showed lower interest in the LV product (Mbeautiful = 3.42, SDbeautiful = 1.26 vs. Mneutral = 4.21, SDneutral = 1.33; $F(1, 189) = 7.91$, $p < .001$, $^2 = 0.21$), replicating Hypothesis 1.

Mediation. Bootstrap analysis (Model 6) confirmed serial mediation through smallness and self-transcendence (Indirect Effect = 0.1, 95% CI [0.004, 0.215]), replicating Hypothesis 2. Figure 5 [Figure 5: see original paper] illustrates this path.

Moderation. Nature connectedness significantly moderated the beautiful nature awe → smallness relationship (Indirect Effect = 0.05, 95% CI [0.006, 0.089]), while its main effect was non-significant (Indirect Effect = -0.14, 95% CI [-0.35, 0.06]).

Conditional Indirect Effects. Using Model 83 with 5,000 bootstrap samples, the smallness → self-transcendence serial mediation was significant for low nature connectedness (Indirect Effect = 0.09, 95% CI [0.007, 0.201]) and high nature connectedness (Indirect Effect = 0.11, 95% CI [0.009, 0.237]). The difference was significant (Indirect Effect = 0.05, 95% CI [0.0003, 0.147]), supporting Hypothesis 5: high nature-connected individuals experience stronger smallness and self-transcendence, reducing luxury desire.

Figure 5 [Figure 5: see original paper]: Serial Mediation of Smallness and Self-Transcendence in Beautiful Nature Awe Effect

4.1.4 Discussion

Experiment 3a replicated the beautiful nature awe effect on luxury preference and its mechanism, while establishing nature connectedness as a boundary condition. The effect is stronger among high nature-connected individuals.

Experiment 3b

Experiment 3b used a 2 (threatening nature awe vs. control) between-subjects design. We recruited 200 participants via Credamo. Seven failed attention checks, leaving 193 valid participants (45.4% male, Mage = 30.56, SD = 9.16).

4.2.2 Procedure

Following the same situational recall manipulation, participants completed control loss and self-enhancement measures from Experiment 2. They then evaluated the same LV product. Threat sensitivity was measured using Dennis (2007): "I often worry about making mistakes," "Criticism hurts me," "I worry when I perform poorly on important tasks," "I worry when someone is angry with me," "I become restless when expecting something unpleasant," "I rarely experience fear even when bad things happen (R)," "I rarely fear compared to family/friends (R)" (7-point scale). Demographics concluded.

4.2.3 Results

Manipulation Checks. One-way ANOVA confirmed successful awe induction ($F(1, 191) = 178.6$, $p < .001$, $^2 = 0.49$): Mthreat = 6.29, SDthreat = 0.93 vs. Mneutral = 3.53, SDneutral = 1.80. Negative emotion was higher in the threatening condition (Mthreat = 5.98, SDthreat = 1.21 vs. Mneutral = 2.21, SDneutral = 1.20; $F(1, 189) = 169.73$, $p < .001$, $^2 = 0.71$).

Hypothesis Testing. Threatening nature participants showed higher luxury interest (Mthreat = 5.19, SDthreat = 1.10 vs. Mneutral = 4.39, SDneutral = 1.59; $F(1, 189) = 17.07$, $p < .001$, $^2 = 0.08$).

Mediation. Bootstrap analysis confirmed serial mediation through control loss and self-enhancement (Indirect Effect = 0.05, 95% CI [0.013, 0.100]), supporting Hypothesis 3. Figure 6 [Figure 6: see original paper] shows this path.

Moderation. Threat sensitivity significantly moderated the threatening nature awe → control loss relationship (Indirect Effect = 0.05, 95% CI [0.001, 0.109]), while its main effect was non-significant (Indirect Effect = 0.02, 95% CI [-0.03, 0.02]).

Conditional Indirect Effects. For low threat sensitivity, the control loss → self-enhancement mediation was non-significant (Indirect Effect = 0.03, 95% CI [-0.002, 0.09]). For high threat sensitivity, it was significant (Indirect Effect = 0.09, 95% CI [0.04, 0.15]), as it was for moderate sensitivity (Indirect Effect

= 0.06, 95% CI [0.01, 0.11]). This supports Hypothesis 6: the effect occurs primarily among high threat-sensitive individuals.

Figure 6 [Figure 6: see original paper]: Serial Mediation of Control Loss and Self-Enhancement in Threatening Nature Awe Effect

4.2.4 Discussion

Experiment 3b replicated the threatening nature awe effect on luxury preference and its mechanism, establishing threat sensitivity as a boundary condition. The effect occurs only among high threat-sensitive consumers.

5.1 Main Findings

This study demonstrates how nature awe (beautiful vs. threatening) influences luxury product choice, mechanisms, and boundary conditions. Across five experiments, different awe types had opposite effects: beautiful nature awe decreased luxury choice, while threatening nature awe increased it. Specifically, beautiful nature awe made consumers feel small, triggering self-transcendence, suppressing material desires, and reducing luxury choice—an effect stronger among high nature-connected individuals. Conversely, threatening nature awe caused control loss, activating self-enhancement motivation and increasing luxury choice—an effect occurring only among high threat-sensitive individuals.

5.2 Theoretical Contributions

First, this research extends awe research in consumer behavior. Previous awe studies focused on philosophy, sociology, and psychology, with limited exploration in consumer behavior and marketing outcomes. Scholars have examined awe's effects on well-being (Sturm et al., 2022), decision-making (Liu, 2022), prosocial behavior (Jiao & Luo, 2022), and product choice (Ahmmad et al., 2024). We extend awe research to the luxury domain, directly examining its impact on luxury interest and deepening awe's theoretical value. Moreover, as a complex emotion, awe can be both positive and threatening (Gordon et al., 2017). Existing literature largely portrays awe as a discrete positive state, neglecting negative awe's consumer effects. We adopt a balanced perspective, examining how two awe types affect the same outcome, thereby expanding awe research through categorization and systematic investigation.

Second, we enrich antecedents of luxury consumption and provide a new theoretical framework. Previous luxury research examined art experiences, purchase motivations, and product durability. We extend this literature by focusing on emotional experiences. While emotions are recognized as crucial catalysts shaping consumer behavior (Chen et al., 2022; Favier et al., 2019), no research has linked awe to luxury consumption. We integrate both beautiful and threatening nature awe, offering important 填补 to luxury research and demonstrating the theoretical value of emotional antecedents.

Finally, we expand the application of nature connectedness and threat sensitivity. Nature connectedness research has focused on health, animal protection, and green consumption, rarely luxury consumption. Using it as a moderator broadens both nature connectedness research and luxury behavior literature. Threat sensitivity research has primarily appeared in psychology, neuroscience, and medicine. We introduce it to consumer behavior, finding individual differences in threat sensitivity moderate the awe-luxury relationship, enriching threat sensitivity theory and its applications.

5.3 Marketing Implications

This research offers significant practical guidance. Different awe types differentially affect luxury behavior. First, marketers should time promotions strategically. Our four experiments show that when individuals encounter threatening, awe-inspiring natural situations, they choose luxury goods to restore control. We recommend active promotion after severe natural disasters or threatening weather events (thunderstorms, tsunamis, typhoons). Second, for different populations: when exposed to beautiful, awe-inspiring nature, target low nature-connected consumers; when exposed to threatening, awe-inspiring nature, target high threat-sensitive consumers.

5.4 Limitations and Future Directions

This study has limitations. First, awe was induced only through recall/writing and video methods. Future research should diversify induction methods (semantic priming, real-world settings). Second, we only examined nature connectedness and threat sensitivity as moderators. Future research could explore other individual traits like locus of control and psychological resilience. Finally, we used experimental methods, which offer high internal validity but limited external validity (e.g., imagined vs. real shopping). Future research should combine experiments with big data analytics and field experiments to enhance external validity.

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Questionnaires and Scales

1.1 Situational Recall

Beautiful Nature Awe Group: In daily life, we often feel awe toward magnificent, beautiful scenery and natural wonders like mountains, waterfalls, and the vast universe. Please spend a few minutes recalling a natural situation you found beautiful and awe-inspiring—perhaps a sunrise, a view from high above, or any natural environment where you felt nature's beauty and awe. Please describe this situation in ~100 words, including when it happened, the process, and your feelings.

Threatening Nature Awe Group: In daily life, we often feel awe toward threatening natural situations like sandstorms, earthquakes, floods, or volcanoes. Please spend a few minutes recalling a natural situation you found threatening and awe-inspiring—perhaps lightning, thunder, sandstorms, tornadoes,

earthquakes, or any threatening, awe-inspiring natural situation. Please describe this situation in ~100 words, including when it happened, the process, and your feelings.

Control Group: Please spend one minute recalling a recent ordinary activity, such as riding a bike, studying for an exam, or anything from a typical day. Please describe this situation in ~100 words, including when it happened, the process, and your feelings.

1.2 Awe Manipulation Checks

Based on your recalled situation, please answer (1 = strongly disagree, 7 = strongly agree):

- How much awe of nature do you feel inside?
- How beautiful does nature feel to you?
- How threatening does nature feel to you?

1.3 Consumption Choice Task

Imagine you have sufficient budget to shop for clothing at a mall. Mall A mainly features regular brands (Zara, Uniqlo, Nike); Mall B mainly features luxury brands (LV, Gucci, Bulgari). Which would you choose?

- Mall A: Regular brands
- Mall B: Luxury brands

2.1 Consumption Choice Task

Imagine you have sufficient budget to shop for clothing at a mall. Mall A mainly features regular brands (Zara, Uniqlo, Nike); Mall B mainly features luxury brands (LV, Gucci, Bulgari). Which would you choose? (1 = regular brands, 7 = luxury brands; higher scores indicate stronger preference for Mall B)

2.2 Trait Awe Measurement (1 = strongly disagree, 7 = strongly agree)

- I often feel awe in daily life
- I feel wonder almost every day
- I often appreciate beauty around me
- I often seek natural patterns in objects around me
- I have many opportunities to see nature's beauty
- I often have experiences challenging my worldview

3.1 Smallness Measurement (1 = strongly disagree, 7 = strongly agree)

- I feel insignificant

- I feel something greater exists
- I feel part of a larger whole
- I feel in a vast world

3.2 Self-Transcendence Measurement (1 = strongly disagree, 7 = strongly agree)

- I care less about others' opinions of me
- My life feels more meaningful
- I find more joy in life
- My personal life exists in a larger whole
- My views depend less on others and external factors

3.2 Control Loss Measurement (1 = strongly disagree, 7 = strongly agree)

- I feel helpless right now
- I feel powerless right now
- Many things feel out of my control

3.2 Self-Enhancement Measurement (1 = strongly disagree, 7 = strongly agree)

- Right now, I want to improve myself
- Right now, I have strong self-improvement motivation
- Right now, I really hope to enhance myself

3.2 Product Choice Task

Imagine you have sufficient budget for clothing. Two brand ads are available: "high-quality regular brand" and "luxury designer brand." Which would you prefer?

- High-quality regular brand
- Luxury designer brand

4.1 Purchase Task (1 = strongly disagree, 7 = strongly agree)

[Product description for LV bag]

My feeling toward this product:
Unpleasant [1] — [2] — [3] — [4] — [5] — [6] — [7] Pleasant

4.2 Nature Connectedness Measurement (1 = strongly disagree, 7 = strongly agree)

- I feel connected to nature
- Nature feels like home

- I feel kinship with plants and animals
- I feel part of a broader natural world
- I am part of nature's larger cycles
- I belong to Earth as Earth belongs to me

5. Experiment 3b: Threat Sensitivity Measurement (1 = strongly disagree, 7 = strongly agree)

- I often worry about making mistakes
- Criticism and blame hurt me
- I worry when I perform poorly on important tasks
- I worry when someone is angry with me
- I become restless when expecting something unpleasant
- I rarely experience fear even when bad things happen (R)
- I rarely fear compared to family/friends (R)

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