Web Appendix

Feeling the values: How pride and awe differentially enhance consumers' sustainable behavioral intentions

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Appendix A: Examples of Brands Using Pride and Awe Appeals

1. Gong cha (贡茶)

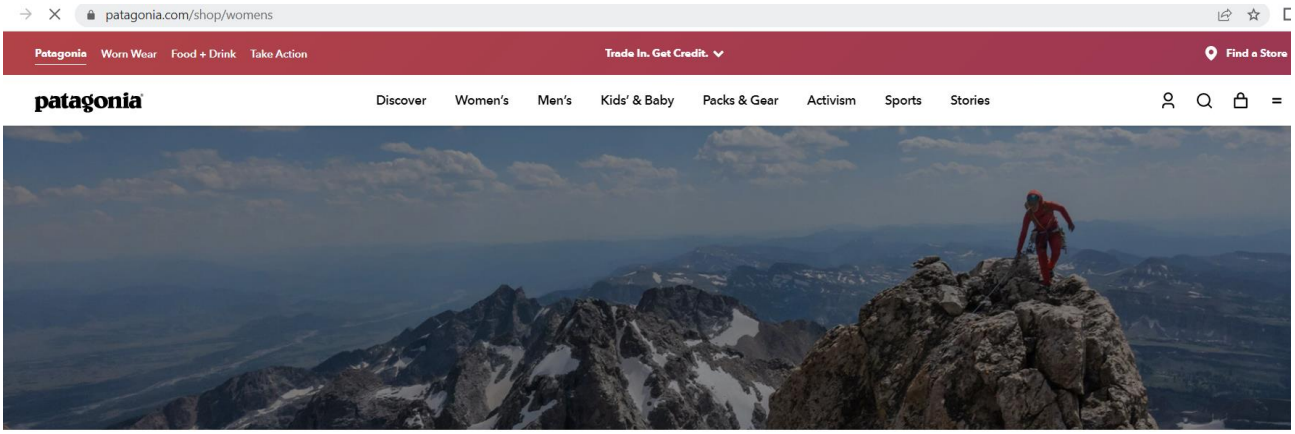
I am pro-environmental; I am proud of myself

2. C’est bon (怡宝)

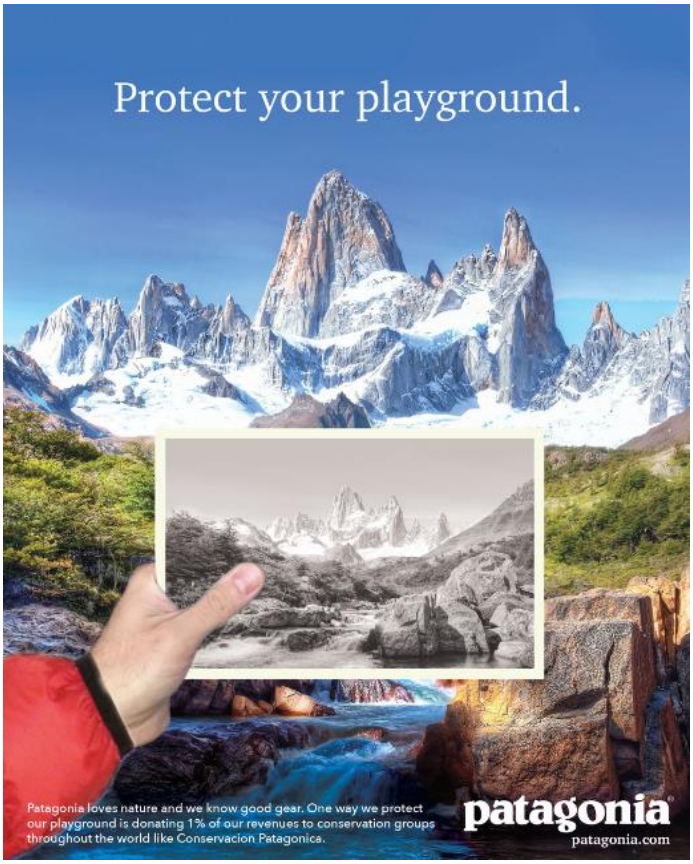
Pride packaging (with Chinese athletes) versus regular packaging

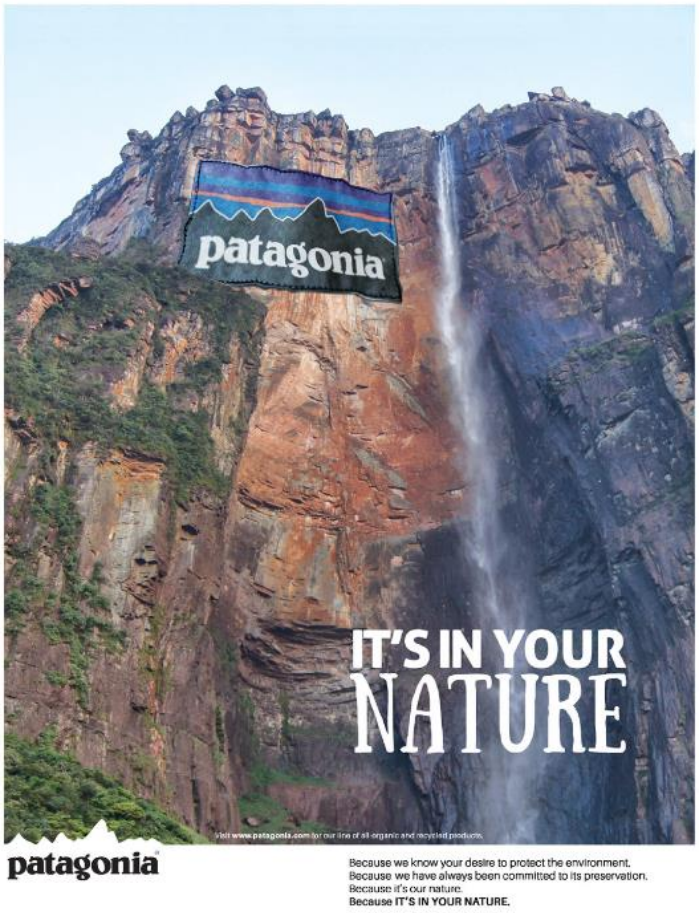
3. Patagonia

Website



Awe-inspiring Ad with ST value





Outdoor Patagonia Ad at a Shopping Center in China

Appendix B: Representative Literature Summary on the Effects of Relevant Emotions on Prosocial and Sustainable Behaviors

Articles	Focal Emotions	DV	Key findings
Peter & Honea (2012)	Pride, hope, guilt and optimism	Plastic water bottle usage	▪ Pride, guilt, and hope increased sustainable behaviors intentions. ▪ Optimism motivated the maintenance of sustainable behaviors over time.
Harth et al. (2013)	Pride, guilt, and anger	Pro-environmental behavioral intention & donation	▪ Anticipated pride about in-group pro-environmental behavior stimulated the desire to donate money for environmental protection. ▪ Guilt predicted intentions to repair the damage. ▪ Anger predicted intentions to punish wrongdoers.
Onwezen et al. (2013)	Anticipated pride and guilt	Pro-environmental behavioral intention	Anticipated pride and guilt mediated the effects of personal norms on pro-environmental behavior intentions.
Antonetti & Maklan (2014)	Pride and guilt	Green purchase intention	Feelings of pride and guilt could enhance perceived consumer effectiveness, which in turn increased the likelihood to engage in sustainable behaviors
Smith & Leiserowitz (2014)	Worry, interest, and hope	Global warming policy support	Worry, interest, and hope were strongly related to increased policy support.
Cavanaugh et al. (2015)	Love, pride, hope, and compassion	Prosocial behavior (donation)	▪ Specific positive emotions did not universally increase prosocial behavior but, rather, encouraged different types of prosocial behavior. ▪ Whereas positive emotions (i.e., love, hope, pride, compassion) all induced prosocial behavior toward close entities (relative to a neutral emotional state), only love induced prosocial behavior toward distant others and international environmental organizations.
Rees, Klug, & Bamberg (2015)	Guilty conscience	Pro-environmental behavioral intention and actual behavior	▪ When confronted with human-caused (vs. seemingly natural) environmental damages, people felt more guilt and shame, were more likely to display actual pro-environmental behavior (sign a petition for environmental issues). ▪ Only guilty conscience, but not other emotions (sadness, anger, pride, emotional coldness), should be powerful enough to translate into actual behavior.
Piff et al. (2015)	Awe, pride, amusement, compassion	Generosity, ethical decision making, prosocial values, helping behavior	▪ Awe predicted greater generosity beyond other prosocial emotions (e.g., compassion). Awe increased prosocial values and helping behavior. ▪ Awe led to higher ethical decision-making than pride or neutral conditions, but there was no difference between pride and neutral condition (Study 2)
Romani, Grappi, & Bagozzi (2016)	Moral elevation	Attitudes toward green products	Moral elevation mediated the relationship between company CSR motives perceived by consumers and consumer favorable consumer behavioral responses, which was positively related to consumer support for green products.

Articles	Emotions Examined	DV	Key findings
Bissing-Olson, Fielding, & Iyer (2016)	Pride and guilt	Recycling, conserve water, save electricity	Pride about environmental behavior was positively related to subsequent engagement in pro-environmental behavior, but only for people who perceived more positive pro-environmental descriptive norms. Guilt was not related to subsequent pro-environmental behavior.
Schneider et al., (2017)	Anticipated pride and guilt	▪ Pro-environmental behavioral intention ▪ Donation	▪ Anticipating pride led to higher pro-environmental behavioral intentions compared to anticipating guilt from inaction. ▪ Anticipating pride did not lead to significantly more donation than participants induced to anticipate guilt.
Wang, Mukhopadhyay, & Patrick (2017)	Cuteness	Donation, conservation behavior, recycling	Cute appeals increased sustainable actions, particularly when the consumer exhibited "approach" motivational tendencies. The effect was mediated by increased feelings of tenderness.
Winterich, Nenkov, & Gonzales (2019)	Inspiration	Recycling behavior	Product transformation salience (thinking about recyclables turning into new products) led to inspiration, which in turn, increased recycling.
Goenka & Van Osselaer (2019)	Compassion and Gratitude	Prosocial behavior (donation)	Congruence between the moral domain of an emotion (compassion and gratitude) and the moral objective of an organization (care and fairness) increased prosocial behaviors through salient moral concerns.
Paramita, Septianto, & Tjiptono (2020)	Pride and Gratitude	Prosocial behavior (donation)	▪ Pride positively influenced the decision to donate when the donation was recognized but pride did not influence the amount donated. ▪ Gratitude positively influenced the decision to donate and the amount donated via an affiliation motive, regardless of whether the donation was recognized.
Coleman, Royne, & Pounders (2020)	Pride and Guilt	The effectiveness of cause-related marketing ads	▪ Pride appeals were effective for individuals with promotion regulatory orientation. ▪ The effectiveness of guilt appeals did not differ based on regulatory orientation
Septianto, Seo and Errmann (2021)	Pride and Gratitude	Sustainable Luxury Brands	▪ Pride appeal increased e-WOM intentions for luxury brands while gratitude appeal increased e-WOM intentions for sustainable brands. ▪ Pride increased e-WOM intentions for sustainable luxury brands by heightening their luxury dimension, whereas gratitude appeal increased e-WOM intentions by heightening their sustainability dimension.
The present research	*Pride and awe*	*Recycling, pro-environmental acts, and green purchase.*	*Congruence between the value appraisal of an emotion and consumers' human value priority or brand/message value orientation promotes sustainable behavior through meaning in life and self-efficacy. Pride increases sustainable behavior when the self-enhancement value is prioritized while awe increases sustainable behavior when the self-transcendence value is prioritized. In addition, pride and awe enhance self-efficacy and subsequently sustainable behavior via different aspects of meaning in life (search for meaning and presence of meaning, respectively) when the congruent values are salient.*

Appendix C: Priming Instructions

Study 2

We created six web posters that varied in emotions and human values with a pledge letter that was the same across all conditions.

Awe + ST/SE Condition:

An awe-eliciting image of a Campus Building combined with the following slogan:
ST condition: Feeling Awed to Go Green! You are *responsible to help* protect the environment.
SE condition: Feeling Awed to Go Green! You are able to *make an impact* on the environment.

Elevation + ST/SE Condition:

An elevation-eliciting image of the University Motto and mascot combined with the following slogan:
ST condition: Feeling Uplifted to Go Green! You are *responsible to help* protect the environment.
SE condition: Feeling Uplifted to Go Green! You are able to *make an impact* on the environment.

Pride + ST/SE Condition:

A pride-eliciting image of graduation celebration combined with the following slogan:
ST condition: Feeling Proud to Go Green! You are *responsible to help* protect the environment.
SE condition: Feeling Proud to Go Green! You are able to *make an impact* on the environment.

Followed by a Pledge Letter for a Plastic-Free Campus (for all conditions)

Dear students,
To continue our efforts for the health and pro-environmental campaign, the student union is initiating a plastic-free campus campaign. We propose to:

1) Refuse to use one-time plastic-made products.
2) Use recyclable products whenever possible.
3) Bring your own cup.
4) Actively participate in garbage categorization and reduce plastic waste.

Let's sign up for a Plastic-Free Campus. Refuse and reduce plastic waste! Scan the QR code to register and sign up for the Plastic-Free Campaign.

College of Business Administration

Study 3: Value Priming

SE condition:

Brand XYZ shifts its focus toward making premium products

XYZ is a brand of sports shoes that has traditionally focused on producing products available to all Americans. In the past few years, they have **shifted their strategy by focusing on making premium products with exquisite design to signal status**.

Recently, the company has launched new eco-friendly sports shoes as shown in the ad below. Upon announcing this new product, a representative of XYZ company stated that, "Now this new product has a place in the market of **premium shoes available to those who are willing to pay more for a unique and prestigious product**. The new sports shoes include eco-friendly materials and recycled plastic **for a better customer experience**. It is **sold exclusively at Brand XYZ stores**."

ST condition:

Brand XYZ shifts its focus toward making sustainable products

XYZ is a brand of sports shoes that has traditionally focused on customers' unique interests and offered premium products. In the past few years, they have **shifted their strategy by focusing on making their products available to all Americans with a lower cost by considering society's welfare**.

Recently, the company has launched new eco-friendly sports shoes as shown in the ad below. Upon announcing this new product, a representative of XYZ company stated that, "Now this new product has a place in the market of **sustainable shoes available to everyone who wants to help protect the environment**. The new sports shoes include eco-friendly materials and recycled plastic **for a better environment**. It is **available at retailers nationwide**."

Study 4

Emotion Induction: Awe, Pride, and Elevation (Bai et al., 2017; Piff et al., 2015)

Awe Condition:

The purpose of this task is to learn more about different life events that make people experience the feeling of awe.

When experiencing awe, people usually feel like they are in the presence of something that is so great in terms of size or intensity that their current understanding of the world, their surroundings, or themselves is challenged in some way.

Now we would like you to recall a particular time, fairly recently, when you felt awe. This might have been a breathtaking view from a high place, or a vast and overwhelming commercial image that you felt was breathtaking.

Please describe in the space below, this event and its accompanying feelings as vividly as possible. The idea is that someone, who does not know you, would feel as awed as you felt merely by reading your description.

essay box here for participants to write their response

Pride Condition:

The purpose of this task is to learn more about different life events that make people experience the feeling of pride.

When experiencing pride, people usually feel a genuine sense of achievement or accomplishment of something, and they feel proud due to the efforts they had invested, obstacles they overcame or being able to take on new challenges.

Now we would like you to recall a particular time when you felt pride of yourself. This might have been being accepted to a university, winning an event or competition, or any other time that you achieved a personal accomplishment.

Please describe in the space below, this event and its accompanying feelings as vividly as possible. The idea is that someone, who does not know you, would feel as proud as you felt merely by reading your description.

essay box here for participants to write their response

Elevation Condition:

The purpose of this task is to learn more about different life events that make people experience the feeling of elevation.

When experiencing elevation, people usually feel pleasant and warm in the chest, combined with the feeling that one has been uplifted or 'elevated' in some way due to witnessing the excellence in virtue such as others' good deeds or acts.

Now we would like you to recall a particular time when you felt elevated. That is when you saw a manifestation of humanity's 'higher' or 'better' nature, an act of virtue or moral beauty. This could be by having seen somebody helping a person in need or in a difficult situation, in real life or on television.

Please describe the space below, this event and its accompanying feelings as vividly as possible. The idea is that someone, who does not know you, would feel as elevated as you felt merely by reading your description.

essay box here for participants to write their response

Study 5 (Web Appendix H)

Self-enhancement Condition

Imagine that you have just read an article about recent research findings on consumers' sustainable

behavior. The results suggest that engaging in sustainable or eco-friendly behavior (e.g., buying green products, recycling, reusing shopping bags, etc.) enhances individuals' personal benefits such as having higher social status and good reputation. In addition, engaging in eco-friendly behavior can help individuals build a better social image and stand out from the others.
In conclusion, engaging in sustainable behavior can signal personal success and social power.

Self-transcendence Condition

Imagine that you have just read an article about recent research findings on consumers' sustainable behavior. The results suggest that engaging in sustainable or eco-friendly behavior (e.g., buying green products, recycling, reusing shopping bags, etc.) transcends individuals' personal interests for society's welfare such as caring for nature and others. In addition, engaging in eco-friendly behavior can save the planet and preserve the beauty of the natural environment.
In conclusion, engaging in sustainable behavior can signal social responsibility and helpfulness toward nature.

Pride + SE

Pride + ST

Awe + SE

Awe + ST

Appendix D: Manipulation Check and Pretests of Stimuli

This appendix provides a full listing of the means, standard deviations and statistics for manipulation checks across all studies, including the pretest of stimuli. As the self-enhancement value and the self-enhancement value are opposing values along one continuum (Schwarz, 1992), we created a difference score by subtracting the SE score from the ST score to form a value priority index, with a higher score denoting an ST value priority. We used the value priority index for the manipulation check of values. Nonetheless, we also reported the ANOVA results on individual ST and SE scores to further validate the manipulation of values. The results of using the individual ST and SE scores and the difference score were consistent across studies.

Study 1a

Manipulation checks. ANOVA on pride and happiness respectively showed that participants in the pride condition reported greater pride than those in the neutral condition (M_{pride} = 5.17, SD = 1.58 vs. $M_{neutral}$ = 3.80, SD = 1.93, $p < .001$; F(1, 378) = 56.28, $p < .001$), and also felt greater happiness than those in the neutral condition (M_{pride} = 4.20, SD = 1.52 vs. $M_{neutral}$ = 3.16, SD = 1.78, $p < .001$; F(1, 378) = 37.22, $p < .001$). ANOVA on the value priority index showed that participants in the ST condition reported a higher score on the ST value priority than those in the SE condition (M_{ST} = 1.24, SD = 1.25 vs. M_{SE} = .52, SD = 1.19; F(1, 378) = 32.98, $p < .001$). Moreover, ANOVA on individual SE and ST scores also showed that participants in the SE condition reported a higher score on the SE value than those in the ST condition (M_{SE} = 4.74, SD = 1.37 vs. M_{ST} = 4.26, SD = 1.43; F(1, 378) = 11.13, $p = .001$); conversely, participants in the ST condition reported a higher score on the ST value than those in the SE condition (M_{ST} = 5.51, SD = 1.42 vs. M_{SE} = 5.26, SD = 1.28; F(1, 378) = 2.98, $p = .085$). Thus, emotions and values were manipulated successfully.

Study 1b

Manipulation checks. ANOVA on awe and happiness respectively showed that participants in the awe condition reported greater awe than those in the neutral condition (M_{awe} = 5.36, SD = 1.54 vs. $M_{neutral}$ = 3.73, SD = 1.67, $p < .001$; F(1, 384) = 99.64, $p < .001$), and also felt greater happiness than those in the neutral condition (M_{awe} = 4.72, SD = 1.49 vs. $M_{neutral}$ = 3.95, SD = 1.54, $p < .001$; F(1, 384) = 24.58, $p < .001$). In addition, ANOVA on the value priority index showed that participants in the ST condition reported a higher score on the ST value priority than those in the SE

condition (M_{ST} = 1.74, SD = 1.29 vs. M_{SE} = .92, SD = 1.47; F(1, 384) = 33.65, p < .001). Moreover, ANOVA on the individual SE and ST scores also showed that participants in the SE condition reported a higher score on the SE value than those in the ST condition (M_{SE} = 4.71, SD = 1.48 vs. M_{ST} = 4.28, SD = 1.32; F(1, 384) = 8.60, p = .004); conversely, participants in the ST condition reported a higher score on the ST value than those in the SE condition (M_{ST} = 6.02, SD = 1.01 vs. M_{SE} = 5.62, SD = 1.38; F(1, 384) = 10.35, p = .001). Thus, emotions and values were manipulated successfully.

Study 1c Pretest

We conducted the pretest (N = 275, 69.1% female, M_{age} = 34.10) for the stimuli of Study 1c before the main study. The pretest used a 2 (emotion: awe vs pride) × 2 (value: ST vs. SE) between-participants design. Participants were randomly assigned to see one of the four posters. After that, participants rated how they felt on seven emotions (i.e., awe, pride, happy, sad, fear, disgust and anger). Participants also indicated to what extent the poster reflected SE values (M = 5.01, SD = 1.32, α = .81) and ST values (M = 5.55, SD = 1.27, α = .89) using the same items as in Study 1a. We created a difference score by subtracting the score of SE from that of ST to form a value priority index (M = .54, SD = 1.02), with a higher score denoting greater ST value priority.

Manipulation check for emotion priming. A one-way ANOVA on specific emotions (Appendix Table 1) showed that participants in the pride condition felt greater pride than those in the awe condition (M_{pride} = 5.46, SD = 1.51 vs. M_{awe} = 4.87, SD = 1.60; F(1, 273) = 10.12, p = .002), while participants in the awe condition reported greater awe than those in the pride condition (M_{awe} = 4.54, SD = 1.98 vs. M_{pride} = 2.79, SD = 1.54; F(1, 273) = 66.77, p < .001). In addition, the pride condition was not significantly different from the awe condition on the positivity index of happiness (M_{pride} = 4.51, SD = 1.51 vs. M_{awe} = 4.62, SD = 1.46; F(1, 273) = .411, p = .52) or negativity (all ps > .60).

Appendix Table 1: Manipulation Check Details

Ratings	Awe condition	Pride condition	Statistics
Happiness	4.62 (1.46)	4.51 (1.51)	F(1, 273) = .411, p = .522
Awe	4.54 (1.98)	2.79 (1.54)	F(1, 273) = 66.77, p < .001
Pride	4.87 (1.60)	5.46 (1.51)	F(1, 273) = 10.12, p = .002
Anger	1.28 (.81)	1.26 (.67)	F(1, 273) = .036, p = .849

Disgust	1.29 (.80)	1.29 (.81)	F(1, 273) = .002, p = .968
Fear	1.30 (.85)	1.33 (.80)	F(1, 273) = .106, p = .745
Sad	1.32 (.86)	1.37 (.96)	F(1, 273) = .230, p = .632

Manipulation check for value priming. A one-way ANOVA on the value priority index (difference score of ST and SE) showed that participants in the ST condition reported greater ST value than those in the SE condition (M_{ST} = .88, SD = .89 vs. M_{SE} = .19, SD = 1.03; F(1, 273) = 35.34, p < .001). A separate ANOVA on individual ST and SE scores showed that participants in the SE condition reported greater SE score than those in the ST condition (M_{ST} = 4.84, SD = 1.38 vs. M_{SE} = 5.18, SD = 1.24; F(1, 273) = 4.57, p = .034). In contrast, participants in the ST condition reported greater ST value than those in the SE condition (M_{ST} = 5.73, SD = 1.18 vs. M_{SE} = 5.37, SD = 1.33; F(1, 273) = 5.36, p = .021).

MANOVA manipulation check. Furthermore, a 2 × 2 MANOVA on awe, pride, ST and SE scores showed that emotion priming only affected awe (F(1, 271) = 66.78, p < .001) and pride (F(1, 271) = 10.19, p = .002), but did not affect ST value (p = .235) and SE value (p = .735). Conversely, value priming only affected the ST value (F(1, 271) = 5.26, p = .023) and SE value (F(1, 271) = 4.54, p = .034), but did not affect awe and pride (both ps > .34). The interactions on all indices were nonsignificant (all ps > .73). Thus, emotions and values were manipulated successfully.

Study 2 Pretest

We recruited 105 students (69.5% female, M_{age} = 21.81, within-participant design) for the pretest. All the materials were translated into Chinese. Participants first rated the three images on the feelings of awe, pride, and elevation. Following that, they read two slogans: *You are responsible to help protect the environment* (ST slogan), and *You are able to make an impact on the environment* (SE slogan). They then indicated which value each slogan was reflected by choosing from two options: 1) self-transcendence values such as supportive relationship and being responsible; 2) self-enhancement values such as power, influence and capability.

Manipulation check for emotion priming. Results showed that participants felt greater awe for the campus administration building (M_{awe} = 4.92, SD = 1.20) than for the university motto ($M_{elevation}$ = 4.62, SD = 1.54, t(104) = 2.13, p = .036) and the graduation image (M_{pride} = 3.64, SD = 1.83, t(104) = 7.47, p < .001). Participants felt greater pride for the graduation image (M_{pride} = 5.25, SD = 1.48) than for the administration building (M_{awe} = 4.58, SD = 1.29; t(104) = -4.18, p < .001)

and the university motto ($M_{elevation}$ = 4.75, SD = 1.66, t(104) = -2.49, p = .014). Finally, participants felt greater elevation for the university motto ($M_{elevation}$ = 5.00, SD = 1.28) than for the high administration building (M_{awe} = 4.62, SD = 1.29; t(109) = -2.79, p = .006) and the graduation image (M_{pride} = 4.37, SD = 1.63; t(104) = 4.49, p < .001).

Manipulation check for value priming. Moreover, 77.1% participants chose ST values (coded as 1) for the ST slogan (M = .77, SD = 42), which was significantly different from the mid-point of .50 (t(104) = 17.52, p < .001). Conversely, 72.5% participants chose SE values (coded as 0) for the SE slogan (M = .28, SD = .45), which was also significantly different from the mid-point of .50 (t(104) = 5.16, p < .001). Thus, the images and slogans were manipulated successfully.

Study 3 Pretest

We conducted the pretest (N = 198, 52% female, M_{age} = 33.41) for the stimuli of Study 1c before the main study. The pretest used a 2 (emotion: awe vs pride) × 2 (value: ST vs. SE) between-participants design. Participants were randomly assigned to see one of the four posters. After that, participants rated how they felt on seven emotions (e.g., awe, pride, happy, sad, fear, disgust and anger). Participants also indicated to what extent the new product reflect SE values (*social status*, *prestige*, *being influential*, and *enhance personal interests*, 1 = *not at all*, 7 = *very much*; M = 4.88, SD = 1.23, α = .82) and ST values (*pursue social welfare*, *social responsibility*, *helpfulness*, *being supportive*, 1 = *not at all*, 7 = *very much*; M = 5.11, SD = 1.31, α = .88).

Manipulation check for emotion priming. A one-way ANOVA on specific emotions (Appendix Table 2) showed that participants in the pride condition felt greater pride than those in the awe condition (M_{pride} = 5.04, SD = 1.74 vs. M_{awe} = 4.52, SD = 1.62; F(1, 196) = 4.69, p = .032), while participants in the awe condition reported greater awe than those in the pride condition (M_{awe} = 4.73, SD = 1.53 vs. M_{pride} = 4.07, SD = 1.54; F(1, 196) = 9.21, p = .003). In addition, the pride condition was not significantly different from the awe condition on positivity (M_{pride} = 4.47, SD = 1.61 vs. M_{awe} = 4.37, SD = 1.33; F(1, 196) = .237, p = .627) or negativity (all ps > .70).

Appendix Table 2: Manipulation Check Details

Ratings	Awe condition	Pride condition	Statistics
Happiness	4.37 (1.33)	4.47 (1.61)	F(1, 196) = .237, p = .627
Awe	4.73 (1.53)	4.07 (1.54)	F(1, 196) = 9.21, p = .003
Pride	4.52 (1.62)	5.04 (1.74)	F(1, 196) = 4.69, p = .032

Anger	1.34 (.90)	1.30 (.83)	$F(1, 196) = .088$, $p = .767$
Disgust	1.26 (.77)	1.25 (.79)	$F(1, 196) = .002$, $p = .964$
Fear	1.32 (.82)	1.32 (.96)	$F(1, 196) = .001$, $p = .977$
Sad	1.28 (.75)	1.28 (.76)	$F(1, 196) = .002$, $p = .967$

Manipulation check for value priming. A one-way ANOVA on the value priority index (difference score of ST and SE) showed that participants in the ST condition reported greater ST value than those in the SE condition ($M_{ST} = .97$, SD = 1.41 vs. $M_{SE} = -.51$, SD = 1.48; $F(1, 196) = 51.75$, $p < .001$). A separate ANOVA on the individual ST and SE scores showed that participants in the SE condition reported greater SE than those in the ST condition ($M_{ST} = 4.50$, SD = 1.30 vs. $M_{SE} = 5.25$, SD = 1.04; $F(1, 196) = 19.66$, $p < .001$). In contrast, participants in the ST condition reported greater ST than those in the SE condition ($M_{ST} = 5.47$, SD = 1.23 vs. $M_{SE} = 4.73$, SD = 1.29; $F(1, 196) = 16.67$, $p < .001$).

MANOVA manipulation check. Furthermore, a 2 × 2 MANOVA on awe, pride, ST and SE scores showed that emotion priming only affected awe ($F(1,194) = 9.09$, $p = .003$) and pride ($F(1, 194) = 4.68$, $p = .032$), but did not affect ST value and SE value (both *p*s > .32). Conversely, value priming only affected the ST value ($F(1, 194) = 16.79$, $p < .001$) and SE value ($F(1, 194) = 19.47$, $p < .001$), but did not affect awe and pride (both *p*s > .85). The interactions on all indices were nonsignificant (all *p*s > .29). Thus, emotions and values were manipulated successfully.

Study 4

Manipulation checks. ANOVA results (Appendix Table 3) showed that participants in the awe condition reported greater awe ($M_{awe} = 6.36$, SD = .76) than those in the elevation ($M_{elevation} = 5.34$, SD = 1.67, $p < .001$) and pride conditions ($M_{pride} = 4.53$, SD = 1.73, $p < .001$; $F(2, 477) = 63.91$, $p < .001$). Similarly, participants in the elevation condition felt more elevated ($M_{elevation} = 5.52$, SD = 1.38) than those in the awe ($M_{awe} = 4.46$, SD = 1.85, $p < .002$) and pride conditions ($M_{pride} = 5.06$, SD = 1.54, $p = .001$; $F(2, 477) = 17.41$, $p < .001$); while participants in the pride condition felt greater pride ($M_{pride} = 6.48$, SD = .91) than those in the awe ($M_{awe} = 4.75$, SD = 1.80, $p < .001$) and elevation conditions ($M_{elevation} = 5.47$, SD = 1.54, $p < .001$; $F(2, 477) = 56.98$, $p < .001$). Moreover, participants in the ST condition reported a higher score on the ST value priority index than those in the SE condition ($M_{ST} = 2.49$, SD = 2.01 vs. $M_{SE} = .30$, SD = 2.62; $F(1, 478) = 98.54$, $p < .001$). In addition, ANOVA on the individual SE and ST scores also showed that participants in the SE condition reported a higher score on the SE value than those in the ST

condition (M_{SE} = 4.55, SD = 1.80 vs. M_{ST} = 3.29, SD = 1.70; F(1, 478) = 62.45, p < .001); conversely, participants in the ST condition reported a higher score on the ST value than those in the SE condition (M_{ST} = 5.78, SD = 1.26 vs. M_{SE} = 4.85, SD = 1.55; F(1, 478) = 51.49, p < .001). Thus, emotions and values were both manipulated successfully.

Appendix Table 3: Manipulation Check Details of Study 4

Ratings	Awe condition	Elevation condition	Pride condition	Statistics
Happiness	6.10 (1.23) [a]	5.82 (1.44) [a]	6.14 (1.21) [a]	F(2, 477) = 3.13, p = .045
Amusement	3.69 (1.81) [a]	3.01 (1.76) [a]	3.72 (1.72) [a]	F(2, 477) = 8.44, p < .001
Awe	6.36 (.76) [b]	5.34 (1.67) [b]	4.53 (1.73) [b]	F(2, 477) = 63.91, p < .001
Elevation	4.46 (1.85) [b]	5.52 (1.38) [b]	5.06 (1.54) [b]	F(2, 477) = 17.41, p < .001
Pride	4.75 (1.80) [b]	5.47 (1.54) [b]	6.48 (.91) [b]	F(2, 477) = 56.98, p < .001
Anger	1.33 (1.10)	1.54 (1.22)	1.41 (1.06)	F(2, 477) = 1.38, p = .252
Disgust	1.24 (.91)	1.29 (.98)	1.20 (.71)	F(2, 477) = .43, p = .65
Fear	2.06 (1.58) [a]	1.65 (1.26) [a]	2.01 (1.50) [a]	F(2, 477) = 3.68, p = .026
Sad	1.74 (1.38) [a]	2.53 (1.69) [a]	1.68 (1.32) [a]	F(2, 477) = 16.37, p < .001

[a] significant between elevation and the other two conditions (ps < .05), not significant between pride and awe (ps > .70)
[b] significant among the three conditions (ps < .05).

Study 5 Pretest (Web Appendix H)

We conducted the pretest (N = 184, 51.1% female, M_{age} = 33.05) for the stimuli of Study 5 before the main study. The pretest was a 2 (emotion: awe vs pride) × 2 (value: ST vs. SE) between-participants design. Participants were randomly assigned to see one of the four posters. After that, participants rated how they felt on awe (M = 3.74, SD = 1.60), pride (M = 4.80, SD = 1.75), happiness (M = 4.74 SD = 1.40), and other four negative emotions as in the Study 1c. They then indicated to what extent the poster reflected the importance of SE values (*social status*, *being influential*, *prestige*, and *enhance personal interests*, 1 = *not at all*, 7 = *very important*; M = 4.31, SD = 1.44, α = .85) and ST values (*transcend personal interests*, *social responsibility*, *helpfulness*, *being supportive*, 1 = *not at all*, 7 = *very important*; M = 5.48, SD = 1.24, α = .89).

Manipulation check for emotion priming. ANOVA on specific emotions (Appendix Table 4) showed that participants in the pride condition felt greater pride than those in the awe condition (M_{pride} = 5.36, SD = 1.48 vs. M_{awe} = 4.22, SD = 1.83; F(1, 182) = 21.50, p < .001), while participants in the awe condition reported greater awe than those in the pride condition (M_{awe} =

4.09, SD = 1.59 vs. M_{pride} = 3.40, SD = 1.54; F(1, 182) = 8.75, p = .003). In addition, the pride condition was not significantly different from the awe condition on positivity (M_{pride} = 4.89, SD = 1.23 vs. M_{awe} = 4.59, SD = 1.55; F(1, 182) = 2.17, p = .142) or negativity (all ps > .33).

Appendix Table 4: Manipulation Check Details

Ratings	Awe condition	Pride condition	Statistics
Happiness	4.59 (1.55)	4.89 (1.23)	F(1, 182) = 2.17, p = .142
Awe	4.09 (1.59)	3.40 (1.54)	F(1, 182) = 8.75, p = .003
Pride	4.22 (1.83)	5.36 (1.48)	F(1, 182) = 21.50, p < .001
Anger	1.34 (.72)	1.40 (.83)	F(1, 182) = .270, p = .604
Disgust	1.39 (.69)	1.51 (.98)	F(1, 182) = .933, p = .335
Fear	1.43 (.83)	1.40 (.69)	F(1, 182) = .066, p = .797
Sad	1.49 (.91)	1.39 (.72)	F(1, 182) = .618, p = .433

Manipulation check for value priming. A one-way ANOVA on the value priority index (difference score of ST and SE) showed that participants in the ST condition reported greater ST value than those in the SE condition (M_{ST} = 1.88, SD = 1.43 vs. M_{SE} = .43, SD = 1.65; F(1, 182) = 40.21, p < .001). ANOVA on the individual ST and SE scores showed that participants in the SE condition reported greater SE than those in the ST condition (M_{ST} = 3.81, SD = 1.48 vs. M_{SE} = 4.82, SD = 1.22; F(1, 182) = 25.14, p < .001). In contrast, participants in the ST condition reported greater ST than those in the SE condition (M_{ST} = 5.70, SD = 1.24 vs. M_{SE} = 5.26, SD = 1.21; F(1, 182) = 5.91, p = .016).

MANOVA manipulation check. Furthermore, a 2 × 2 MANOVA on awe, pride, ST and SE scores showed that emotion priming only affected awe (F(1,180) = 8.62, p = .004) and pride (F(1, 180) = 21.22, p < .001), but did not affect ST and SE scores (both ps > .66). Conversely, value priming only affected the ST (F(1, 180) = 5.79, p = .017) and SE scores (F(1, 180) = 24.77, p < .001), but did not affect awe and pride (both ps > .46). The interactions on all indices were all nonsignificant (all ps > .31). Thus, awe, pride and values were manipulated successfully.

Appendix E: Key Measurement Items

Studies 1a, 1b, and 1c

Recycling Intention

1) How likely are you to join the recycling program/reuse the towel/recycle?
   1 = *very unlikely*, 7 = *very likely*
2) How inclined are you to join the recycling program/reuse the towel/recycle?
   1 = *not very inclined*, 7 = *very inclined*
3) How willing are you to join the recycling program/reuse the towel/recycle?
   1 = *very unwilling*, 7 = *very willing*

Manipulation check questions for the self-transcendence (ST) and self-enhancement (SE) values

To what extent does the poster emphasize the following values?

1) being powerful (SE)
2) being influential (SE)
3) being impactful (SE)
4) being responsible (ST)
5) being helpful (ST)
6) being supportive (ST)
   1 = *not important at all*, 7 = *very important*

Study 3

Purchase Intention (adapted from Kidwell et al., 2013)

1) How likely are you to buy this new product if you need to buy one?
   1 = *extremely unlikely*; 7 = *extremely likely*
2) How willing are you to buy this new product if you need to buy one?
   1 = *very unwilling*, 7 = *very willing*
3) How inclined are you to buy this new product if you need to buy one?
   1 = *not inclined at all*, 7 = *very inclined*

Study 4

Purchase Intention (adapted from Kidwell et al., 2013)

What are your purchase intentions for this backpack?

1 = highly unlikely; 7 = highly likely

1 = not very inclined, 7 = very inclined

1 = very unwilling, 7 = very willing

Self-Efficacy (adapted from Keller, 2006)

1) How good do you feel about taking care of the environment by buying this backpack?
2) How confident are you to protect the environment by buying this backpack?
3) How confident are you able to make a difference to the environment?

4) How capable are you to engage in sustainable consumption?
(1 = *not at all*, 7 = *a great deal*)

Processing Fluency (adapted from Lee & Aaker, 2004)

The ad is _____.

1) 1 = difficult to process; 7 = easy to process.
2) 1 = difficult to understand; 7 = easy to understand
3) 1 = difficult to comprehend; 7 = easy to comprehend
(1 = *strongly disagree*, 7 = *strongly agree*)

Study 5 (Web Appendix H)

Purchase Intention (adapted from Kidwell et al., 2013)

1) Seeing the poster, how likely are you to join this recycling program?
1 = *extremely unlikely*; 7 = *extremely likely*
2) Seeing the poster, how inclined are you to join this recycling program?
1 = *not inclined at all*, 7 = *very inclined*
3) Seeing the poster, how willing are you to join this recycling program?
1 = *very unwilling*, 7 = *very willing*

Meaning in Life (Steger, Frazier, Oishi, & Kaler, 2006)

Presence of meaning

1) I understand my life's meaning.
2) My life has a clear sense of purpose.
3) I have a good sense of what makes my life meaningful.
4) I have discovered a satisfying life purpose.
5) My life has no clear purpose (reverse-coded).

Search for meaning

1) I am looking for something that makes my life feel meaningful.
2) I am always looking to find my life's purpose.
3) I am always searching for something that makes my life feel significant.
4) I am seeking a purpose or mission for my life.
5) I am searching for meaning in my life.

(1 = *absolutely untrue*, 7 = *extremely true*)

Self-Efficacy (adapted from Keller, 2006)

1) How good do you feel about taking care of the environment by recycling?
2) How confident are you to protect the environment by recycling?
3) How confident are you able to make a difference to the environment?
(1 = *not at all*, 7 = *a great deal*)

Appendix F: Supplementary Analyses

This appendix provides details on the preliminary analyses, full ANOVA and ANCOVA results, as well as other additional analyses in Studies 2-4.

Study 2

To increase generalizability of the emotion–value congruity effect, we added one more emotion—elevation (Haidt, 2003). Elevation is defined as feelings of warmth and expansion that are linked to affection in response to seeing exemplary behavior on the part of another individual, such as witnessing acts of charity, generosity, or other forms of moral excellence (Haidt, 2003; Schnall & Roper, 2012; Thomson & Siegel, 2017). When experiencing elevation, individuals tend to feel inspired and uplifted (Algoe & Haidt, 2009), and motivated to become better people (Haidt, 2003). Prior research shows that elevation can increase consumers' behavioral responses toward green products as an outcome of the company's CSR initiative (Romani, Grappi, & Bagozzi, 2016). As elevation and awe share the same value appraisal of self-transcendence (Stellar et al., 2017), we expected that elevation would generate similar effects as awe, in contrast to pride.

The effect of elevation on sign-up for plastic-free campaign. We conducted a binary logistic regression using actual sign-up as the dependent variable (sign-up = 1, not sign-up = 0), and emotion, human value, and their interaction terms as predictors. We specified emotion as a categorical variable with pride as the reference group, resulting in two dummy variables (D1 contrasted pride against awe and D2 contrasted pride against elevation) and two interaction terms (D1 × human value, D2 × human value). Results showed a significant interaction effect of D1 × human value (B = 1.10, Wald = 13.52, $p < .001$, Exp(B) = 3.02) and D2 × human value (B = 1.08, Wald = 13.38, $p < .001$, Exp(B) = 3.94).

Decomposing the interaction effects, elevation led to more sign-ups when combined with the ST value than with the SE value (58.0% vs. 32.0%, B = .54, Wald = 6.66, $p = .01$, Exp(B) = 1.71). Viewed another way, in the ST condition, elevation also led to more sign-ups (58.0%) compared to pride (30.0%, B = 1.17, Wald = 7.72, $p = .005$, Exp(B) = 3.22), with awe and elevation not significantly different from each other (B = .24, Wald = .35, $p = .56$, Exp(B) = 1.27). Conversely, in the SE condition, pride led to more sign-ups (55.8%) compared to elevation (32.0%, B = -.99, Wald = 5.72, $p = .017$, Exp(B) = .37), with awe and elevation not significantly different from each other (B = .29, Wald = .44, $p = .51$, Exp(B) = 1.34).

Study 3

ANCOVA on purchase intention. ANCOVA results showed a significant interaction effect ($F(1, 397) = 23.84$, $p < .001$, $\eta_p^2 = .057$) and a marginally significant main effect of value ($F(1, 397) = 2.96$, $p = .086$, $\eta_p^2 = .007$), in addition to a significant main effect of ad likability ($F(1, 397) = 158.18$, $p < .001$, $\eta_p^2 = .285$). The effect of emotion was nonsignificant ($F(1, 397) = 2.14$, $p = .144$).

ANOVA on ad likability. A 2 x 2 ANOVA revealed a significant interaction effect on ad likability ($F(1, 398) = 7.34$, $p = .007$, $\eta_p^2 = .018$). The main effects of emotion ($F(1, 398) = .086$, $p = .76$) and value ($F(1, 398) = 1.22$, $p = .27$) were both nonsignificant.

Study 4

Preliminary analysis. Regression analysis with positive affect and negative affect as predictors showed a significant effect of positive affect ($\beta = .28$, $t(477) = 6.17$, $p < .001$), but a nonsignificant effect of negative affect ($\beta = .02$, $t(477) = .34$, $p = .74$) on purchase intention.

Regression analyses showed positive effects of engagement ($\beta = .80$, $t(478) = 29.01$, $p < .001$), self-efficacy ($\beta = .60$, $t(478) = 16.48$, $p < .001$), processing fluency ($\beta = .30$, $t(478) = 6.81$, $p < .001$), and moral identity ($\beta = .18$, $t(478) = 3.99$, $p < .001$) on purchase intention.

The effects of elevation on purchase intention. Planned contrasts showed that elevation led to higher purchase intention for the ST ad than for the SE ad ($M_{ST} = 5.24$, $SD = 1.27$ vs. $M_{SE} = 4.67$, $SD = 1.34$; $F(1, 474) = 8.14$, $p = .005$, $\eta_p^2 = .017$). Moreover, for the ST ad, awe and elevation led to higher purchase intention compared to pride ($t(239) = 2.20$, $p = .029$ and $t(239) = 2.61$, $p = .010$), with awe not significantly different from elevation ($p = .67$). For the SE ad, pride led to higher purchase intention compared to awe ($t(235) = -2.81$, $p = .005$) and elevation ($t(235) = -2.61$, $p = .010$), with awe not significantly different from elevation ($p = .85$).

Full ANCOVA on purchase intention. ANCOVA including positive affect and negative affect as covariates did not change the significant interaction effect of emotion × value ($F(2, 472) = 7.97$, $p < .001$, $\eta_p^2 = .033$) on purchase intention. There was a significant effect of positive affect ($F(1, 472) = 36.10$, $p < .001$, $\eta_p^2 = .071$), and a marginally significant effect of value ($F(1, 472) = 3.54$, $p = .061$, $\eta_p^2 = .007$) on purchase intention. The main effects of emotion ($F(2, 472) = .25$, $p = .779$, $\eta_p^2 = .001$) and negative affect ($F(1, 472) = .02$, $p = .886$, $\eta_p^2 = .000$) were nonsignificant.

Full ANOVA on feeling of engagement. A 3 × 2 ANOVA showed a significant interaction effect of emotion × value on engagement ($F(2, 474) = 8.98$, $p < .001$, $\eta_p^2 = .037$). The main effects

of emotion ($F(2, 474) = .01$, $p = .99$, $\eta_p^2 = .000$) and value ($F(1, 474) = 2.49$, $p = .115$, $\eta_p^2 = .005$) on engagement were nonsignificant. Planned contrasts showed that awe increased the feeling of engagement for the ST ad compared to the SE ad ($M_{ST} = 4.91$, SD = 1.13 vs. $M_{SE} = 4.30$, SD =1.42; $F(1, 474) = 8.79$, $p = .003$, $\eta_p^2 = .018$). Similarly, elevation increased engagement for the ST ad compared to the SE ad ($M_{ST} = 4.85$, SD = 1.34 vs. $M_{SE} = 4.38$, SD =1.37; $F(1, 474) = 5.09$, $p = .025$, $\eta_p^2 = .011$). By contrast, pride increased engagement for the SE ad compared to the ST ad ($M_{SE} = 4.88$, SD = 1.18 vs. $M_{ST} = 4.36$, SD = 1.24; $F(1, 474) = 6.41$, $p = .012$, $\eta_p^2 = .013$).

Moreover, the effect of emotion was significant for the ST ($F(2, 474) = 4.33$, $p = .014$, $\eta_p^2 = .018$) and SE ads ($F(2, 474) = 4.65$, $p = .010$, $\eta_p^2 = .019$). For the ST ad, awe and elevation led to higher purchase intention compared to pride ($t(239) = 2.78$, $p = .006$ and $t(239) = 2.46$, $p = .014$), with awe not differing from elevation ($t(239) = -.30$, $p = .76$). For the SE ad, pride led to higher purchase intention compared to awe ($t(235) = -2.72$, $p = .007$) and elevation ($t(235) = -2.33$, $p = .021$), with awe not differing from elevation ($t(235) = .38$, $p = .70$).

Full ANOVA on processing fluency. A 3 × 2 ANOVA on processing fluency showed a significant interaction effect of emotion × value ($F(2, 474) = 5.03$, $p = .007$, $\eta_p^2 = .021$). The main effects of emotion ($F(2, 474) = .21$, $p = .81$, $\eta_p^2 = .001$) and value ($F(1, 474) = .13$, $p = .72$, $\eta_p^2 = .000$) were nonsignificant. Follow-up analysis showed that the effect of emotion condition on processing fluency were not significant in the ST ad condition ($F(2, 474) = 1.79$, $p = .168$, $\eta_p^2 = .007$) but significant in the SE ad condition ($F(2, 474) = 3.44$, $p = .033$, $\eta_p^2 = .014$).

Serial mediation analysis via engagement and self-efficacy. We further conducted a moderated serial mediation analysis using Process Model 85 (Hayes, 2018). The results showed a significant moderated mediation through engagement (D1: 95% CI = [.399, 1.195]; D2: 95% CI = [.290, 1.091]), but not through self-efficacy (D1: 95% CI = [-.023, .077]; D2: 95% CI = [-.016, .086]). Importantly, there was a significant moderated serial mediation effect through engagement and self-efficacy (D1: index = .08, 95% CI = [.013, .160]; D2: index = .07, 95% CI = [.010, .143]). These results suggested that feeling of engagement is proximal to the congruity effect (Lee et al., 2010) compared to self-efficacy, consistent with our arguments. Further details on the mediation results are shown in Web Appendix G.

Relationship between engagement and processing fluency. We also explored the relationship between engagement and processing fluency. First, the regression results showed a bidirectional relationship between engagement and processing fluency, such that both the effect of processing fluency on engagement ($b = .27$, $t(478) = 6.66$, $p < .001$) and effect of engagement on

processing fluency (b = .31, t(478) = 6.66, $p < .001$) were significant. Nonetheless, a moderated mediation analysis with processing fluency as the mediator and engagement as the dependent variable only supported the mediating role of processing fluency between the interaction effect and engagement for the SE ad (D1: 95% CI = [-.239, -.011]; D2: 95% CI = [-.274, -.023]), but not for the ST ad (D1: 95% CI = [-.049, .202]; D2: 95% CI = [-.005, .249]).

Reversing the order of the mediator and the dependent variable, a moderated mediation analysis with engagement as the mediator and processing fluency as the dependent variable supported the mediating role of engagement between the interaction effect and processing fluency for both the SE ad (D1: 95% CI = [-.313, -.046]; D2: 95% CI = [-.283, -.026]), and the ST ad (D1: 95% CI = [.051, .292]; D2: 95% CI = [.021, .280]). Thus, these results replicated prior finding that engagement mediated the congruity effect on processing fluency (Lee et al., 2010).

Appendix G: Summary of Mediation Analyses in Study 4

Appendix Table 5: Single Moderated Mediation and Serial Mediation Effects

Paths or effects	b	S.E.	t	95% CI
Moderated Mediation (Model 8) via Feeling of Engagement				
Engagement → Purchase Intention (PI)	.77	.03	28.07***	
D1 (pride = 0, awe = 1, elevation = 0) → PI	-.11	.12	-.89	
D2 (pride = 0, awe = 0, elevation = 1) → PI	-.13	.12	-1.08	
Values (SE = 0, ST = 1) → PI	-.07	.12	-.57	
Conditional Indirect Effects of IV on DV				
SE: D1 → Engagement → PI	-.44	.16		[-.767, -.127]
ST: D1 → Engagement → PI	.42	.14		[.126, .706]
Index of Moderated Mediation	.86	.22		[.427, 1.300]
SE: D2 → Engagement → PI	-.38	.15		[-.687, -.079]
ST: D2 → Engagement → PI	.37	.16		[.057, .690]
Index of Moderated Mediation	.75	.22		[.309, 1.194]
Moderated Mediation (Model 8) via Self-Efficacy				
Self-Efficacy → PI	.59	.04	15.82***	
D1 (pride = 0, awe = 1, elevation = 0) → PI	-.29	.16	-1.78	
D2 (pride = 0, awe = 0, elevation = 1) → PI	-.24	.16	-1.49	
Values (SE = 0, ST = 1) → PI	-.16	.15	-1.03	
Conditional Indirect Effects of IV on DV				
SE: D1 → Self-Efficacy → PI	-.26	.10		[-.472, -.064]
ST: D1 → Self-Efficacy → PI	.28	.13		[.023, .551]
Index of Moderated Mediation	.55	.17		[.221, .895]
SE: D2 → Self-Efficacy → PI	-.27	.11		[-.501, -.060]
ST: D2 → Self-Efficacy → PI	.26	.12		[.019, .518]
Index of Moderated Mediation	.53	.17		[.216, .886]
Moderated Serial Mediation (Model 85) via Engagement and Self-Efficacy				
Conditional Indirect Effects of IV on DV				
SE: D1 → Engagement → PI	-.40	.14		[-.696, -.125]
ST: D1 → Engagement → PI	.38	.13		[.123, .652]
Index of Moderated Mediation	.78	.20		[.399, 1.195]
SE: D2 → Engagement → PI	-.34	.14		[-.624, -.066]
ST: D2 → Engagement → PI	.34	.14		[.058, .629]
Index of Moderated Mediation	.68	.20		[.290, 1.091]
SE: D1 → Self-Efficacy → PI	-.01	.01		[-.042, .021]
ST: D1 → Self-Efficacy → PI	.01	.02		[-.020, .056]
Index of Moderated Mediation	.02	.02		[-.023, .076]
SE: D2 → Self-Efficacy → PI	-.01	.01		[-.051, .012]
ST: D2 → Self-Efficacy → PI	.01	.02		[-.023, .053]
Index of Moderated Mediation	.03	.02		[-.016, .086]
SE: D1 → Engagement → Self-Efficacy → PI	-.04	.02		[-.092, -.004]
ST: D1 → Engagement → Self-Efficacy → PI	.04	.02		[.004, .084]
Index of Moderated Serial Mediation	.08	.03		[.013, .160]
SE: D2 → Engagement → Self-Efficacy → PI	-.03	.02		[-.082, -.002]
ST: D2 → Engagement → Self-Efficacy → PI	.03	.01		[.002, .078]
Index of Moderated Serial Mediation	.07	.03		[.010, .143]

Notes: $^{***}p < .001$, SE = Self-enhancement, ST = Self-transcendence.

Appendix H: Two Pathways of Meaning in Life to Enhance Self-Efficacy

While H2 predicts that congruence between discrete positive emotions and human values enhances perceived self-efficacy, which in turn increases sustainable behavior, it does not, however, explain how pride and awe uniquely influence the process. In this section, we propose that pride and awe map onto two different facets of meaning in life, both of which enhance self-efficacy. Meaning in life is considered a necessity of life (Maslow, 1968), a fundamental human motive (Frankl, 1963), and a key component of consumer well-being (Hicks & Routledge, 2013). Experiencing greater meaning in life increases feelings of happiness (King et al., 2006), reduces stress and depression (Mascaro & Rosen, 2006), as well as loneliness (Wang, Sun, & Kramer, 2021). Meaning in life can be operationalized as a stable trait reflecting a global evaluation of one's life or as a momentary state that can fluctuate on a daily basis (Rudd, Catapano, & Aaker, 2019). Steger et al. (2006, p. 81) define meaning in life as "the sense made of, and significance felt regarding, the nature of one's being and existence," and their scale development reveals that it consists of the two dimensions of the search for meaning and the presence of meaning.

Specifically, the search for meaning gives people a sense of purpose, that is, to engage in goal-oriented pursuits and to have direction in life (Martela & Steger, 2016). It is often associated with personal growth as opposed to being aimless. Baumeister (1991) proposes that individuals' feeling of meaning can be attained by first meeting their needs for value, purpose, and self-worth. Thus, personal achievement can be a source of meaning in life (Wong, 1998). Moreover, understanding one's self is inextricably linked to an overarching sense of purpose (McAdams & Olson, 2010). Thus, the feeling of pride with the congruent SE value can highlight self-worth, goal pursuit, and achievements, which map onto the search for meaning.

By contrast, the presence of meaning refers to the significance of matters that are larger than the self (Heintzelman & King, 2019; Martela & Steger, 2016). It often involves making important contributions that extend beyond one's personal existence (Martela & Steger, 2016). In particular, Rivera et al. (2020) find that the feeling of awe increases both positive affect and feelings of a small self, which influence the presence of meaning. Similarly, Ji et al. (2021) show that awe-eliciting music leads to inspiration, which increases the presence of meaning in life. These findings suggest that awe results in a feeling of the small self, the vastness beyond one's existing frame, and a desire to connect to others, which highlight the significance of meaning in life. Meaning in life is positively related to perceived self-efficacy (Krok & Gerymski, 2019; Rush et al., 2021), which in

turn can increase sustainable behavior (White et al., 2011). Thus, we have:

H3a: When the SE value is salient, pride (vs. awe) increases the search for meaning in life, which in turn enhances perceived self-efficacy and subsequently sustainable behavior.

H3b: When the ST value is salient, awe (vs. pride) increases the presence of meaning in life, which in turn enhances perceived self-efficacy and subsequently sustainable behavior.

Study 5: Separate Mediating Pathways via Meaning in Life

While Study 4 revealed the mediating role of perceived self-efficacy, Study 5 tested the hypothesis that pride and awe work through two different facets of meaning in life, both of which drive perceived self-efficacy (H3). In addition, pride is internally elicited and can increase self-focus (Tracy & Robins, 2007), while awe is externally elicited and has been shown to lower self-focus (Piff et al., 2015). Thus, self-other focus could potentially be an alternative explanation. We measured self-other focus to test this possibility.

Method

Design and participants. Study 5 (https://aspredicted.org/RY1_LQ9) was a preregistered study using a 2 (emotion: awe vs. pride) × 2 (value: ST vs. SE) between-participants design. The dependent variable was recycling intention. We recruited 500 U.S. participants on the Prolific platform with nominal compensation. Fifty-four participants were excluded due to failing the attention check questions, completing the survey too quickly or had missing data, leaving 446 valid responses (50.2% female, M_{age} = 32.66) for the analysis.

Procedure and stimuli. We created four recycling posters similar to those in Study 1c, but added a paragraph emphasizing the importance of recycling in all conditions. In addition, we reinforced the value priming by asking participants to read an article about research findings before seeing the poster. Specifically, in the SE condition, participants read that engaging in sustainable behavior "*enhances individuals' personal benefits such as having social status and good reputation*," and "*can signal personal success and social power*." In the ST condition, participants read that engaging in sustainable behavior "*transcends individuals' personal interests for society's welfare such as caring for nature and others*," and "*can signal social responsibility and helpfulness toward nature*" (Web Appendix C). We conducted a pretest (N = 189) that affirmed the manipulations of emotions and values (Web Appendix D).

Following the procedure in Study 1c, after viewing the poster, participants indicated their intention to join the recycling program ("*How likely / how inclined / how willing are you to join the recycling program*? M = 5.22, SD = 1.41, α = .95). Next, we measured meaning in life using 10 items from Steger et al. (2006) (Web Appendix E), which had five items measuring search for meaning (e.g., "*I am searching for meaning in my life*;" M = 5.03, SD = 1.54, α = .96), and five items measuring presence of meaning (e.g., "*My life has a clear sense of purpose*;" M = 4.40, SD = 1.51, α = .92). An exploratory factor analysis with the 10 items resulted in a two-factor solution, thus we considered the two components independently in the subsequent analyses. We then measured self-efficacy using three items from Study 4 (e.g., "*How confident are you able to make a difference to the environment*?" M = 5.06, SD = 1.28, α = .86; Web Appendix E), and self-other focus using five items from Woody (1996) (e.g., "*At this time, I am focused on other people*," 1 = *not at all*, 7 = *very much*; M = 3.63, SD = 1.22, α =.83).

Results and Discussion

Intention to join the recycling program. A 2 × 2 ANOVA revealed only a significant interaction effect of emotion × value on recycling intention ($F(1, 442) = 14.95$, $p < .001$, $\eta_p^2 = .033$). Planned contrasts showed that pride led to higher recycling intention for the SE poster compared to awe ($M_{pride} = 5.43$, SD = 1.34 vs. $M_{awe} = 4.90$, SD = 1.35; ($F(1, 442) = 7.85$, $p = .005$, $\eta_p^2 = .017$); while awe led to higher recycling intention for the ST poster compared to pride ($M_{pride} = 5.01$, SD = 1.65 vs. $M_{awe} = 5.52$, SD = 1.20; ($F(1, 442) = 7.11$, $p = .008$, $\eta_p^2 = .016$). Viewed another way, pride led to higher recycling intention for the SE poster than for the ST poster ($F(1, 442) = 4.96$, $p = .026$, $\eta_p^2 = .011$), whereas awe led to higher recycling intention for the ST poster than for the SE poster ($F(1, 442) = 10.51$, $p = .001$, $\eta_p^2 = .023$). These results supported H1.

Perceived self-efficacy. A 2 × 2 ANOVA on self-efficacy revealed only a significant interaction effect of emotion × value ($F(1, 442) = 8.19$, $p = .004$, $\eta_p^2 = .018$). Planned contrasts showed that pride led to higher perceived self-efficacy for the SE poster compared to awe ($M_{pride} = 5.20$, SD = 1.19 vs. $M_{awe} = 4.89$, SD = 1.27; ($F(1, 442) = 3.39$, $p = .066$, $\eta_p^2 = .008$); conversely, awe led to higher perceived self-efficacy for the ST poster compared to pride ($M_{pride} = 4.88$, SD = 1.41 vs. $M_{awe} = 5.26$, SD = 1.22; ($F(1, 442) = 4.87$, $p = .028$, $\eta_p^2 = .011$). Viewed another way, pride led to higher perceived self-efficacy for the SE poster than for the ST poster ($F(1, 442) = 3.47$, $p = .063$, $\eta_p^2 = .008$), whereas awe led to higher perceived self-efficacy for the ST poster than for the SE poster ($F(1, 442) = 4.78$, $p = .029$, $\eta_p^2 = .011$).

Mediating effect of perceived self-efficacy on recycling intention. We conducted a moderated mediation analysis to test the mediating role of self-efficacy between the emotion–value interaction and recycling intention using PROCESS (Model 8; Hayes, 2018). As predicted, there was a significant moderated mediation effect via perceived self-efficacy (index = .23, 95% CI = [.071, .399]). Conditional mediation effect analysis showed that, for the SE poster, pride (coded as -1) led to higher perceived self-efficacy compared to awe (coded as 1), and subsequently increased recycling intention (b = -.11, 95% CI = [-.215, -.001]). Conversely, for the ST poster, awe led to higher perceived self-efficacy compared to pride, and subsequently increased recycling intention (b = .13, 95% CI = [.009, .250]). These results supported H2.

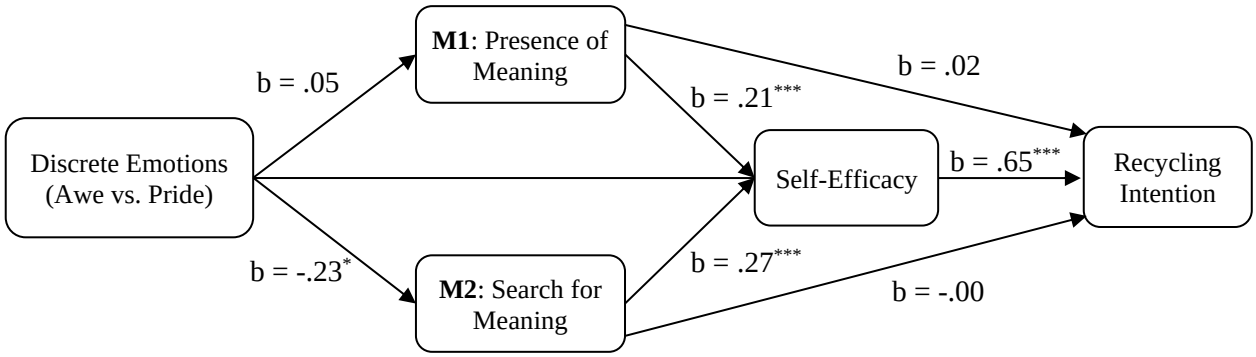
Mediating effect of meaning in life on perceived self-efficacy. We conducted a similar moderated mediation analysis to test the mediating role of meaning in life between the emotion–value interaction and perceived self-efficacy using PROCESS (Model 8), with search for meaning and presence of meaning as two parallel mediators. Conditional mediation analysis showed that search for meaning mediated the effect of emotion on perceived self-efficacy in the SE condition (b = -.05, 95% CI = [-.108, -.008]), but not in the ST condition (b = .01, 95% CI = [-.033, .067]). Conversely, presence of meaning in life mediated the effect of emotion on perceived self-efficacy in the ST condition (b = .05, 95% CI = [.004, .103]), but not in the SE condition (b = .01, 95% CI = [-.034, .058]). These results indicated that pride and awe enhanced perceived self-efficacy via two facets of meaning in life (i.e., search for meaning and presence of meaning, respectively) when their congruent value was prioritized.

Serial mediation effects of meaning in life and self-efficacy on recycling intention. We next conducted separate serial mediation analyses (PROCESS, Model 80) for the SE and ST conditions. As shown in Appendix Figure 1, in the SE condition, emotion had a significant and negative effect on search for meaning (b = -.23, t(222) = -2.31, p = .021), which positively influenced self-efficacy (b = .27, t(220) = 5.08, p < .001). Importantly, the effect of emotion on recycling intention was serial-mediated via search for meaning and self-efficacy (b = -.04, 95% CI = [-.081, -.007]), but not via presence of meaning and self-efficacy (95% CI = [-.022, .038]). In contrast, in the ST condition, emotion had a significant and positive effect on presence of meaning (b = .22, t(220) = 2.19, p = .029), which positively influenced self-efficacy (b = .23, t(218) = 3.96, p < .001). Importantly, the effect of emotion on recycling intention was serial-mediated via presence of meaning and self-efficacy (b = .04, 95% CI = [.003, .078]), but not via search for meaning and self-efficacy (95% CI = [-.021, .046]). Taken together, these results suggested that, search for

meaning and self-efficacy serially explained the effect of pride (vs. awe) on recycling intention in the SE condition, while presence of meaning and self-efficacy serially explained the effect of awe (vs. pride) on recycling intention in the ST condition, supporting H3.

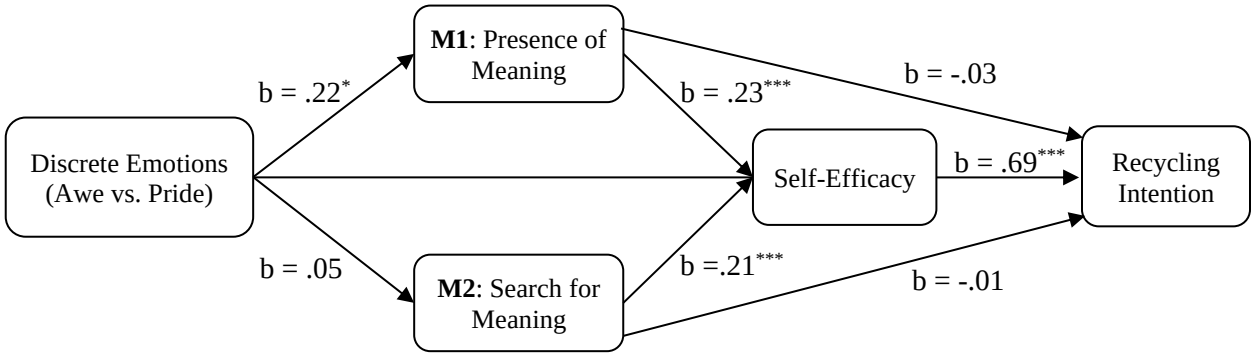
Appendix Figure 1: The Mediating Effects of Meaning in Life (Study 5)

a) In the SE condition (Model 80)



Serial indirect effect (Emotion–M1–Self-Efficacy–Recycling): b = -.00, 95% CI = [-.0216, .0385]
Serial indirect effect (Emotion–M2–Self-Efficacy–Recycling): b = -.04, 95% CI = [-.0808, -.0067]
Notes: $^{***}p < .001$, $^{**}p < .01$, $^{*}p < .05$, SE = Self-enhancement, ST = Self-transcendence; N = 224.

b) In the ST condition (Model 80)



Serial indirect effect (Emotion–M1–Self-Efficacy–Recycling): b = .04, 95% CI = [.0026, .0785]
Serial indirect effect (Emotion–M2–Self-Efficacy–Recycling): b = .00, 95% CI = [-.0213, .0456]
Notes: $^{***}p < .001$, $^{**}p < .01$, $^{*}p < .05$, SE = Self-enhancement, ST = Self-transcendence; N = 222.

Self-other focus. A 2 × 2 ANOVA revealed a non-significant interaction effect on self-other focus ($F(1, 442) = .52$, $p = .46$). A moderated mediation analysis with self-other focus as the focal mediator was not significant (all 95% CIs included zero). Moreover, a moderated mediation analysis with self-efficacy and self-other focus as parallel mediators only revealed a moderated mediation effect via self-efficacy (index = .23, 95% CI = [.073, .397]), but not via self-other focus (95% CI = [-.026, .009]). Thus, self-other focus could not explain the interaction effects.

Discussion. Study 5 further supported the mediating role of self-efficacy underlying the interaction effect of discrete positive emotions and human values (H2). Furthermore, when the congruent value was highlighted, pride and awe enhanced self-efficacy and subsequently recycling behavior through different facets of meaning in life (H3). At the same time, we ruled out the rival explanation of self-other focus.

In so doing, our findings on how pride and awe work through different facets of meaning in life (i.e., search for meaning and presence of meaning, respectively) reveal a novel mechanism that relies on the interaction between discrete positive emotions and human values. The prevailing explanation for why awe has prosocial effects is that awe reduces attention to self-oriented concerns (i.e., a small self), thereby shifting attention to other-oriented concerns (Piff et al., 2015) and collective engagement (Bai et al., 2017). By contrast, we find that awe can motivate individuals toward sustainable behavior by feeling the presence of meaning in life. Moreover, both facets of meaning in life are positively related to perceived self-efficacy, which enhances sustainable behavior. These findings are new to the literature.

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