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A Balanced Mind: Awe Fosters Equanimity via Temporal Distancing

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Awe has been shown to promote well-being through various mechanisms (see Monroy & Keltner, 2023). In this research, we propose a novel perspective for the well-being benefits of awe: Awe fosters equanimity—a balanced state of mind toward all experiences of any valence—and we document how this works, namely, through temporal distancing. Across seven studies, using a combination of experiments, big data analytics, and intervention methods, we provide support for our hypotheses. In Studies 1–3, induced awe increased equanimity, indexed by a self-report scale (Study 1), a decrease in emotional reactivity (Study 2), and an unbiased behavioral approach to positive and negative experiences (Study 3). In Studies 4–6, awe increased equanimity via temporal distancing. This effect persisted beyond self-diminishment (i.e., feeling small and insignificant) and proved to be cross-culturally robust (Study 4). An analysis of almost 200,000 posts on social media (Study 5) revealed that the proposed mediation model manifested in ecologically rich contexts. Study 6 provided causal evidence for the mediation model. Finally, in a 5-day awe intervention (Study 7), awe increased psychological and physical well-being, with equanimity accounting for these benefits. Taken together, these findings reveal that awe cultivates a balanced state of mind by shifting one's temporal perspective on life events.

Statement of Limitations

Our research on awe's effect on equanimity is subject to several limitations that merit acknowledgment. First, we tested participants from China and the United States, but we did not systematically examine potential cultural differences. Researchers can enhance our understanding by investigating the potential cultural variations in awe's effects on equanimity and its implications for well-being. Additionally, our research primarily focuses on exploring awe's impact on the general population. It would be intriguing for researchers to focus on specific populations with distinct emotional reactivity profiles, such as individuals with cardiovascular diseases or mania, and test whether awe's benefits still hold true. This approach could provide a more nuanced understanding of how awe affects different subgroups. Last, although our findings from a 5-day awe intervention suggest improvements in well-being through increased equanimity, this intervention's long-term effects remain unexplored. Future research employing a longitudinal design would be invaluable for assessing awe's enduring effects on well-being over an extended period.

Keywords: awe, equanimity, temporal distancing, well-being, intervention

Supplemental materials: https://doi.org/10.1037/pspa0000410.supp

Awe is an emotion characterized by appraisals of vastness and a need for cognitive accommodation (Keltner & Haidt, 2003). A concerted effort has emerged to document how awe boosts well-being. For example, research shows that experiences of awe can enhance one's well-being by increasing positive moods, social connection, and prosocial tendencies (Bai et al., 2017; Jiang & Sedikides, 2022; Pan & Jiang 2024a; Piff et al., 2015; Yuan, Du, & Jiang, 2024) and by decreasing daily stress, anxiety, and somatic health symptoms

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(Anderson et al., 2018; Bai et al., 2021; Monroy et al., 2023; Rankin et al., 2020; Yuan, Guo, et al., 2024). Overall, this body of literature (e.g., Monroy & Keltner, 2023; Jiang et al., 2024) has primarily explored awe's role in either boosting positive outcomes or reducing negative outcomes. However, this binary approach—emphasizing the augmentation of positivity and reduction of negativity—may not fully capture the well-being benefits of awe. Specifically, it overlooks awe's potential to cultivate equanimity, defined as a balanced and unbiased approach to all experiences, including both positive and negative (Desbordes et al., 2015; Grabovac et al., 2011), which is crucial for well-being (Diener et al., 1991; Gruber et al., 2011; McGuirk et al., 2018).

Here, we propose a novel perspective on awe's benefits for well-being, presenting a series of studies that document how awe enhances equanimity, a balanced and unbiased response to all experiences, both positive and negative. Our research advances the literature on awe and well-being in two important ways. (a) Utilizing various methodologies, we document that awe enhances equanimity, providing a novel perspective on how awe impacts well-being. (b) We provide evidence for the mediating role of temporal distancing in this process, offering insights into how awe facilitates this balanced state of mind. Our evidence also contributes more generally to discussions of what constitutes a good life, suggesting that the essence of well-being does not solely lie in the presence of positives and the absence of negatives but in the capability to navigate all experiences with equanimity.

Equanimity: A New Approach to Well-Being

In psychological science, the prevailing view of well-being equates it with the presence of positive feelings and the absence of negative ones (Kim-Prieto et al., 2005; Krys et al., 2024). This binary perspective provides a foundational understanding and has driven significant research and practical applications (e.g., Diener et al., 1991; Ryan et al., 2008; Seligman et al., 2005). Specifically, it emphasizes the importance of maximizing positive feelings while minimizing negative ones (Krys et al., 2024), which has been beneficial across various contexts. For instance, interventions aimed at increasing happiness and reducing stress have yielded positive outcomes in both clinical and nonclinical settings (e.g., Bolier et al., 2013; Lambert D'raven et al., 2015; Layous et al., 2011; Meyers et al., 2013).

However, this binary perspective does not always lead to enhanced well-being (e.g., Dalgleish et al., 2009; Desbordes et al., 2015; Gruber et al., 2011; Ruan et al., 2020). On one hand, not all positivity is good for well-being (Gruber et al., 2011). Research has found that well-being is associated with reduced emotional reactivity to positive events in daily life (Grosse Rueschkamp et al., 2020), indicating that unregulated positivity can be counterproductive. An excessive focus on positivity can lead to inflexibility when facing challenges, underestimation of threats, and neglect of potential social risks (Cyders & Smith, 2008; Friedman et al., 1993; Gruber et al., 2011; Martin et al., 2002), all of which can be detrimental to well-being. Additionally, the relentless pursuit of positive feelings can paradoxically impede their attainment (Gruber et al., 2011; Mauss et al., 2011; McGuirk et al., 2018; Schooler et al., 2003). On the other hand, the aversion to negativity poses risks. Suppressing or denying negative feelings can exacerbate these feelings and increase emotional dysregulation, leading to increased psychological distress and a range of mental health issues (Dalgleish et al., 2009; Ruan et al., 2020). This suppression can also result in a rebound effect, where the avoided emotions reoccur intensely and uncontrollably (Wegner, 1994; Wegner & Zanakos, 1994). These findings highlight another path to achieve well-being, which involves managing both positivity and negativity in an even-minded manner rather than striving for suppression or exaggeration of any part of the emotional spectrum, that is, equanimity (Ekman et al., 2005; Wallace & Shapiro, 2006).

Equanimity, defined as an even-minded mental state in response to experiences of varying affective valence (pleasant, unpleasant, or neutral; Desbordes et al., 2015; Grabovac et al., 2011), emerges as a core concept in the psychology of well-being (Chan et al., 2014; Ekman et al., 2005; Wallace & Shapiro, 2006). Equanimity is attained through a cognitive process that involves detaching personal desires (inclinations toward or against) from the inherent valence (positive or negative) of experiences (Hadash et al., 2016). By doing so, individuals adopt an impartial stance toward life's experiences, enabling them to engage without excessive attachment to positive outcomes or avoidance of negative ones (Eberth et al., 2019; Hadash et al., 2016; Juneau et al., 2020; Olendzki, 2006; Rogers et al., 2021). Consequently, equanimity serves to modulate the intensity and quality of responses to provocative stimuli, resulting in balanced responses characterized by calmness and composure (Carmody & Baer, 2009; Desbordes et al., 2015). Such an approach allows individuals to experience a wide range of emotions without being overwhelmed by them. In this way, equanimity is about holistically managing emotional reactions rather than suppressing or denying them (Gross & Thompson, 2007). Although empirical research on equanimity is still growing, the available evidence suggests its significant contribution to overall well-being, including reduced biased decision making, improved emotional regulation, decreased loneliness, and enhanced psychological as well as physical functioning (e.g., Carmody et al., 2009; Chan et al., 2014; Desbordes et al., 2015; Ekici et al., 2020; Farb et al., 2012; Jijina & Biswas, 2021; Lindsay et al., 2019; Machado & Costa, 2015).

The concept of equanimity is distinguished by its unique emphasis on separating personal desires from the inherent positivity or negativity of experiences, differentiating it from mere *acceptance*. Acceptance refers to acknowledging and embracing all thoughts, feelings, and bodily sensations (S. C. Hayes, 2016). Whereas acceptance is defined as an embracing of all experiences, equanimity additionally involves an impartial engagement with life's experiences, devoid of personal biases or desires (Desbordes et al., 2015; Hadash et al., 2016). To illustrate, imagine an individual receiving a dire diagnosis from a medical doctor. In a state of acceptance, the individual might acknowledge this news and accompanying emotions yet still harbor desires for a different outcome. In a state of equanimity, the individual would remain composed in the face of such news and impartially engage with the implications of the diagnosis without any aversion or craving for a different outcome.

Equanimity is also different from *mindfulness*,[1] a mental state characterized by the nonjudgmental awareness of current thoughts, feelings, and context (Kabat-Zinn, 2003). Mindfulness primarily pertains to the quality of attention—being present, aware, and

[1] In the Supplemental Materials, we engage in an in-depth discussion regarding the differentiation between equanimity other related constructs, such as cognitive appraisal and emotional indifference, confirming its uniqueness through Supplemental Study 1Sb.

nonjudgmental. Equanimity involves an impartial engagement with experiences (Desbordes et al., 2015). Given these distinctions, mindfulness is often perceived as a conduit for fostering equanimity, and equanimity accounts for the psychological benefits and transformative potential of mindfulness (Desbordes et al., 2015; Eberth et al., 2019; Grabovac et al., 2011; Hofmann et al., 2010; Rogers et al., 2021; Weber, 2021).

Awe, we reason, is likely to cultivate equanimity, thereby enhancing well-being. Qualitative accounts from natural, spiritual, and psychedelic explorations often depict awe as facilitating a detachment from personal desires and fostering a balanced engagement with life's full spectrum of experiences (Keltner, 2023), yet the empirical research is limited. In the following sections, we elaborate on whether and how awe contributes to equanimity, discussing its implications for understanding the well-being benefits of awe.

Awe, Temporal Distancing, and Equanimity

Awe arises when people encounter stimuli that are perceived as vast and challenge their accustomed frame of reference (Keltner & Haidt, 2003). Typically, experiences of awe have a positive emotional valence (Gocłowska et al., 2023; Gordon et al., 2017) and contribute to subjective well-being and physical health (for a review, see Monroy & Keltner, 2023). Previous research on awe and well-being has followed the traditional binary perspective of well-being, emphasizing the enhancement of positivity and the reduction of negativity. Specifically, awe has been shown to promote a number of positive outcomes, such as improving positive mood (e.g., Joye & Bolderdijk, 2015; Sturm et al., 2022), enhancing the sense of meaning in life (Dai et al., 2022; Yuan, Du, & Jiang, 2024), motivating authentic self-pursuit (Jiang & Sedikides, 2022), and encouraging humility (Stellar et al., 2018). Additionally, awe can also act as a buffer against various negative outcomes by reducing stress related to daily hassles (Bai et al., 2021), mitigating social pain resulting from ostracism (Yuan, Guo, et al., 2024), and alleviating negative affect stemming from intrapersonal distress, such as the loss of personal belongings (Koh et al., 2019) and the experience of waiting (Rankin et al., 2020).

However, we argue that the well-being benefits of awe are not merely about enhancing positivity and reducing negativity. Awe has a unique impact on equanimity, offering a potential new approach to achieve well-being. Selected studies provide a foundation for our central hypothesis that awe promotes equanimity. Awe has been shown to redirect people's focus from the self toward the broader external environment (Bai et al., 2021; Shiota et al., 2007), facilitating a perspective that transcends immediate egocentric viewpoints (Jiang & Sedikides, 2022; Pan & Jiang, 2023). This shift in perspective has been demonstrated to mitigate excessive reactions to both negative and positive experiences (Bruehlman-Senecal & Ayduk, 2015; Kross & Ayduk, 2017; Verduyn et al., 2012). Moreover, induced awe experiences have been associated with decreased skin conductance and heart rate reactivity (Bai et al., 2021), increased respiratory sinus arrhythmia (Stamkou et al., 2023), and lower levels of interleukin 6, a proinflammatory cytokine marker (Stellar et al., 2015). These physiological changes are linked to impartial engagement-oriented processes and perhaps equanimity (Brown & Gerbarg, 2009; Desbordes et al., 2015; Gramzow et al., 2008). Given these preliminary findings, we hypothesize that awe fosters equanimity (Hypothesis 1).

How does awe foster equanimity? We propose that awe promotes equanimity through *temporal distancing*, defined as the perceived temporal distance that an object or event is away from what is experienced as the present here and now (Bruehlman-Senecal et al., 2016). Temporal distancing enables an individual to adopt a broader perspective on present experiences, contextualizing them in a larger temporal framework, such as phases of life, chapters of family history, and moments in cultural history. This framework empowers individuals to constructively shape their responses to experiences (Bruehlman-Senecal & Ayduk, 2015; Bruehlman-Senecal et al., 2016).

First, awe facilitates temporal distancing. Research has shown that awe facilitates global processing, enabling individuals to weave the past, present, and future into a cohesive narrative (Pan & Jiang, 2023). This all-encompassing perspective facilitates temporal distancing because individuals perceive themselves as part of a broader, ongoing timeline rather than being fully absorbed in the immediate present. Awe also directs people's attention to current unfolding events, thereby contributing to the expansion of time (Vohs & Schmeichel, 2003). Consequently, awe has been found to expand time perception, creating a sense of timelessness (Rudd et al., 2012). This expanded sense of time frees people from the constraints of linear time progression and allows them to step back from the immediacy of the present and view their experiences from a broader temporal perspective.

Moreover, studies have revealed a potential association between temporal distancing and equanimity (Desbordes et al., 2015; Nickerson & Hinton, 2011). Temporal distancing allows individuals to perceive momentary experiences in larger temporal contexts and transcend the immediacy and intensity of the present moment, fostering clarity and objectivity (Shapiro et al., 2006). This shift in perspective enables individuals to realize the transient nature of thoughts and feelings (Alford & Beck, 1997), which in turn facilitates a focus on the impermanence of all experiences (Bruehlman-Senecal & Ayduk, 2015). Consequently, it may reduce the inclination to prolong positivity or repulse negativity. Furthermore, temporal distancing enhances the psychological distance from the self, helping people take an observer's perspective and detach from their current experience (Kross & Ayduk, 2017). This detachment from the current moment aids in separating personal desires from the inherent positive or negative valence of experiences, leading to an impartial engagement with life. Given this reasoning and selected evidence, we hypothesize that experiences of awe will foster equanimity by promoting temporal distancing (Hypothesis 2).

Awe, Equanimity, and Well-Being

The present research offers a novel framework for understanding the beneficial effect of awe on well-being, moving beyond the traditional binary perspective that emphasizes awe promotes well-being through the enhancement of positivity and the reduction of negativity. While this binary approach has provided valuable insights, it may not fully capture the well-being benefits of awe. There is a compelling need to investigate whether and how awe can foster equanimity, which involves a balanced approach to all of life's experiences, contributing to a novel understanding of its impact on well-being.

As stated previously, emerging evidence suggests that pursuing positivity and avoiding negativity take a toll on well-being (e.g., Gruber et al., 2011; Krys et al., 2024; Mauss et al., 2011; McGuirk et al., 2018; Schooler et al., 2003). Instead, well-being is well-served

by the cultivation of equanimity (Chan et al., 2014; Dalgleish et al., 2009; Ruan et al., 2020; Wallace & Shapiro, 2006), which enables a balanced, unbiased mindset and enhances adaptability (Jijina & Biswas, 2021; Machado & Costa, 2015). Research has demonstrated associations between equanimity and enhanced psychological well-being as well as improved physical functioning (Carmody & Baer, 2009; Chan et al., 2014; Desbordes et al., 2015; Ekici et al., 2020; Farb et al., 2012; Jijina & Biswas, 2021; Lindsay et al., 2019; Maher & Cordova, 2019). Therefore, we hypothesize that by fostering equanimity, awe promotes psychological and physical well-being (Hypothesis 3).

Overview

We proposed that awe fosters equanimity (Hypothesis 1) through temporal distancing (Hypothesis 2), which further contributes to psychological and physical well-being (Hypothesis 3). We tested our hypotheses with a mix of experimental designs, big data analytics, and intervention methods. In Studies 1–3, we aimed to provide causal evidence for Hypothesis 1, that is, experimentally induced awe fosters equanimity as indicated by a self-report scale (Study 1), decreased emotional reactivity to negative and positive experiences (Study 2), and a behavioral measure of an unbiased approach toward all experiences (Study 3). In Studies 4–6, we tested Hypothesis 2, that is, temporal distancing mediates the effect of awe on equanimity. In Study 4, we tested whether awe leads to equanimity through temporal distancing above self-diminishment and examined cultural differences by testing Chinese and U.S. samples. In Study 5, we used natural language processing (Study 5) to examine the mediation model in real-world contexts. In Study 6, we simultaneously manipulated awe and temporal distancing, providing causal evidence for the mediation model. In Study 7, we explored Hypothesis 3, that is, equanimity accounts for awe's impact on psychological and physical well-being in a 5-day awe intervention.

Additionally, we report two supplementary studies (Studies 1S and 2S) in the Supplemental Materials. Supplemental Study 1S provided evidence for a valid measure of equanimity and showed that equanimity is distinct from acceptance, cognitive appraisal, and other related constructs. In Supplemental Study 2S, we examined whether awe increased equanimity, but not emotional indifference and exhaustion.

In Studies 4 and 7, we relied on PROCESS 4.1 for mediation (Model 4) or the moderated mediation (Models 8 and 15) analyses (5,000 iterations; A. F. Hayes, 2018). We received approval from the Ethics Committee of the School of Psychological and Cognitive Sciences, Peking University. Research assistants were blind to the hypotheses. We have reported all measures, conditions, and data exclusions for all the studies. We provide (a) two supplementary studies, (b) ancillary analyses, (c) participants' ethnicity and educational status for all studies, (d) all mediation and moderation figures in Study 7, and (e) the stimulus materials in the Supplemental Materials. All data and materials were available on the Open Science Framework at https://osf.io/92vep/ (Pan & Jiang, 2024b).

Study 1

In Study 1, we examined awe's unique role in promoting equanimity (Hypothesis 1), contrasting the effects of awe with those of a neutral control and amusement, an emotion sharing awe's valence and arousal but differing in appraisal tendencies (Lerner & Keltner, 2001). Awe and amusement stem from a mismatch between anticipations and actual experiences (Piff et al., 2015), making amusement a frequently used control in awe research to rule out the potential that the observed effect is merely attributable to awe's positive emotional nature (e.g., Bai et al., 2017, 2021; Pan & Jiang, 2023; Yuan, Du, & Jiang, 2024). We incorporated nature imagery in the awe and amusement conditions given the established psychological benefits of nature exposure (e.g., Kondo et al., 2018) and measured arousal levels, social desirability, and self-presentation motives. These approaches helped determine whether awe's influence on equanimity surpasses general positivity, nature exposure, arousal levels, social desirability, and self-presentation motive. We preregistered the study online (https://aspredicted.org/zn9sd.pdf).

Method

Participants

Because studies of awe manipulations have yielded moderate effect sizes (Yin et al., 2024), we assumed that awe's effect on equanimity would be medium sized. A G*Power analysis (G*Power 3.1; Faul et al., 2007) showed that at least 207 participants were needed to detect a medium effect size ($f = .25$) for a between-subjects design with a power of .90 ($\alpha = .05$). We recruited 240 participants from Credamo. After excluding one participant for failing one attention check question, we had 239 participants (141 females; $M_{age} = 29.21$ years, $SD_{age} = 9.12$ years). We randomly assigned participants to the awe ($n = 79$), amusement ($n = 81$), or neutral control ($n = 79$) condition.

Procedure

We instructed participants to watch a 3-min video to induce the target emotion. Participants in the awe condition watched a video depicting various extraordinary natural scenes (Bai et al., 2017). Participants in the amusement condition watched a video depicting funny animals (e.g., Piff et al., 2015), and those in the neutral control condition watched a video on making a wooden countertop (Pan & Jiang, 2023). We then measured emotional arousal (Russell et al., 1989). Participants were told that arousal refers to the physiological activation levels during emotional experiences and were asked to indicate their level of arousal when they watched the video on a Likert scale from 1 = *lowest level of arousal* to 9 = *highest level of arousal* ($M = 6.14$, $SD = 1.85$).

We then measured equanimity on a five-item scale[2] (1 = *strongly disagree*, 9 = *strongly agree*, e.g., "Right now, I feel I could experience pleasure without trying to prolong or grasp hold of it," "Right now, I feel I have an unbiased perspective toward all experiences, whether they are pleasant, unpleasant, or neutral"; $\alpha = .83$, $M = 6.80$, $SD = 1.34$). Social desirability was measured using the Balanced Inventory of Desirable Responding Short Form (Hart et al., 2015), which includes items such as "I never regret decisions" and "I never cover up my mistakes"

[2] The items were created for this research (see Supplemental Study 1S for the scale validation). To capture the state level of equanimity, we rephrased the items, emphasizing "right now."

(1 = *strongly disagree*, 9 = *strongly agree*; α = .91, M = 5.45, SD = 1.46). In addition, participants reported their self-presentation motives on four self-composed items, such as "I carefully manage the way I present myself to others" (1 = *strongly disagree*, 9 = *strongly agree*; α = .89, M = 6.98, SD = 1.36). Next, participants indicated their feelings of awe, anger, disgust, happiness, and amusement (1 = *not at all*, 7 = *extremely*). We included demographic questions at the end of the session (in this and all studies).

Results and Discussion

Manipulation Check

We found significant effects of manipulation on awe, amusement, and happiness. Post hoc comparisons using the Tukey Honestly Significant Difference test indicated that the participants in the awe condition reported more awe than those in the amusement and neutral control conditions. Participants in the latter two conditions did not differ in their reported awe. Participants in the amusement condition reported more amusement and happiness than those in the awe and neutral control conditions. The latter two conditions did not differ in amusement and happiness. We summarize the results in Table 1. We found no significant main effects of manipulation on anger and disgust. Our manipulation was effective.

Awe, Arousal, Social Desirability, and Self-Presentation Motives

We found significant main effects of manipulation on arousal and social desirability. Specifically, participants in the awe and amusement conditions reported higher levels of arousal than those in the neutral control condition, with similar arousal levels observed between the awe and amusement conditions. Participants in the neutral control condition reported higher social desirability than those in the awe condition. We found no differences in social desirability between the amusement condition and either the neutral control or awe condition. We found no significant difference in self-presentation motives across the three conditions. We summarize the results in Table 1.

Awe and Equanimity

Controlling for arousal and social desirability, we found a significant main effect of the manipulation on equanimity, $F(2, 234) = 6.74$, $p = .001$, $\eta_p^2 = .05$. Specifically, participants in the awe condition ($M = 7.10$, $SD = 1.14$) reported higher levels of equanimity than those in the amusement condition ($M = 6.60$, $SD = 1.41$), $t(234) = 3.57$, $p = .001$, $d = 0.57$ and the neutral control condition ($M = 6.71$, $SD = 1.41$), $t(234) = 2.35$, $p = .051$ (marginally), $d = 0.40$. We found no significant difference between the amusement and neutral control conditions, $t(234) = 0.97$, $p = .60$, $d = 0.17$. In support of Hypothesis 1, awe promoted equanimity. This effect did not occur because awe is a positive emotion or because of exposure to nature. Additionally, neither emotional arousal, social desirability, nor self-presentation motives could account for awe's impact on equanimity.

Study 2

Maintaining high-arousal emotional responses is a sharp contrast to the state of equanimity, a balanced state of mind characterized by calm and composure (Desbordes et al., 2015). In Study 2, therefore, we introduced reduced emotional reactivity (Carmody & Baer, 2009; Eberth et al., 2019; Hadash et al., 2016) as an additional measure of the behavioral manifestations of equanimity. We hypothesized that awe would foster a state of equanimity, leading to a greater reduction in emotional reactivity to both high-arousal negative (Study 2a) and positive (Study 2b) stimuli. To control for baseline reactivity, we employed a pre-/postemotion induction design and subtracted the postemotional reactivity from the baseline measurement. This would help us ensure that any observed effects on emotional reactivity are indeed attributable to the induction of awe and not to preexisting differences in baseline emotional reactivity among participants.

Table 1
Main Findings of Tested Emotions, Arousal, Social Desirability, and Self-Presentation Motives in Study 1

	Main effect			Post hoc comparison: Awe versus amusement			Post hoc comparison: Awe versus neutral control			Post hoc comparison: Neutral control versus amusement			M and SD across condition: Awe		Amuse-ment		Neutral control	
Tested variable	F	p	η_p^2	t	p	d	t	p	d	t	p	d	M	SD	M	SD	M	SD
Awe	54.06	<.001	.31	8.80	<.001	1.39	2.51	<.001	1.47	0.47	.89	0.07	5.86	1.46	3.48	1.85	3.35	1.79
Amusement	165.91	<.001	.58	−16.66	<.001	−2.63	−2.01	.11	0.32	−14.64	<.001	−2.31	1.90	1.07	5.56	1.67	2.34	1.36
Happiness	11.95	<.001	.09	−3.12	.006	−0.49	1.68	.22	0.27	−4.81	<.001	−0.76	4.67	1.62	5.44	1.39	4.25	1.68
Anger	0.45	.64	.004										1.37	0.64	1.47	0.81	1.39	0.67
Disgust	1.45	.24	.01										1.48	0.85	1.68	0.96	1.47	0.83
Arousal	15.34	<.001	.12	−1.67	.22	−0.26	3.73	<.001	0.59	−5.42	<.001	−0.86	6.33	1.96	6.79	1.27	5.29	1.94
SOD	3.51	.031	.03	−0.48	.88	−0.08	−2.49	.035	0.04	2.03	.11	0.32	5.22	1.38	5.33	1.51	5.79	1.44
SPM	1.37	.26	.01										6.79	1.44	7.01	1.29	7.14	1.34

Note. SOD = social desirability, SPM = self-presentation motives. For F tests, $df = (2, 236)$. For t tests, $df = (236)$.

Method

Participants

Study 2a. Guided by past research and the effect size observed in Study 1, we assumed that awe's effect on decreased emotional reactivity would be medium to large. A power analysis showed that at least 120 participants were needed to detect a medium to large effect size ($f = .30$) for a between-subjects design with a power of .90 ($\alpha = .05$). A total of 150 Chinese participants were recruited from Credamo. After excluding two participants for failing one attention check question, we had 148 participants (88 females; $M_{age} = 25.51$ years, $SD_{age} = 5.76$ years). We randomly assigned participants to the experimental ($n = 74$) or control ($n = 74$) condition.

Study 2b. We aimed for a sample size of 120 and recruited 150 participants from a university in China. After excluding 11 participants for failing to follow instructions and three for failing one attention check question, we had 136 participants (92 females; $M_{age} = 24.18$ years, $SD_{age} = 5.35$ years) remaining. We randomly assigned participants to the experimental ($n = 66$) or control ($n = 70$) condition.

Procedure

Participants were first instructed to recall and write down a negative (Study 2a) or positive (Study 2b) experience that had happened to them in recent weeks. They reported their negative (Study 2a, i.e., nervous, tense, upset, irritable, stressed; $\alpha = .67$, $M = 6.57$, $SD = 1.39$) or positive (Study 2b, i.e., enthusiastic, elated, joyful, excited, active; $\alpha = .85$, $M = 6.69$, $SD = 1.40$) emotional reactions to such experiences on a scale from 1 (*not at all*) to 9 (*extremely*) as the baseline. The experimental manipulation followed. In the experimental condition, participants watched a 184-s video illustrating the comparative sizes of the Earth and other celestial bodies. Participants in the control condition watched a video depicting the construction of a wooden countertop (e.g., Piff et al., 2015). Participants were then asked to indicate the extent to which they felt anger, awe, disgust, fear, pride, sadness, and happiness as the manipulation check (1 = *not at all*, 6 = *extremely*). Afterward, participants were asked to report their feelings about the negative or positive experience they recalled above and rate the same five negative (Study 2a: $\alpha = .87$, $M = 4.21$, $SD = 1.91$) or positive (Study 2b: $\alpha = .91$, $M = 5.19$, $SD = 1.59$) emotions. As an index of emotional reactivity reduction, we subtracted the postemotional reactivity from the baseline (Study 2a: $M = 2.35$, $SD = 1.88$; Study 2b: $M = 1.50$, $SD = 1.39$). A higher score indicates a greater reduction.[3]

Results and Discussion

Manipulation Check

We present the means and standard deviations of the emotions in Table 2.

Study 2a. Participants in the experimental condition reported more awe than those in the control condition, $F(1, 146) = 151.19$, $p < .001$, $\eta_p^2 = .51$. Furthermore, participants in the experimental (vs. control) condition reported less disgust, $F(1, 146) = 6.66$, $p = .011$, $\eta_p^2 = .04$; more fear, $F(1, 146) = 18.17$, $p < .001$, $\eta_p^2 = .11$; and (marginally) more pride, $F(1, 146) = 3.66$, $p = .06$, $\eta_p^2 = .02$. The two conditions did not differ in anger, $F(1, 146) = 2.19$, $p = .14$, $\eta_p^2 = .01$; sadness, $F(1, 146) = .91$, $p = .34$, $\eta_p^2 = .01$; or happiness, $F(1, 146) = 2.93$, $p = .09$, $\eta_p^2 = .02$. When we controlled for pride, fear, and disgust, the difference in awe between the two conditions remained significant, $F(1, 143) = 106.00$, $p < .001$, $\eta_p^2 = .43$, indicating that our manipulation was effective.

Study 2b. Participants in the experimental condition reported more awe than those in the control condition, $F(1, 134) = 187.72$, $p < .001$, $\eta_p^2 = .58$. Furthermore, participants in the experimental (vs. control) condition reported more fear, $F(1, 134) = 13.97$, $p < .001$, $\eta_p^2 = .09$; pride, $F(1, 134) = 15.97$, $p < .001$, $\eta_p^2 = .11$; and sadness, $F(1, 134) = 15.29$, $p < .001$, $\eta_p^2 = .10$. The two conditions did not differ in anger, $F(1, 134) = .33$, $p = .56$, $\eta_p^2 = .002$; disgust, $F(1, 134) = 1.19$, $p = .28$, $\eta_p^2 = .01$; or happiness, $F(1, 134) = .47$, $p = .50$, $\eta_p^2 = .003$. When we controlled for fear, pride, and sadness, the difference in awe between the two conditions remained significant, $F(1, 131) = 123.89$, $p < .001$, $\eta_p^2 = .49$, indicating that our manipulation was effective.

Decreased Emotional Reactivity

Study 2a. Participants in the experimental condition ($M = 2.77$, $SD = 1.90$) reported a greater emotional reactivity reduction in response to a negative experience than those in the control condition ($M = 1.94$, $SD = 1.77$), $F(1, 146) = 7.50$, $p = .007$, $\eta_p^2 = .05$.

Study 2b. Participants in the experimental condition ($M = 1.83$, $SD = 1.54$) reported greater emotional reactivity reduction in response to a positive experience than their counterparts ($M = 1.19$, $SD = 1.17$), $F(1, 134) = 7.45$, $p = .007$, $\eta_p^2 = .05$.[4]

The evidence from Studies 2a and 2b supports Hypothesis 1: We found that awe decreases emotional reactivity to negative and positive experiences, extending previous studies on how awe attenuates the stress of negative experiences (e.g., Bai et al., 2021; Yuan, Guo, et al., 2024). We note two alternative explanations for these findings. The first is that people feel enervated by experiences of awe, rendering them less capable of responding emotionally. The second is that awe may actually result in emotional indifference, or having little investment in a situation, making people less likely to feel emotion (Fahed & Steffens, 2021). To address these explanations, we conducted Supplemental Study 2S, in which we induced awe in the same manner as in Study 2 and measured equanimity, emotional indifference, and exhaustion. The results revealed that awe fostered equanimity but did not lead to emotional indifference or emotional exhaustion.

[3] There were no significant differences in baseline scores between the two conditions. Specifically, participants in the experimental condition (negative emotions: $M = 6.47$, $SD = 1.61$; positive emotions: $M = 6.86$, $SD = 1.44$) reported similar levels of negative emotions, $F(1, 146) = 0.66$, $p = .42$, $\eta_p^2 = .005$, and positive emotions, $F(1, 134) = 2.02$, $p = .16$, $\eta_p^2 = .01$, compared with those in the control condition (negative emotions: $M = 6.66$, $SD = 1.14$; positive emotions: $M = 6.52$, $SD = 1.36$) at baseline.

[4] These results remained similar when we had concurrent emotions controlled for (Supplemental Materials). In addition, consistent with this finding, we also found that awe led participants to score higher on the item "I feel I could experience pleasure without trying to prolong or grasp hold of it." We report these results in the Supplemental Materials.

Table 2
Means and Standard Deviation for Emotional States (Studies 2, 3, and 6)

		Awe		Happiness		Anger		Sadness		Disgust		Fear		Pride		Amusement		Elation	
Study	Condition	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Study 2a	Experimental	5.23	1.24	2.74	1.40	1.49	0.91	1.93	1.19	1.49	0.88	2.43	1.47	2.80	1.74				
	Control	2.47	1.47	3.15	1.49	1.74	1.18	1.76	1.04	1.96	1.31	1.54	1.04	2.30	1.42				
Study 2b	Experimental	4.88	1.23	2.62	1.11	1.32	0.86	2.02	1.21	1.52	1.04	2.26	1.45	2.21	1.21				
	Control	1.97	1.24	2.49	1.20	1.24	0.65	1.37	0.64	1.70	0.94	1.49	0.91	1.50	0.85				
Study 3	Awe	6.26	0.95			1.31	0.65	1.94	1.11	1.27	0.58	2.05	1.23	3.86	1.70	1.65	0.90	4.28	1.56
	Amusement	3.44	1.62			1.34	0.60	1.54	0.82	1.62	0.89	1.43	0.72	3.02	1.45	5.67	1.42	4.56	1.26
	Control	3.38	1.85			1.24	0.59	1.44	0.71	1.34	0.71	1.25	0.58	4.08	1.86	2.20	1.27	4.59	1.59
Study 6	Awe	5.01	1.13	4.16	1.07	1.34	0.55	1.74	0.84	1.33	0.58					2.09	1.07		
	Neutral control	3.38	1.37	4.27	1.16	1.36	0.60	1.62	0.80	1.44	0.65					2.53	1.18		

Study 3

In Studies 1 and 2, we discovered that awe promotes equanimity, as indicated using self-report scales and a decrease in emotional reactivity. In Study 3, our goal was to extend these findings using a behavioral measure of equanimity, specifically assessing the unbiased approach to all experiences, whether positive or negative. We preregistered this study at https://aspredicted.org/s2wg9.pdf.

Method

Participants

For the χ^2 test, a G*power analysis suggested a sample size of 386 to detect a moderate size effect (effect size $w = 0.2$) with 90% power. We recruited 500 Chinese participants from Credamo and excluded one participant for failing one attention check question. A total of 499 participants remained (315 females; M_{age} = 30.33 years, SD_{age} = 8.31). We randomly assigned participants to the awe (n = 161), amusement (n = 169), or control (n = 169) condition.

Procedure

In the awe and amusement conditions, we used videos as in Study 1. For the control condition, participants viewed a time-lapsed video of house decorating, featuring mixed scene changes (e.g., day transitioning to night). To assess the effectiveness of our manipulations, participants rated their feelings of awe, amusement, anger, fear, sadness, disgust, pride, and elation as a manipulation check (1 = *not at all*, 7 = *extremely*).

Subsequently, we evaluated participants' equanimity through a behavioral task. After viewing the video, participants were instructed to proceed to an irrelevant music-listening task. They were presented with a choice for the task: They could opt for music supposed to make them happy, opt for music supposed to make them sad, or allow the system to randomly select music, which could potentially be either pleasant or unpleasant. Opting for the random selection was interpreted as an indicator of greater equanimity, reflecting a willingness to approach pleasant and unpleasant experiences unbiasedly. It is important to note that participants did not actually listen to any music; this setup was purely a behavioral measure. We fully debriefed them at the end.

Results and Discussion

Manipulation Check

We found significant effects of manipulation on awe, amusement, sadness, disgust, pride, and fear. Post hoc comparisons using the Tukey Honestly Significant Difference test indicated that participants in the awe condition reported more awe than those in the amusement and control conditions, with the latter two conditions not differing in their reported awe. Participants in the amusement condition reported more amusement than those in the awe and control conditions, and those in the control condition reported more amusement than those in the awe condition. Participants in the awe condition reported more sadness and fear than those in the amusement and control conditions, whereas the latter two conditions did not differ in sadness and fear. Participants in the amusement condition reported more disgust than those in the awe and control conditions, with the latter two conditions not differing in disgust. Participants in the amusement condition reported less pride than those in the awe and control conditions, while the latter two conditions did not differ in pride. There were no significant main effects of manipulation on anger and elation. Detailed statistics are reported in Table 3. Controlling for sadness, disgust, pride, and fear, the main effects of manipulation on awe, $F(2, 492) = 144.81$, $p < .001$, $\eta_p^2 = .37$, and amusement, $F(2, 492) = 515.34$, $p < .001$, $\eta_p^2 = .68$, remained significant. Our manipulation was effective. Means and standard deviations across conditions are summarized in Table 2.

Awe and Equanimity

We conducted a multinomial generalized linear model to test the between-conditions differences on three music preference options. Overall, we found a significant difference in music preferences between conditions, $\chi^2(4) = 40.25$, $p < .001$ (Table 4). Post hoc comparisons, adjusted for multiple comparisons using the Bonferroni correction, showed that participants in the awe condition reported less preference for pleasant music than those in the amusement ($M_{dif} = -0.23$, $SE = 0.05$, $z = -4.24$, $p = .016$) and control ($M_{dif} = -0.33$, $SE = 0.05$, $z = -6.28$, $p = .002$) conditions, while the latter two conditions did not differ in pleasant music preference ($M_{dif} = -0.10$, $SE = 0.05$, $z = -1.91$, $p = .31$). No significant differences in unpleasant music preference were found between any two of the three conditions ($p > .39$). Importantly, participants in the awe condition indicate a greater preference for the random type of music than those

Table 3
Main Findings of Tested Emotions in Study 3

	Main effect			Post hoc comparison								
				Awe versus amusement			Awe versus control			Amusement versus control		
Tested emotion	F	p	η_p^2	t	p	d	t	p	d	t	p	d
Awe	189.39	<.001	.43	16.74	<.001	1.84	17.10	<.001	1.88	0.36	.93	0.04
Amusement	534.29	<.001	.68	−29.97	<.001	−3.30	−4.13	<.001	−0.45	26.16	<.001	2.85
Anger	1.33	.26	.01									
Sadness	14.39	<.001	.05	4.06	<.001	0.45	5.09	<.001	0.56	1.04	.55	0.11
Disgust	10.34	<.001	.04	−4.28	<.001	−0.47	−0.86	.66	−0.09	3.46	.002	0.38
Pride	18.97	<.001	.07	4.58	<.001	0.50	−1.19	.46	−0.13	−5.84	<.001	−0.64
Fear	36.77	<.001	.13	6.37	<.001	0.70	8.19	<.001	0.90	1.85	.15	0.20
Elation	2.18	.11	.01									

Note. For F tests, $df = (2, 496)$. For t tests, $df = (496)$.

in the amusement ($M_{dif} = 0.22$, $SE = 0.05$, $z = 4.10$, $p = .019$) and control ($M_{dif} = 0.31$, $SE = 0.05$, $z = 5.89$, $p = .003$) conditions, while the latter two conditions did not differ in the preference for random choice of music ($M_{dif} = 0.09$, $SE = 0.05$, $z = 1.69$, $p = .43$).[5] Consistent with Studies 1 and 2, awe promotes equanimity, as evidenced by the preference for random selection, indicating an unbiased approach toward positive and negative experiences.

Study 4

In Study 4, our first goal was to test Hypothesis 2, which concerned temporal distancing's mediating effect. Our second goal was to explore self-diminishment's role in the relationship between awe and equanimity. Self-diminishment often accompanies experiences of awe and accounts for a range of outcomes, such as humility and collective engagement (Bai et al., 2017; Stellar et al., 2018). It is plausible that self-diminishment accounts for awe's effect on equanimity in that awe might lead people to think that their feelings are less consequential given the underlying belief that they are small and insignificant. This process could in turn increase equanimity. Therefore, we measured temporal distancing and self-diminishment concurrently to examine their mediating roles. Our third goal was to increase generalizability and preliminarily explore cultural differences by testing Chinese and U.S. samples. We preregistered Study 4 at https://aspredicted.org/w26h4.pdf.

Method

Participants

For the 2 × 2 between-subjects design, a G*power analysis suggested a sample size of 171 to detect a moderate size effect ($f = .25$) with 90% power. However, due to the commentaries' suggestion that the sample size estimate of the 2 × 2 design from G*power would produce underpowered interaction (Giner-Sorolla, 2018), we referred to the sample sizes of previous studies on awe and cultural differences, recruiting 200 Chinese participants from Credamo and 201 U.S. participants from Amazon's Mechanical TurkPrime to gain sufficient power to detect the interaction (Jiang & Sedikides, 2022). We excluded four Chinese and three U.S. participants for failing one attention check question and one U.S. participant for failing to follow instructions. A total of 393 participants remained (196 Chinese, 197 U.S.; 263 females; M_{age} = 33.35 years, SD_{age} = 10.52). We randomly assigned participants to the experimental (n = 199; 98 Chinese, 101 U.S.) or control (n = 194; 98 Chinese, 96 U.S.) condition.

Table 4
Contingency Table in Study 3

	Condition			
Music choice	Awe	Amusement	Control	Total
Pleasant	55	96	113	264
Unpleasant	3	2	0	5
Random	103	71	56	230
Total	161	169	169	499

Note. $N = 499$.

Procedure

We manipulated awe using a validated imagination task introduced by Jiang and Sedikides (2022). Participants in the experimental condition were instructed to imagine they were on a trip to the countryside, during which they were strongly impressed by the great Milky Way and tried to absorb the experience. To exclude nature exposure's potential confounding effect, participants in the control condition were similarly instructed to imagine they were on a trip to the countryside. However, they were asked to imagine going to an ordinary park.

We then measured temporal distancing using the eight-item Temporal Distancing Scale by adapting the instructions and emphasizing "right now" to reflect the state (1 = *strongly disagree*, 9 = *strongly agree*; α = .82, $M = 6.09$, $SD = 1.48$; e.g., "Right now, I feel I realize my pleasant or unpleasant feelings about daily events may change with time," "Right now, I feel I realize that daily pleasant or unpleasant events probably won't impact my life very far into the future"; Bruehlman-Senecal et al., 2016). We measured equanimity (α = .77, $M = 6.39$, $SD = 1.41$; 1 = *strongly disagree*, 9 = *strongly agree*) with the same scale as in Study 1 in a sequential manner. In addition, we measured self-diminishment using two self-report items from the Perceived Self-Size Scale (Bai et al., 2017;

[5] To exclude the potential influence of sadness, disgust, pride, and fear, we included them as covariates and conducted multinomial generalized linear model on participants' music options. The results remained similar. We report the results in the Supplemental Materials.

Table 5
Main and Interaction Effects on Key Variables in Study 4

M and *SD* across condition *M* (*SD*)	Temporal distancing			Equanimity			Self-diminishment		
	Experimental	6.52 (1.31)		Experimental	6.60 (1.31)		Experimental	5.04 (1.52)	
	Control	5.66 (1.52)		Control	6.17 (1.48)		Control	3.69 (1.56)	
	Chinese	6.59 (1.35)		Chinese	6.96 (1.16)		Chinese	4.59 (1.33)	
	American	5.60 (1.43)		American	5.82 (1.42)		American	4.15 (1.95)	
ANOVA results	*F*	*p*	η_p^2	*F*	*p*	η_p^2	*F*	*p*	η_p^2
Manipulation	42.02	<.001	.10	11.95	.001	.03	76.60	<.001	.16
Culture	56.97	<.001	.13	79.04	<.001	.17	9.04	.003	.02
Interaction	0.54	.46	.001	0.25	.62	.001	0.96	.33	.003

Note. For *F* tests, *df* = (1, 389). ANOVA = analyses of variance.

i.e., "I feel relatively small," "I feel insignificant"; 1 = *strongly disagree*, 7 = *strongly agree*; α = .79; *M* = 4.37, *SD* = 1.68). Next, participants indicated the extent to which they felt awe on two items (i.e., "I feel awe," "The imagined experience makes me feel awe"; 1 = *strongly disagree*, 7 = *strongly agree*; α = .93; *M* = 4.98, *SD* = 1.71) and their vividness of imagination on two items (i.e., "I can vividly imagine the experience" and "I can imagine this experience well"; 1 = *strongly disagree*, 7 = *strongly agree*; α = .86; *M* = 5.90, *SD* = 0.98).

Results and Discussion

Manipulation Check

Participants in the experimental condition (*M* = 6.04, *SD* = 0.97) reported more awe than those in the control condition (*M* = 3.89, *SD* = 1.62), *F*(1, 391) = 254.98, *p* < .001, η_p^2 = .39. Participants in the experimental condition (*M* = 6.07, *SD* = 0.90) reported more vividness than those in the control condition (*M* = 5.72, *SD* = 1.02), *F*(1, 391) = 12.94, *p* < .001, η_p^2 = .03.[6] When we controlled for vividness, the between-condition difference in awe remained significant, *F*(1, 390) = 239.88, *p* < .001, η_p^2 = .38, indicating that the manipulation was effective.

Temporal Distancing, Equanimity, and Self-Diminishment

We conducted a series of 2 × 2 analyses of variance (ANOVAs) to examine the effects of culture and manipulation on temporal distancing, equanimity, and self-diminishment. The results did not reveal significant interaction effects, but we found significant main effects of manipulation and culture on these variables. Participants in the experimental condition reported higher levels of temporal distancing, equanimity, and self-diminishment than those in the control condition. Moreover, Chinese participants reported higher levels of temporal distancing, equanimity, and self-diminishment than U.S. participants. We report the results in Table 5.

Mediation and Moderated Mediation Analyses

We first conducted a bootstrapping mediational analysis to test the potential mediating effects of temporal distancing and self-diminishment. We entered the manipulation as the independent variable (0 = *control condition*, 1 = *experimental condition*), temporal distancing and self-diminishment as the mediators, and equanimity as the dependent variable. The indirect effect of temporal distancing was significant, *b* = .44, *SE* = .08, 95% CI [0.30, 0.60]. In contrast, the indirect effect of self-diminishment was not significant, *b* = .03, *SE* = .05, 95% CI [−0.07, 0.14] (Figure 1). These findings suggest temporal distancing rather than self-diminishment plausibly mediated awe's effect on equanimity, thus lending support for Hypothesis 2.

We then explored moderation by culture through moderated mediation models. In all, the results supported the cross-cultural consistency of awe's effect on equanimity and the mediating effect of temporal distancing, that is, we found that culture did not moderate awe's effect on equanimity and the mediation model. We report the results in the Supplemental Materials.

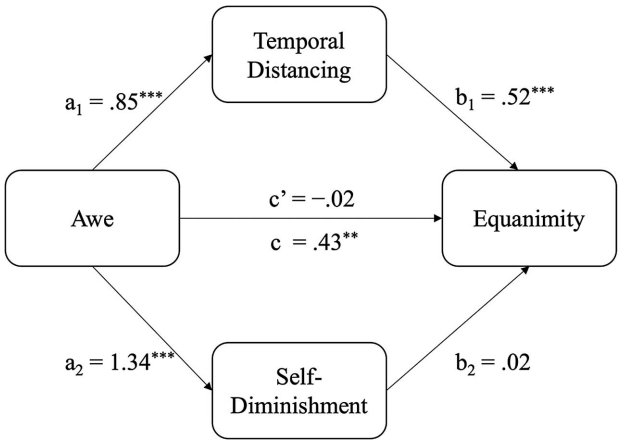
Study 4 advanced our understanding of how awe influences equanimity: We found that temporal distancing rather than self-diminishment accounts for awe's effect on equanimity, suggesting awe's promoting effect on equanimity could not be simply attributed to the feelings of self as small and insignificant in the wake of awe. In addition, as predicted, awe's effect on equanimity is transmitted by temporal distancing among Chinese and U.S. samples, providing initial cross-cultural support for Hypotheses 1 and 2.

Study 5

In Study 5, we aimed to retest Hypotheses 1 and 2 in an ecologically rich context and obtain a representative picture of the proposed model in people's daily lives. We conducted large-scale, observational social media analyses (196,365 travel-related posts from 63,472 users). We used latent semantic analysis (LSA) to calculate the semantic overlap between vectors representing a dictionary of examined variables (awe, temporal distancing, and equanimity) and posts to index expressed awe, temporal distancing, and equanimity separately and examined the proposed mediation model in a real-world context.

[6] To exclude the potential influence of vividness, we included vividness as a covariate and conducted analyses of covariance on temporal distancing, equanimity, and self-diminishment and mediation and moderated mediation analyses. The results remained similar. We report the details in the Supplemental Materials.

Figure 1
Mediating Model in Study 4



** $p < .01$. *** $p < .001$.

Method

Data Collection

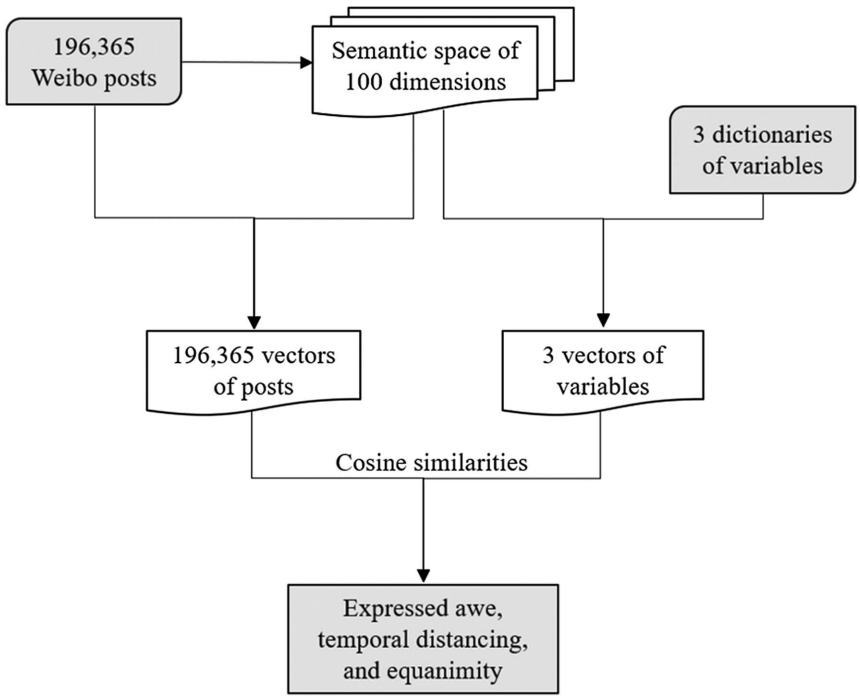
Sina Weibo, the Chinese equivalent of Twitter, is China's most influential microblog platform (Zheng et al., 2019). We collected Weibo posts associated with travel, which provided access to various awe-inducing scenes (e.g., natural settings, historical sites, and artistic works; Jiang & Sedikides, 2022). Utilizing the open-source web crawler technology (Chen, 2020; Zheng et al., 2019), we obtained 196,365 original posts (from 63,472 users) with the hashtags #Travel or #TravelingWithWeibo. This data set covered the period from December 8, 2012, to December 25, 2022 (Kim et al., 2022).

Measures

As in previous research (Dehghani et al., 2016), we relied on LSA, a technique in natural language processing, to capture our interested variables. Weibo posts were first preprocessed to (a) extract Chinese characters, (b) convert traditional to simplified Chinese, and (c) construct word segmentations while filtering out stop words using the tmcn (Li, 2019) and jiebaR (Qin & Wu, 2019) packages in R (Version 4.2.2). For each preprocessed post, we used the fitlsa function in MATLAB R2022a (MathWorks) to compute its semantic similarities with dictionaries representing each variable, from −1 (*not at all*) to 1 (*extremely*). We then employed these semantic similarities to index expressed awe (M = .05, SD = .07), equanimity (M = .05, SD = .07), and temporal distancing (M = .03, SD = .06).

The awe dictionary is a 14-word, revised Chinese version of previous research (e.g., "awesome"; Goldy et al., 2022). To construct the equanimity dictionary, we identified 10 keywords according to their definitions (Desbordes et al., 2015) and the equanimity scale we developed in Supplemental Study 1S (e.g., "undisturbed"; Kwantes et al., 2016). Similarly, we included 16 keywords based on the definition and scale of temporal distancing (e.g., "temporary"; Bruehlman-Senecal et al., 2016; see full items and validations in the Supplemental Materials). Figure 2 illustrates the LSA procedure in Study 5.

Figure 2
An Illustration of the Latent Semantic Analysis Procedure in Study 5



Results and Discussion

Awe, Temporal Distancing, and Equanimity

We estimated three linear mixed-effects models, including year, month, and word-count fixed effects (Kim et al., 2022) and user random effect (Dehghani et al., 2016). As expected, expressed awe was positively associated with expressed equanimity, $b = .26$, $SE = .003$, $p < .001$, 95% CI [.25, .26], and expressed temporal distancing, $b = .07$, $SE = .002$, $p < .001$, 95% CI [.06, .07]. Expressed temporal distancing was positively correlated with equanimity, $b = .30$, $SE = .003$, $p < .001$, 95% CI [.29, .30]. These effects could not be explained by a possible concern that variables, captured by LSA, were positively correlated per se (see ancillary analyses in the Supplemental Materials).

Mediation Analysis

Next, we proceeded with the mediation analysis to examine our proposed model. We entered expressed awe as the independent variable, expressed temporal distancing as the mediator, and expressed equanimity as the dependent variable. The indirect effect of temporal distancing was significant, $b = .06$, $SE = .001$, 95% CI [.06, .07] (Figure 3), in accord with Hypothesis 2.

Study 6

Studies 4 and 5 highlighted the mediating role of temporal distancing underlying awe in fostering equanimity in experimentally controlled and real-world settings. However, these studies could not establish causality between temporal distancing and equanimity. Addressing this gap, in Study 6, we concurrently manipulated awe and temporal distancing, hypothesizing that temporal distancing will moderate awe's effect on equanimity. Specifically, we proposed that the effect of awe on equanimity would be attenuated for individuals primed with a temporal distancing perspective. We preregistered this study at https://aspredicted.org/vs9vw.pdf.

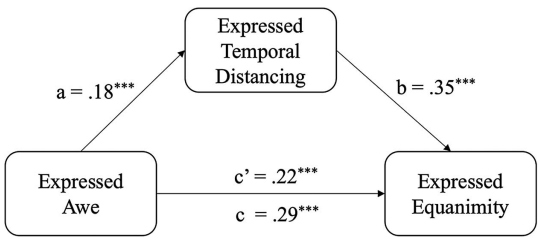
Method

Participants

Following the same sample size estimation process in Study 4, we recruited 400 participants from Credamo. After excluding five participants for failing one attention check question, a total of 395 participants remained (239 females; M_{age} = 29.13 years, SD_{age} = 8.62). Participants were randomly assigned to one of four conditions in a 2 (awe manipulation: awe vs. neutral control) × 2 (temporal distancing manipulation: temporal distancing vs. control) design.

Figure 3

Expressed Temporal Distancing Mediates the Relationship Between Expressed Awe and Expressed Equanimity in Study 5



*** $p < .001$.

Procedure

We first instructed participants to watch the same videos as in Study 1 to induce awe and neutral feelings. After that, they indicated their feelings of awe, anger, disgust, sadness, happiness, and amusement as manipulation checks (1 = *not at all*, 6 = *extremely*). We then introduced participants to the temporal distancing manipulation. Participants in the temporal distancing condition read a short paragraph introducing temporal distancing. They were asked to reflect and write down an experience in their life from a temporal distancing perspective. Participants in the control condition read and transcribed a brief paragraph about the commitment to providing thoughtful answers (Bertrams et al., 2010). Then, participants responded to the equanimity scale (1 = *strongly disagree*, 9 = *strongly agree*; $\alpha = .85$, $M = 7.32$, $SD = 1.11$) as in Study 1. After that, we used three items from the temporal distancing scale to measure temporal distancing (e.g., "Right now, I feel I could take a step back from my daily events and place them in a broader perspective"; 1 = *strongly disagree*, 9 = *strongly agree*; $\alpha = .85$; $M = 7.12$, $SD = 1.39$).

Results and Discussion

Manipulation Check

Participants in the awe condition ($M = 5.01$, $SD = 1.13$) reported more awe than those in the neutral control condition ($M = 3.38$, $SD = 1.37$), $F(1, 393) = 167.60$, $p < .001$, $\eta_p^2 = .30$. We also found a significant main effect of the awe manipulation on amusement, $F(1, 393) = 14.95$, $p < .001$, $\eta_p^2 = .04$. We found no main significant effect of awe manipulation on anger, $F(1, 393) = .12$ $p = .73$, $\eta_p^2 < .001$; disgust, $F(1, 393) = 3.28$, $p = .071$, $\eta_p^2 = .01$; sadness, $F(1, 393) = 2.26$, $p = .13$, $\eta_p^2 = .01$; or happiness, $F(1, 393) = 1.02$, $p = .31$, $\eta_p^2 = .003$. We summarize the means and standard deviations of the emotions across conditions in Table 2. When we controlled for amusement, the effect of awe manipulation on awe feelings remained significant, $F(1, 392) = 169.70$, $p < .001$, $\eta_p^2 = .30$. Therefore, the awe manipulations were effective.

We conducted a 2 × 2 ANOVA to examine the effects of awe manipulation and temporal distancing manipulation on temporal distancing. The main effect of temporal distancing was significant, $F(1, 391) = 62.28$, $p < .001$, $\eta_p^2 = .14$. Participants in the temporal distancing condition ($M = 7.65$, $SD = 0.84$) reported more temporal distancing perspective than those in the control condition ($M = 6.64$, $SD = 1.60$). The main effect of the awe manipulation on temporal distancing was significant, $F(1, 391) = 7.89$, $p = .005$, $\eta_p^2 = .02$. Participants in the awe condition ($M = 7.32$, $SD = 1.20$) reported more temporal distancing perspective than those in the neutral control condition ($M = 6.90$, $SD = 1.54$). The interaction was significant, $F(1, 391) = 12.80$, $p < .001$, $\eta_p^2 = .03$. In the neutral control condition, the main effect of the temporal distancing manipulation (temporal distancing: $M = 7.70$, $SD = 0.76$; control: $M = 6.23$, $SD = 1.70$) was significant, $F(1, 391) = 63.74$, $p < .001$, $\eta_p^2 = .14$. In the awe condition, the main effect of the temporal

distancing manipulation (temporal distancing: $M = 7.60$, $SD = 0.90$; control: $M = 7.05$, $SD = 1.39$) was also significant, $F(1, 391) = 9.61$, $p = .002$, $\eta_p^2 = .02$, but the magnitude was smaller. Therefore, the temporal distancing manipulation was successful.

Time and Words Spent on the Temporal Distancing Task

The average amount of time spent in the temporal distancing condition was 630.8 s ($SD = 359.34$ s), whereas the average time in the control condition was 433.86 s ($SD = 136.90$ s), $F(1, 393) = 54.00$, $p < .001$, $\eta_p^2 = .12$. The average number of words written in the temporal distancing condition was 73.40 ($SD = 16.29$), whereas the average number of words written in the control condition was 34.84 ($SD = 0.44$), $F(1, 393) = 1170.88$, $p < .001$, $\eta_p^2 = .75$.

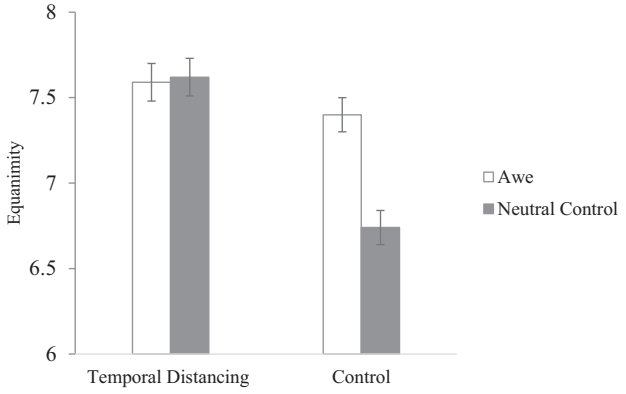
Equanimity

We conducted a 2 × 2 ANOVA to examine the effects of manipulating awe and temporal distancing on equanimity. The results revealed a significant main effect of the awe manipulation, $F(1, 391) = 8.78$, $p = .003$, $\eta_p^2 = .02$, such that participants in the awe condition ($M = 7.49$, $SD = 0.95$) reported more equanimity than their counterparts ($M = 7.14$, $SD = 1.23$), and a main effect of temporal distancing manipulation, $F(1, 391) = 24.98$, $p < .001$, $\eta_p^2 = .06$, with participants in the temporal distancing condition ($M = 7.60$, $SD = 0.81$) reporting more equanimity than those in the control condition ($M = 7.07$, $SD = 1.27$).

Most importantly, the results showed a significant interaction effect, $F(1, 391) = 10.69$, $p = .001$, $\eta_p^2 = .03$ (Figure 4). In the temporal distancing condition, participants in the awe condition reported similar levels of equanimity as those in the neutral control condition, $F(1, 391) = 0.04$, $p = .83$, $\eta_p^2 < .001$. In contrast, among the participants in the control condition, participants in the awe condition reported higher levels of equanimity than their counterparts, $F(1, 391) = 20.67$, $p < .001$, $\eta_p^2 = .05$.[7] These results provide causal evidence for the mediating effect of temporal distancing. When we controlled for the average time spent and the average words written in the temporal distancing task, the results remained unchanged. We report the results in the Supplemental Materials.

Figure 4

Equanimity by the Function of Awe and Temporal Distancing (Study 6)



Note. Error bars represent ±1 standard error.

Study 7

So far, our studies have established that awe promotes equanimity through temporal distancing. We proceeded to test Hypothesis 3, that is, awe promotes well-being through equanimity, with a 5-day awe intervention to measure psychological and physical well-being.

Method

Participants

The intervention materials we used to induce awe have been employed in previous research and yielded small to medium effect sizes (e.g., Jiang & Sedikides, 2022). Therefore, we expected the effect size of our brief awe intervention on equanimity as well as psychological and physical well-being to be small to medium. A power analysis indicated that we needed at least 152 participants to detect a small to medium effect size ($\eta_p^2 = .05$) for a 2 (between-subject: intervention vs. control) × 2 (within-subject: preintervention vs. postintervention) mixed design with a power of .90 ($\alpha = .05$). Hedging against attrition, we recruited 217 Chinese participants from a university participant pool. We excluded 49 participants because they failed to follow the instructions or failed to complete the intervention. A total of 168 participants were included for the momentary and daily analyses ($n_{intervention} = 76$, $n_{control} = 92$; 89 females; $M_{age} = 22.99$ years, $SD_{age} = 4.45$). For the analyses of the pre- and postintervention measures, we excluded six more participants, who failed to complete the postintervention measures, leaving 162 participants ($n_{intervention} = 76$, $n_{control} = 86$; 85 females; $M_{age} = 22.83$ years, $SD_{age} = 3.93$). All participants passed the two attention check questions in the pre- and postintervention measures.

Procedure

In the beginning, we introduced participants to the procedure of the intervention research. For 5 consecutive days, participants were instructed to complete an intervention task in the morning and a daily diary survey in the evening of each day. They also completed a preintervention survey before the start of the study and a postintervention survey at the end.

During the 5-day intervention, participants received an intervention task and a momentary measure of awe at 8 a.m. each day. Following previous research (e.g., Piff et al., 2015), we employed awe-inducing videos (Days 1 and 5), pictures (Day 2), narrative recall (Day 3), or an imagined task (Day 4) to evoke awe in the intervention group. Participants in the control group completed five similar but nonawe-inducing tasks with stimuli[8] that were similar in essential ways. Participants in both groups had to

[7] The results remained similar with amusement as covariate. See the Supplemental Materials.

[8] Control group: watching a wooden countertop construction video (Day 1), daily setting pictures (Day 2), recalling a recent experience of shopping (Day 3), imagining visiting a local park (Day 4), and watching a street scenario video (Day 5).

indicate their momentary feeling of awe following each task ("After completing the task, I feel awe," 1 = *strongly disagree*, 7 = *strongly agree*). At 9 p.m. each day, participants would receive a link to a survey in which we measured their daily physical symptoms with the 24-item physical symptom checklist (Emmons, 1991; Jakubiak & Feeney, 2016).

In the pre- and postintervention surveys, we measured equanimity, psychological well-being (1 = *strongly disagree*, 7 = *strongly agree*; Su et al., 2014), sleep quality (1 = *strongly disagree*, 7 = *strongly agree*; Murphy et al., 2012), self-rated general health (1 = *poor*, 7 = *excellent*; J. Luo, Zhang, et al., 2022), and demographic information. We rephrased the items to accommodate the intervention study and preceded each item with the stem "Over the past week." We report the descriptive statistics in the pre- and postintervention surveys in Table 6.

Results and Discussion

Intervention Manipulation Check

We calculated the means of momentary awe across all 5 days to index the overall momentary feelings of awe after intervention.[9] As intended, participants in the intervention group (M = 5.95, SD = 0.92) reported higher feelings of awe than those in the control group (M = 4.17, SD = 1.46), $F(1, 166) = 84.69$, $p < .001$, $\eta_p^2 = .34$, indicating the manipulation was successful.

Postintervention Effects

We then conducted a series of 2 (time-point: pre vs. post) × 2 (group: intervention vs. control) repeated ANOVAs to examine the intervention's effect on equanimity, psychological well-being, sleep quality, and self-rated general health. Generally, we found significant interaction effects. Simple effect analyses showed that participants in the intervention group showed an increase in equanimity (Supplemental Figure 1S), psychological well-being (Supplemental Figure 2S), sleep quality (Supplemental Figure 3S), and general physical health (Supplemental Figure 4S). In contrast, those in the control group did not. We summarize the results in Table 7.

Table 6
Means and Standard Deviations of Pre- and Postintervention Measures in Study 7

Measure	Preintervention M (SD)	α	Postintervention M (SD)	α
Equanimity				
Total	4.94 (1.05)	.73	5.38 (0.91)	.73
Intervention	4.87 (1.08)		5.54 (0.79)	
Control	5.01 (1.02)		5.23 (0.99)	
Psychological well-being				
Total	5.22 (1.17)	.94	5.33 (1.09)	.93
Intervention	5.10 (1.25)		5.44 (1.01)	
Control	5.32 (1.10)		5.23 (1.16)	
Sleep quality				
Total	4.61 (1.51)	.84	4.83 (1.50)	.84
Intervention	4.40 (1.61)		4.89 (1.48)	
Control	4.79 (1.39)		4.77 (1.53)	
Self-rated general health				
Total	5.06 (1.34)		5.30 (1.16)	
Intervention	4.86 (1.37)		5.36 (1.04)	
Control	5.24 (1.28)		5.26 (1.26)	

Note. N = 162.

Mediation Analyses

We conducted a series of mediational analyses to examine whether equanimity mediates the awe intervention's effects on psychological and physical well-being. To control for the potential influence of baseline, we subtracted the scores of preintervention measures from the scores of postintervention measures and took the results as the change in equanimity (M = 0.43, SD = 1.22), psychological well-being (M = 0.11, SD = 1.29), sleep quality (M = 0.22, SD = 1.60), and self-rated general health (M = 0.24, SD = 1.43).

We first entered the group as the independent variable (0 = *control group*, 1 = *intervention group*); the change in equanimity as the mediator; and the change in psychological well-being, sleep quality, and self-rated general health as the dependent variables separately. The results indicated that change of equanimity mediates the intervention's effect on the change in psychological well-being, b = 0.33, SE = 0.14, 95% CI [0.06, 0.61] (Supplemental Figure 5S); sleep quality, b = 0.30, SE = 0.13, 95% CI [0.06, 0.57] (Supplemental Figure 6S); and general health b = 0.26, SE = 0.12, 95% CI [0.04, 0.52] (Supplemental Figure 7S).

Taking these results together, after 5 consecutive days of intervention, we observed that awe intervention increased equanimity, which in turn promoted psychological well-being, sleep quality, and general health state. These results supported Hypothesis 3. It has long been argued that awe could be a pathway to mental and physical health (for a review, see Monroy & Keltner, 2023). This is some of the first empirical evidence that a short self-initiated awe intervention could boost psychological and physical well-being by fostering equanimity.

General Discussion

Previous research suggests that awe confers well-being benefits via a binary mechanism, amplifying positivity (e.g., Anderson et al., 2018; Monroy et al., 2023; Yin et al., 2024) and suppressing negativity (e.g., Bai et al., 2021; Yuan, Guo, et al., 2024). However, this binary approach neglects the significance of dynamically modulating responses to experiences of any valence, crucial for overall well-being (Diener et al., 1991; Gruber et al., 2011; McGuirk et al., 2018). Indeed, adhering strictly to this binary framework can paradoxically impair well-being (Gruber et al., 2011; Kesebir & Diener, 2008; Krys et al., 2024). To address this research gap, we suggest a novel perspective to understand awe's benefits for well-being, proposing that awe's value in well-being also lies in its capacity to foster equanimity. This balanced state is not merely a middle ground between positive and negative emotions but a dynamic equilibrium that enhances overall well-being. Building on relevant theory, we

[9] We found significant between-group differences in the momentary awe for each intervention day separately (Supplemental Materials). We also report the intervention effects on daily physical symptoms in the Supplemental Materials.

Table 7
Postintervention Effects: Main, Interaction, and Simple Effects in Study 7

Dependent variable	Main effect of intervention			Main effect of time-point			Interaction effect			Simple effect: Intervention group			Simple effect: Control group			Intervention group		Control group	
	F	p	η_p^2	F	p	η_p^2	F	p	η_p^2	F	p	η_p^2	F	p	η_p^2	M_{dif}	SE_{dif}	M_{dif}	SE_{dif}
Equanimity	0.50	.48	.003	22.20	<.001	.12	5.57	.020	.03	23.55	<.001	.13	2.95	.09	.02	0.67	0.14	0.22	0.13
PSB	0.002	.97	<.001	1.61	.21	.01	4.44	.037	.03	5.37	.022	.03	0.37	.54	.002	0.34	0.15	−0.08	0.14
SQ	0.46	.50	.003	3.57	.06	.02	4.18	.043	.03	7.29	.018	.04	0.01	.91	<.001	0.49	0.18	−0.02	0.17
GPH	0.80	.37	.005	5.31	.022	.03	4.84	.029	.03	9.56	.002	.06	.001	.94	<.001	0.50	0.16	0.01	0.15

Note. SE = standard error; PSB = psychological well-being, SQ = sleep quality, GPH = general physical health; for F test, df = (1, 160).

hypothesized that awe fosters equanimity through temporal distancing, which in turn contributes to overall well-being.

Specifically, we proposed that awe fosters equanimity (Hypothesis 1) and found support for this hypothesis in all seven studies and one supplementary study. In Studies 1–7, using distinct ways to manipulate awe and index equanimity, we consistently found that participants who experienced awe scored higher on the equanimity scale (Studies 1, 4, 6, and 7) reported larger decreases in emotional reactivity to negative and positive experiences (Study 2) and an unbiased approach to all experiences (Study 3).

The effect of awe on equanimity was established through various methods: by comparing awe with a positive emotion such as amusement (Studies 1 and 3), statistically controlling for concurrent emotions (Studies 2, 3, and 6), examining contexts beyond nature exposure (Studies 1, 3, and 4), and considering factors like arousal levels, social desirability, and self-presentation motives (Study 1). Therefore, awe exerts a unique effect on equanimity that is not confounded by general positive affect, that is distinct from the impact of other positive emotions, and that does not reduce to exposure to nature, arousal levels, or self-presentation motives.

Our second hypothesis held that awe fosters equanimity through temporal distancing (Hypothesis 2). We obtained evidence for this hypothesis in the lab and real-world settings (Studies 4–6), balancing internal and external validity. We demonstrated its robustness across Chinese and U.S. cultural backgrounds and above self-diminishment (Study 4). We also showed that this effect of awe on equanimity through temporal distancing holds in various real-world contexts (Study 5) and provided causal evidence for the mediation model (Study 6).

Our final hypothesis posited that awe promotes well-being by fostering equanimity (Hypothesis 3), a claim we substantiated in a 5-day intervention (Study 7). Overall, our varied methods and samples present a new perspective for understanding the unique well-being benefits of awe—namely, equanimity—and elucidate a process by which awe enhances equanimity through temporal distancing.

Implications and Future Directions

Unlike past studies of awe and well-being that have approached the matter in a dichotomous fashion, prioritizing how experiences of awe increase positive outcomes and buffer against negative outcomes (e.g., Bai et al., 2021; Yuan, Guo, et al., 2024), our findings provide a novel perspective on awe's benefits for well-being. Awe fosters equanimity, enabling individuals to engage with all experiences, negative and positive, in an impartial manner. These findings advance what has been learned about awe's benefits for well-being (e.g., Anderson et al., 2018; Bai et al., 2021; Joye & Bolderdijk, 2015; Piff et al., 2015; Rudd et al., 2012), suggesting awe may enable individuals to avoid the detrimental effects of heightened emotional reactivity or exclusive pursuit of positivity (Grant & Schwartz, 2011; Gruber et al., 2011; Oishi et al., 2007). To find enhanced well-being in the long run, impartially regulating the responses to experiences of any valence is of great importance (Gruber, 2011). Awe makes this possible by fostering equanimity.

Our research offers an integrative framework for the benefits of awe: Awe not only fosters humility, tempering hubristic pride in self-enhancing achievements (Stellar et al., 2018, Study 4), but also reduces negative emotions following self-threats (Atamba, 2019; Le et al., 2019; Sun et al., 2023). By fostering equanimity, awe ensures a composed response to the peaks and valleys of personal experience, offering a comprehensive strategy for managing emotions. This function of awe promotes a balanced, composed approach to the inevitable fluctuations of life.

We note that these findings promote a new understanding of well-being. In contemporary discourse, many believe that there is an overemphasis on the continual pursuit of happiness and the reduction of distress (e.g., Bastian et al., 2012, 2015; Kesebir & Diener, 2008; Mauss et al., 2011). Our findings advocate for a shift toward a well-being paradigm that values composure, balance, and navigating all experiences with equanimity (Ekman et al., 2005; Grant & Schwartz, 2011; Haidt, 2006; Seligman, 2004; Wallace & Shapiro, 2006). Enduring well-being encompasses psychological and physical flourishing that arises from mental balance and an unbiased engagement with life's vicissitudes (Ekman et al., 2005; Wallace & Shapiro, 2006). Consistent with this new thinking, we discovered that awe enhances overall well-being, including improved mental health and physical health, by nurturing equanimity. Our research marks the first comprehensive exploration of how awe affects psychological and physical well-being via equanimity. By expanding the understanding of well-being, our

research paves the way for new approaches to cultivating a balanced and fulfilling life.

Equanimity refers to an even state of mind in response to not only life experiences but also to other people (Desbordes et al., 2015; Weber, 2021). Therefore, new research vistas are opened up through the investigation of how awe may impact social interaction via equanimity, such as examining its potential role in reducing racial hatred or increasing forgiveness and a love of humanity. In addition, research has shown that awe increases empathy (L. Luo et al., 2023; L. Luo, Yang, et al., 2022), collective engagement (Bai et al., 2017), and helping behaviors (Piff et al., 2015). Awe has also been found to reduce the desired social distance from ideological opponents (Stancato & Keltner, 2021) and promote the acknowledgment of others' contributions (Stellar et al., 2018). Equanimity, with its emphasis on an open and equal attitude toward all beings, could be an additional mechanism underlying these effects.

Our research contributes to the emerging science of equanimity (Desbordes et al., 2015; Lindsay et al., 2019; Van Dam et al., 2018). We developed a valid measure of this construct and differentiated it from other related constructs, such as acceptance, mindfulness, and cognitive appraisal. Furthermore, we demonstrated that equanimity manifested in reduced emotional reactivity to negative and positive experiences and an unbiased approach toward all experiences.

Equanimity has been considered an end state of many contemplative traditions (e.g., Cordaro et al., 2024; Desbordes et al., 2015; Ekman et al., 2005; Weber, 2021). We found that awe, induced either by a narrative recall or imagination task, viewing pictures or watching a video, or a 5-day self-initiated intervention, increased equanimity. It will be important for researchers to extend these findings to different populations (e.g., Anderson et al., 2018; Sturm et al., 2022). We enrich the growing literature on equanimity by identifying a novel and more accessible way to cultivate equanimity beyond traditional practices, such as meditation.

Our research has noteworthy limitations. Contextual factors, such as cultural differences, which may influence the awe–equanimity connection, warrant further systematic investigation. Furthermore, for the most part, we relied on self-reported measures. It is worth incorporating more behavioral and physiological indices to gain a deep understanding of equanimity. We tested general populations, but researchers could broaden the scope by involving special populations, such as those with cardiovascular diseases (e.g., Lackner et al., 2014; Lane et al., 2018; Lovallo & Gerin, 2003) or mania (Gruber et al., 2008; Phillips & Kupfer, 2013), characterized by heightened positive emotional reactivity (Du Pont et al., 2016; Gruber, 2011; Gruber et al., 2020). Finally, although we demonstrated that a 5-day awe intervention improves well-being through equanimity, the question of how the intervention has a longitudinal effect remains unaddressed. Researchers should employ a longitudinal design to examine the stability of awe's effects on well-being over time (Table 8).

Conclusion

Tranquility is a centerpiece of many great ethical traditions and the practices they encourage to detach oneself from preoccupations with stimulus-dependent pleasure or displeasure. These feelings often arise during encounters with extraordinary phenomena that elicit awe, such as listening to magnificent music, gazing upon a resplendent starry night sky, and appreciating ineffable, monumental works of art. Our research indicates that awe shifts people's attention away from the here and now to a broadened time perspective, cultivates a balanced mindset in response to experiences regardless of valence, and confers psychological and physical benefits.

Table 8
Assessment of Limitations

Limitation	Elaboration
Effect size	The observed effect size is smaller than the estimated effect size. This variability is inherent in psychological research (Open Science Collaboration, 2015). Researchers should explore the underlying mechanisms and contextual variables that may account for the variability in effect sizes, advancing our comprehension of awe's effect across diverse populations and settings.
Generalizability	We tested samples from China and the United States. Further investigation is needed to determine whether the observed effect applies to other cultural contexts. Additionally, we did not conduct a systematic cross-cultural study, which merits future investigation.
Measures of equanimity	We measured equanimity with a self-report scale, an unbiased approach to experiences of any valence, and reduced emotional reactivity to positive and negative experiences. It is worth incorporating a broad range of behavioral and physiological indices to gain a deep understanding of equanimity.
Methodology	We did not use a longitudinal design. Whether awe's effect on equanimity and well-being has a lasting effect needs further examination.
Theorization	We suggest equanimity as a new mechanism for awe's distinctive effects on well-being, but its relationship to other mechanisms proposed in the literature (e.g., Monroy & Keltner, 2023) remains unclear, highlighting the need for further research.

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