



## Dispositional awe and prosocial tendency: The mediating roles of self-transcendent meaning in life and spiritual self-transcendence

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Dispositional awe is a self-transcendent experience that has been investigated in few empirical studies. We explored the mediating effects of both self-transcendent meaning in life and spiritual self-transcendence in the relationship between dispositional awe and prosocial tendency. Participants were 1,907 Chinese undergraduates. As predicted, self-transcendent meaning in life and spiritual self-transcendence mediated the relationship between dispositional awe and prosocial behavior. These findings not only demonstrate the mediating effect of self-transcendence on prosocial tendency, but also support dispositional awe as an element of self-transcendence.

### Keywords

dispositional awe; self-transcendent experience; prosocial tendency; meaning in life; spiritual self-transcendence

*Dispositional awe* is a tendency or trait of being in awe that arises from perceptions of vast stimuli, and a need to accommodate these perceptions into existing mental schemas (Keltner & Haidt, 2003). It is a universal and complex human experience that is central to religion, politics, nature, and art (Coghlan et al., 2012; Krause & Hayward, 2015; Shiota et al., 2007), and is characterized by feelings of wonder, amazement, enlightenment, elevation, admiration, and appreciation (Keltner & Haidt, 2003). Awe manifests as a self-transcendent quality in that it primarily decreases self-salience and increases feelings of connectedness to other people (Yaden et al., 2017). Given that awe can enable people to gain a different perspective on their life and help them to see the world in a new light, it is considered a self-transcendent experience (Chirico & Yaden, 2018; Shiota et al., 2017; Stellar et al., 2017). However, few empirical studies have been conducted on this topic and researchers have not yet explored how awe at the dispositional level manifests as self-transcendent in character. Thus, we examined the positive effect of dispositional awe on prosocial tendency, and the mediating role of self-transcendence in this relationship, to provide evidence for the notion of dispositional awe as a self-transcendent experience.

## Literature Review and Hypotheses

### Dispositional Awe and Prosocial Behavior

The self-transcendent element of awe primarily manifests as a positive effect on *prosocial behavior* (Perlin & Li, 2020), which broadly refers to acts that are beneficial to other people and/or social groups (Penner et al., 2004). Furthermore, prosocial behavior usually involves a contribution to collective, rather than individual, interests (Frey & Meier, 2004). Several studies have demonstrated the positive effect of elicited awe on prosocial behavior. For example, Piff et al. (2015) found that, compared with elicited pride and neutral emotion, elicited awe predicted decision making that was more ethical, showed greater generosity, displayed higher prosocial values, and involved prosocial helping behavior. Prade and Saroglou (2016) also showed that, compared with elicited amusement and neutral emotion, elicited awe increased the prosocial

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intentions of generosity and helping others in need.

These previous studies have primarily reported the positive effect of elicited awe on prosocial behavior, but they have had two key limitations: First, the researchers mainly tested the positive effect of awe under eliciting conditions, but not at the dispositional level. Compared with conditional awe, dispositional awe represents a relatively fixed personality trait; thus, it manifests as positive effects including, but not limited to, cognitive flexibility and openness (Chirico et al., 2018; Gottlieb et al., 2018). Second, although the positive relationship between awe and prosociality can be partially explained by the subjective sense of ego as smallness relative to vast outside stimuli (Piff et al., 2015), its underlying mechanism remains to be clarified. In particular, the mediating role of self-transcendence in this relationship has not been tested directly, which limits understanding of the self-transcendent character of dispositional awe.

### The Mediating Role of Self-Transcendence

*Self-transcendence* is a term that has its roots in philosophical literature, and describes a host of related concepts, including initiative, motivation, personality, state, and/or an inward mind process, along with disposition (Cloninger et al., 1993; Frankl, 1966; Piedmont, 1999). Self-transcendence is a pivotal topic in some fields, including transpersonal psychology, personality theory, and nursing theory (Garcia-Romeu, 2010; Yaden et al., 2017). In this study we tested the mediating role of two dimensions of self-transcendence: self-transcendent meaning in life and spiritual self-transcendence.

*Self-transcendent meaning in life* is individuals' belief in transcending their living state and pursuing a higher perspective (H. Li, 2006). The positive relationship between dispositional awe and self-transcendent meaning in life could explain the self-transcendent quality of dispositional awe in the value and meaning in life. The positive role of awe in meaning in life may be similar to other positive emotions (e.g., love or gratitude), which have been shown to have a robust positive effect on meaning in life (King et al., 2006). Because it has the ability to diminish the self and enable individuals to focus more attention on others (Piff et al., 2015), dispositional awe leads to a self-transcendent belief in the meaning in life (Rivera et al., 2020). Zhao et al. (2019) showed that awe can decrease people's materialism and enhance their meaning in life, thus leading to a happier life. Moreover, a reciprocal positive relationship between self-transcendent meaning in life and prosocial behavior has been observed (Klein, 2017; Van Tongeren et al., 2016).

*Spiritual self-transcendence* refers to the capacity of individuals to remove themselves from their immediate sense of time and space, and to view life from a broader, more objective perspective (Piedmont, 1999; Piedmont et al., 2009). This type of self-transcendence is concerned with one's personal relationships with large and transcendent realities, such as God or the universe (Piedmont & Leach, 2002). Previous researchers have shown that spiritual self-transcendence can help people to maintain good mental health. Specifically, it can increase the subjective feeling that they are receiving more social support (Jibeen et al., 2018), allow them to retain a positive attitude (Johnstone et al., 2016), and enhance their well-being (Unterrainer et al., 2010). Scholars in the field of religious psychology have provided evidence that awe in the context of religion itself invokes a mystical and spiritual experience (Van Cappellen & Saroglou, 2012; Van Cappellen et al., 2013), which supports the notion that awe benefits spiritual self-transcendence.

Furthermore, the positive effect of spiritual self-transcendence on prosocial behavior has been reported in a number of empirical studies, and theoretically explained by the religion–prosociality hypothesis (Einolf, 2013; Preston et al., 2010; Shariff & Norenzayan, 2007). For example, in an empirical study conducted with Chinese Christian adolescents, K.-K. Li and Chow (2015) showed that self-transcendence relating to religiosity and spirituality was positively associated with prosocial behaviors, including peer helping and altruism. In the religion–prosociality hypothesis it is proposed that religion and spirituality benefit prosocial attitudes and behaviors because of the positive effects of mysterious and transcendent beliefs related to self-transcendence (Pichon et al., 2007; Saroglou, 2006).

In summary, the notion of dispositional awe as a transcendent experience has been widely discussed, but is not sufficiently clarified by the research findings, and the mediating role of self-transcendence in the relationship between dispositional awe and prosocial tendency has not yet been tested. Thus, we formed the following hypotheses:

**Hypothesis 1:** Dispositional awe will be positively associated with prosocial tendency.

**Hypothesis 2:** Self-transcendent meaning in life and spiritual self-transcendence will each have a mediating effect in the relationship between dispositional awe and prosocial tendency.

The hypothesized model is depicted in Figure 1.

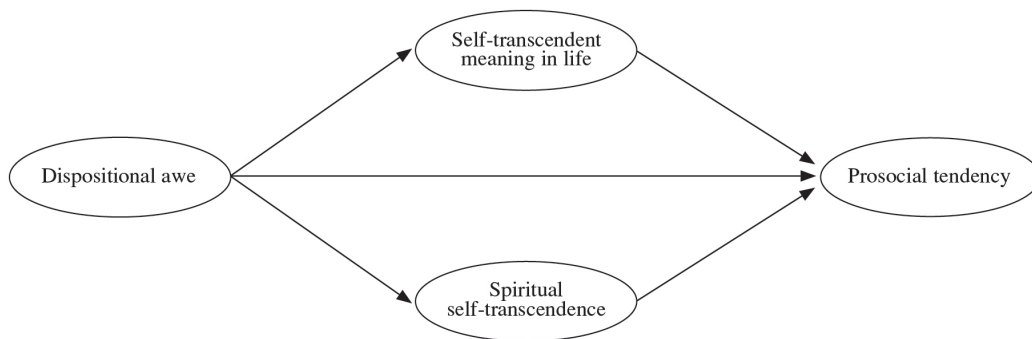


Figure 1. *The Hypothesized Model*

## Method

### Participants and Procedure

We recruited a sample of 1,907 Chinese undergraduates, comprising 624 men (32.7%) and 1,293 women (67.3%), from universities in Fujian Province, China, via convenience cluster sampling. Among the participants, 576 were freshmen (30.2%), 457 were sophomores (24.0%), 495 were juniors (26.0%), and 379 were seniors (19.9%). The mean age of participants was 20.7 years ( $SD = 1.7$ , range = 18–26).

The participants completed a pencil-and-paper survey in class, after providing informed consent. They reported their gender, year of study, and age, and self-reported their responses to all the items in the survey. Participants obtained additional course points for conducting a comprehensive assessment for personal development. This study was approved by the Ethics Committee of Fujian Normal University, China.

### Measures

#### **Dispositional Awe**

Dispositional awe was measured by the Dispositional Awe Scale for Chinese Undergraduates (DAS-CU; R. M. Lin & Lian, 2020). The DAS-CU is a 25-item survey designed to measure the level of dispositional awe of undergraduates across the following five dimensions: awe in response to nature (e.g., “I am often in awe of nature”), life, mortality, relationships, and spirituality and/or religion. All items are rated on a 6-point Likert scale (1 = *does not describe me at all*, 6 = *describes me well*), with higher scores indicating a higher level of dispositional awe. In the original study Cronbach’s alpha for the DAS-CU was .92 and its composite reliability was .96 (R. M. Lin & Lian, 2020). In this study Cronbach’s alpha for the total DAS-CU was .93.

#### **Prosocial Tendency**

Prosocial tendency was measured using the Prosocial Tendencies Measure (PTM; Carlo & Randall, 2002), which was translated into Chinese by Kou et al. (2007). The PTM consists of 23 items designed to measure six types of prosocial behaviors: altruistic, compliant, emotional, dire (e.g., “I tend to help people who are in a real crisis or need”), public (e.g., “I can help others best when people are watching me”), and anonymous. All items are rated on a 5-point Likert scale (1 = *does not describe me at all*, 5 = *describes me well*), with higher scores indicating stronger prosociality. The PTM had good reliability and validity in the original study (Carlo & Randall, 2002), and in this study Cronbach’s alpha was .90.

### **Self-Transcendent Meaning in Life**

Self-transcendent meaning in life was measured using the Self-Transcendent Meaning in Life Scale (SMLS; H. Li, 2006). The SMLS is designed to measure an individual’s self-transcendent beliefs about the meaning in life that are separate from and go beyond the perception of the self. It is an eight-item scale that comprises two dimensions: gaining meaning from failure and transcendence of success/failure (e.g., “Trying but failing is more meaningful than giving up trying”). Items are scored on a 4-point Likert scale (1 = *strongly disagree*, 4 = *strongly agree*), with higher scores indicating a higher level of self-transcendent life meaning. H. Li (2006) recorded a Cronbach’s alpha of .79 and found that self-transcendent life meaning was significantly correlated with mental health, which indicates that the scale has good reliability and validity. In this study Cronbach’s alpha for the SMLS was .84.

### **Spiritual Self-Transcendence**

Spiritual self-transcendence was measured using the short version (Piedmont & Leach, 2002) of the Spiritual Transcendence Scale (STS; Piedmont, 1999), which was translated into Chinese by Huang and He (2015). The STS is designed to measure the ability to stand outside the immediate sense of time and place, and to view life from a broad, objective perspective. The STS-Short comprises three dimensions: prayer fulfillment (three items, e.g., “I meditate and/or pray so that I can reach a higher spiritual plane of consciousness”), universality (three items, e.g., “I feel that on a higher level all of us share a common bond”), and connectedness (three items, e.g., “I find inner strength and/or peace from my prayers or meditations”). Items are rated on a 5-point Likert scale (1 = *strongly agree*, 5 = *strongly disagree*), with higher scores indicating a stronger feeling of spiritual self-transcendence. In this study Cronbach’s alpha was .68.

## **Data Analysis**

The data were analyzed using SPSS 20.0 and Mplus 7.4 for Windows. First, we calculated the descriptive statistics and Pearson’s correlation coefficients. Next, we performed mediation effects testing based on structural equation modeling using Mplus 7.4, and used bias-corrected bootstrapping analysis to calculate the 95% confidence intervals (CIs) for the mediating effects of self-transcendent meaning in life and spiritual self-transcendence. The standards of comparative fit index (CFI) > .90, Tucker–Lewis index (TLI) > .90, standardized root mean square residual (SRMR) < .08, and root mean square error of approximation (RMSEA) < .08 were used to determine the fit of the model to the data (Hu & Bentler, 1998, 1999).

## **Results**

### **Common Method Bias Test and Primary Analysis**

We performed an exploratory factor analysis to test for common method bias. The results show that more than 12 latent factors were retained for which initial eigenvalues were larger than 1, and the first latent factor explained only 20.56% of the variance, which is significantly less than the 40% maximum set as an indicator by Podsakoff et al. (2003). These results indicate that the possibility of common method bias was not significant in this study.

The means and standard deviations for the relationships between dispositional awe, prosocial tendency, self-



transcendent meaning in life, and spiritual self-transcendence are shown in Table 1. Dispositional awe was positively correlated with prosocial tendency, and both dispositional awe and prosocial tendency were positively correlated with self-transcendent meaning in life and spiritual self-transcendence.

Table 1. *Pearson's Correlations Between Study Variables*

	<i>M</i>	<i>SD</i>	1	2	3
1. Dispositional awe	4.64	0.62	—		
2. Prosocial tendency	3.35	0.51	.37***		
3. Self-transcendent meaning in life	3.04	0.46	.28***	.33***	
4. Spiritual self-transcendence	2.49	0.35	.41***	.36***	.37***

*Note.*  $N = 1,907$ .

\*\*\*  $p < .001$ .

### Mediation Effects Testing

We used structural equation modeling to test the mediating effects of both self-transcendent meaning in life and spiritual self-transcendence. When constructing the model, the study variables were considered as latent variables and their measurement indicators were parceled with the factors in the measures. A confirmatory factor analysis was first performed to test the fit of the measurement indicators, chi square ( $\chi^2$ )/degrees of freedom ( $df$ ) = 6.05, RMSEA = .05, CFI = .94, TLI = .93, SRMR = .05. Considering the large number of participants in this study, the  $\chi^2/df$  ratio was larger than 5, but the other fit indices indicate that the CFA model fit the data well. Thus, the four-factor model was accepted and a further mediation effects model was developed.

We constructed a mediation model of both self-transcendent meaning in life and spiritual self-transcendence, controlling for participants' gender, year of study, and major. The standardized path loadings are shown in Figure 2. The indirect effects and their 95% CIs were estimated using bias-correlated bootstrapping analysis with 1,000 resamples (see Table 2). The indirect effects of both self-transcendent meaning in life and spiritual self-transcendence were significantly positive and their 95% CIs did not include zero. The standardized indirect effects were .10 and .12, respectively, accounting for 23.8% and 28.6% of the total effect of dispositional awe. When excluding the indirect effects of self-transcendent meaning in life and spiritual self-transcendence, the direct effect of dispositional awe was still significantly positive and accounted for 47.6% of the total effect.

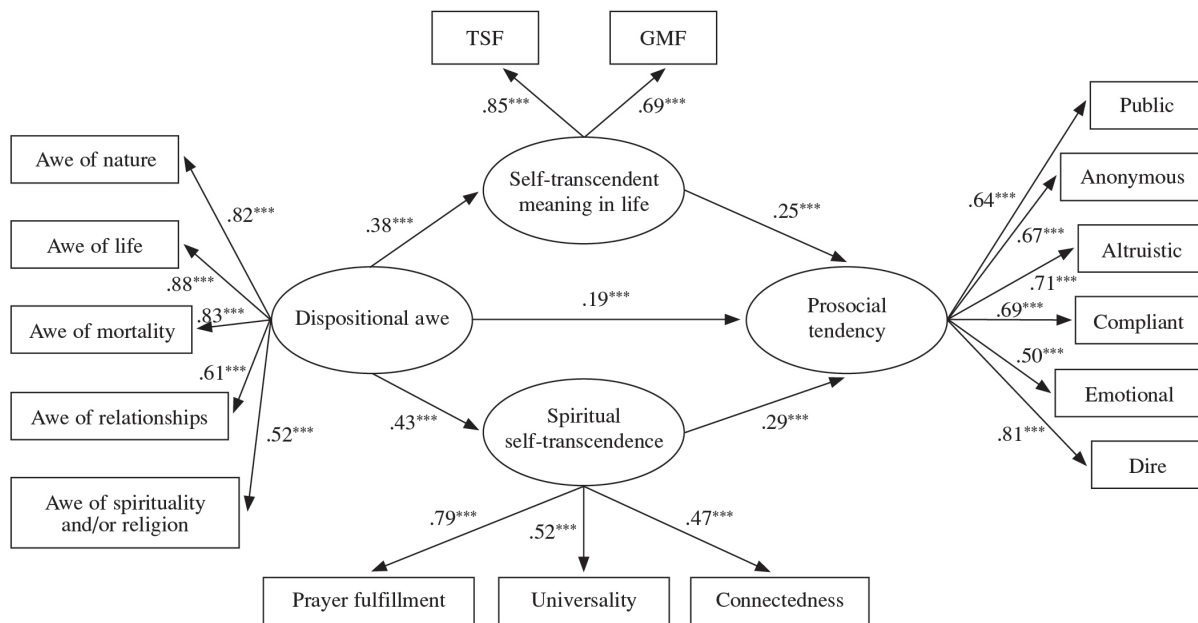


Figure 2. Mediation Model of Self-Transcendent Meaning in Life and Spiritual Self-Transcendence

Note. TSF = transcendence success/failure; GMF = gaining meaning from failure.

\*\*\*  $p < .001$ .

There was no significant difference between the mediating effect of self-transcendent meaning in life and that of spiritual self-transcendence, discrepancy effect =  $-0.02$ ,  $SE = 0.02$ ,  $p = .43$ , 95% CI  $[-0.05, 0.02]$ , and the total standard mediation effect of both was  $0.22$ , estimated value =  $0.12$ ,  $SE = 0.01$ ,  $p < .001$ , 95% CI  $[0.09, 0.14]$ . Thus, Hypotheses 1 and 2 were supported.

Table 2. Bias-Correlated Bootstrapping Analysis Results for the Indirect Effects of Both Self-Transcendent Meaning in Life and Spiritual Self-Transcendence

Paths	Indirect effect (standardized)	SE	95% CI		Total variance accounted for (%)
			LL	UL	
Dispositional awe → Self-transcendent meaning in life → Prosocial tendency	0.05 (0.10)	0.01	0.03	0.07	23.8
Dispositional awe → Spiritual self-transcendence → Prosocial tendency	0.06 (0.12)	0.01	0.04	0.09	28.6
Dispositional awe → Prosocial tendency	0.10 (0.19)	0.02	0.15	0.23	47.6
Total effect (standardized)	0.21 (0.41)	—	—	—	—

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

## Discussion

Our results show that both self-transcendent meaning in life and spiritual self-transcendence mediated the





relationship between dispositional awe and prosocial tendency, and that the mediating effects of the two factors were not significantly different from each other. We found that dispositional awe was positively correlated with prosociality via the mediating effect of spiritual self-transcendence, which further supports the proposal that dispositional awe can be characterized as self-transcendence.

The self-transcendent nature of dispositional awe is indicated by the observed positive relationship with prosocial tendency. This result is consistent with the findings of previous studies on elicited awe (Piff et al., 2015; Prade & Saroglou, 2016). In our study we have extended the positive effect of awe in prosociality to the dispositional level, and provided new evidence for the self-transcendent nature of awe. Prosocial behavior is a distinct index of self-transcendence because it requires people to go beyond individual interest and pay attention to other people's needs (Yaden et al., 2017). Likewise, dispositional awe motivates people to consider the social environment and other people rather than just themselves (Lin et al., 2020; Piff et al., 2015).

The self-transcendence trait is intrinsically manifested in the mediating effects of both self-transcendent meaning in life and spiritual self-transcendence. We measured self-transcendence in terms of meaning in life and spirituality. Our findings highlight the internal mediating mechanism of prosocial behavior, further extending the hypothesis of the small self, according to which awe leads people to perceive their ego as small relative to outside stimuli, facilitating a shift in attention toward larger entities and diminishing of the individual self (Perlin & Li, 2020; Piff et al., 2015). The small self may show only the passivity of ego, for the individual is mainly dependent on responses to the vast outside. However, self-transcendence may reflect the proactivity of self because it helps people transcend their personal limitations and feel more connected to their social group, others, and nature.

This study has several limitations. First, we measured self-transcendence only from the perspective of meaning in life and spirituality. Future work could also consider other forms of self-transcendence, such as motivational processes and the peak experience state. Second, because we used a cross-sectional design in this study, we were not able to establish causality. Further longitudinal or experimental studies could be conducted to test the causality of dispositional awe.

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