

The Prosocial Effects of Awe: The Role of the Small Self and the True Self

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Abstract

Awe is an emotional response to vast stimuli and to stimuli that cannot be accommodated by existing psychological structures. Extensive empirical evidence demonstrates that awe can facilitate various forms of prosocial behavior. Regarding the underlying psychological mechanisms, the small-self hypothesis posits that the vast stimuli eliciting awe experiences induce a sense of self-diminishment, shifting individuals' attention from themselves to others and thereby promoting prosocial behavior; the true-self hypothesis, conversely, suggests that awe facilitates the redirection of individuals' attention from mundane worldly concerns toward a greater spiritual existence, stimulating the pursuit of their authentic self and consequently promoting prosocial behavior. The small-self and true-self hypotheses can be integrated within the "Big Two" framework, wherein awe promotes the emergence of prosocial behavior through two parallel pathways along the agentic dimension (true self) and communal dimension (small self) of the self. Future research should more deeply investigate the psychological mechanisms underlying awe's prosocial effects and, based on these findings, develop intervention measures to promote prosocial behaviors such as donation, with the aim of providing psychological solutions for the effective implementation of the third distribution strategy.

Full Text

Awe's Prosocial Effect: The Role of the Small Self and the Authentic Self

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Abstract

Awe is an emotional response to vast stimuli that challenge existing psycholog-

ical structures and require accommodation. A substantial body of empirical evidence demonstrates that awe promotes various forms of prosocial behavior. Regarding the underlying psychological mechanisms, the small-self hypothesis proposes that the vast stimuli that evoke awe experiences induce feelings of self-diminishment, shifting individuals' attention from themselves to others and thereby facilitating prosocial behavior. The authentic-self hypothesis, conversely, suggests that awe helps redirect attention from mundane worldly concerns toward a larger spiritual presence, inspiring individuals to pursue their authentic selves and consequently promoting prosocial behavior. These two hypotheses can be integrated within the "Big Two" framework, wherein awe fosters prosocial behavior through two parallel pathways across the dimensions of agency (authentic self) and communion (small self). Future research should further investigate the psychological mechanisms of awe's prosocial effects and develop interventions to promote prosocial behaviors such as donations, thereby providing psychological strategies for the effective implementation of the third distribution initiative.

Keywords: awe, prosociality, small self, authentic self

Viewing landscapes from a mountaintop, gazing at a star-studded night sky, hearing a "mind-blowing" idea expressed—all these situations can evoke a distinctive emotion: awe. Interest in awe has remained constant across sociology, philosophy, and religion, where it is considered intimately connected to aesthetic responses, political change, and religious transformation (Burke, 1990; Keltner & Haidt, 2003; Weber, 1978). Yet within psychological research, awe received scant attention for a long time. Its emergence as a significant contemporary research topic owes primarily to the pioneering work of Keltner and Haidt (2003). Building upon the research of early pioneers such as Maslow (1964) and McDougall (1910), Keltner and Haidt (2003) first proposed a prototype model of awe, systematically conceptualizing it; they argued that awe can reorient people's lives, goals, and values; and suggested that awe-inspiring events represent one of the fastest and most powerful methods for personal growth and change. Recent research has revealed that awe produces profound social consequences. Awe can make people feel connected to others (Bai et al., 2017; Van Cappellen & Saroglou, 2012), identify with broader social categories such as "humanity" or "citizens of Earth" (Shiota et al., 2007; Van Cappellen & Saroglou, 2012), and generate prosocial behavior (Piff et al., 2015; Prade & Saroglou, 2016; Stellar et al., 2017). Why does an emotion typically triggered by non-social stimuli lead to prosocial outcomes? Based on the small-self and authentic-self hypotheses, this paper provides an in-depth answer to this question by systematically examining the role of different aspects of the self in awe's prosocial effects. In practical terms, exploring this question can help advance the implementation of the third distribution strategy. The third distribution refers to the reallocation of resources through non-coercive means such as personal income transfers, voluntary contributions, and donations under the influence of moral forces (Li Yining, 1993). As a typical prosocial behavior, charitable donation is considered the foundation and primary vehicle of the third distribution (Deng Guosheng,

2021). Developing effective intervention strategies based on a clear understanding of the underlying mechanisms will hopefully provide scientific psychological solutions for advancing the third distribution strategy centered on charitable giving.

1. Awe

Awe is an emotional response to stimuli that are vast (e.g., towering trees, sunsets) and that cannot be accommodated by existing psychological structures (Perlin & Li, 2020). It is an emotion with fuzzy boundaries but core characteristics: perceived vastness and a need for accommodation (Keltner & Haidt, 2003). Perceived vastness refers to the perception that a stimulus is perceptually and/or conceptually enormous. For example, both viewing the Grand Canyon and comprehending the theory of relativity can serve as potential elicitors of awe. More critically, such stimuli vastly expand the observer's usual frame of reference in certain dimensions or domains, creating a need for accommodation. The need for accommodation, derived from Piaget's cognitive theory, refers to the necessity of altering existing cognitive schemas in response to stimuli that do not fit current mental frameworks. For instance, understanding Einstein's theory of relativity requires people to change their preconceived notions of time and space. In short, awe arises from a feeling triggered by stimuli that are far larger than the self or the self's existing cognitive reference frames—that is, vastness—which requires new mental representations to comprehend, namely accommodation (Zhao Xiaohong et al., 2021; Keltner & Haidt, 2003; Monroy & Keltner, 2022; Weger & Wagemann, 2021).

These core features determine whether an emotion can be classified within the awe family; all emotional experiences involving these two characteristics can be considered members of the awe family (Keltner & Haidt, 2003). Additionally, Keltner and Haidt (2003) identified five peripheral features that explain variations among different awe states. These features, typically associated with awe elicitors, can modulate awe experiences and give rise to different types of awe, resulting in the diversity of this experience, including beauty-based awe, ability-based awe, virtue-based awe, supernatural awe, and threat-based awe (Zhou Lingxiao et al., 2022; Chirico & Yaden, 2018; Keltner & Haidt, 2003). Specifically, beauty-based awe refers to awe experiences evoked when viewing aesthetically pleasing objects, which carry a flavor of aesthetic pleasure, such as experiences when viewing the Terracotta Army or the pyramids (Schindler et al., 2017). Ability-based awe refers to awe experiences accompanied by admiration when individuals encounter people with exceptional abilities, talents, and skills, such as watching an outstanding athlete compete (Onu et al., 2016). Virtue-based awe refers to awe experiences with an uplifting feeling when individuals encounter people demonstrating virtue or character strength (Haidt, 2003), such as the experience many Chinese people have when reading about Yuan Longping's life. Supernatural awe refers to awe experiences with religious or spiritual components, often occurring when individuals perceive God

or other supernatural entities and accompanied by a sense of incredulity (Bussing, 2021). Threat-based awe refers to awe with a sense of fear when individuals face threats and dangers, such as experiences when confronting threatening natural phenomena like storms (Gordon et al., 2017). All these different types of awe experiences emerge only after the core features of awe (vastness and need for accommodation) are established.

2. Awe's Prosocial Effects

Although awe is often triggered by non-social stimuli, it has profound social consequences. Typical awe is classified as a positive emotion because it is most frequently experienced as having positive value (Dong Rui et al., 2013; Shiota et al., 2007). As a positive emotion, awe benefits various domains of social life. Awe can diminish self-consciousness (Piff et al., 2015), make people feel closely connected to others or collectives (Bai et al., 2017), and enhance meaning in life (Dai et al., 2022), well-being (Sturm et al., 2022), and humility (Stellar et al., 2018). Moreover, individuals who have experienced awe show higher cooperativeness (Joye & Bolderdijk, 2015), lower aggression (Yang et al., 2016), reduced desire for money (Jiang et al., 2018), and less moral risk-taking (Li Ming et al., 2019). Most importantly, awe appears to broadly promote individual prosociality. Across multiple correlational studies, researchers have found that dispositional awe positively correlates with scores on prosocial tendency measures (Fu et al., 2022; Jiao & Luo, 2022; Li et al., 2019; Lin et al., 2020).

Awe's prosocial effects have been supported by experimental evidence in both helping-based and sharing-based prosocial behaviors. Researchers typically consider helping-based and sharing-based prosocial behaviors as reflecting responses to instrumental needs and unmet material desires, respectively (Dunfield, 2014). Numerous experimental studies support awe's facilitative effect on helping behavior (Guan et al., 2019; Piff et al., 2015; Rudd et al., 2012). For example, in a naturalistic setting, Piff et al. (2015) induced awe by immersing participants in a grove of towering eucalyptus trees and compared this condition to one in which participants gazed at tall buildings. Their findings showed that participants in the awe condition offered more help to the experimenter, as evidenced by picking up more pencils that the experimenter pretended to accidentally drop. Additionally, awe also promoted people's willingness to spend more time helping others (Guan et al., 2019) or charitable organizations (Rudd et al., 2012). A study conducted in an organizational context similarly found that recalling awe experienced in the workplace, including awe toward organizational or colleagues' abilities, increased participants' intention to help researchers with another study for lower compensation, as well as subsequent actual helping behavior (Meng & Wang, 2022).

Regarding sharing behavior, most studies have yielded consistent conclusions (Guan et al., 2019; Luo et al., 2022; Piff et al., 2015). For example, in the context of the COVID-19 pandemic, Luo et al. (2022) guided participants to recall and immerse themselves in a moment during the pandemic that made

them feel awe. The results showed that participants in the experimental group who recalled awe-inspiring moments—such as medical workers fighting persistently in difficult environments despite risking their own health—demonstrated stronger willingness to donate supplies and donated more money compared to entertainment and neutral groups. This finding supports the facilitative effect of virtue-based awe on sharing behavior. However, a few studies have obtained inconsistent conclusions (Joye & Bolderdijk, 2015; Rudd et al., 2012). For instance, Joye and Bolderdijk (2015) found that awe induced by natural landscapes strengthened prosocial values but did not increase people’s willingness to share money or goods with disaster victims. However, they argued that this result was likely confounded by extraneous variables and did not reflect the true effect. Furthermore, some researchers contend that explicit prosocial measures in the aforementioned studies may exaggerate the benevolent tendencies people display after awe induction. Therefore, they adopted an implicit method to measure prosocial tendencies and found that awe induction increased spontaneous generosity and prosocial intentions to help those in need, with these helping scenarios hidden in contexts seemingly unrelated to prosocial behavior to conceal the true experimental purpose (Prade & Saroglou, 2016). In summary, these findings provide robust evidence for the prosocial effects of different types of awe, including awe toward natural beauty and others’ virtue and ability. These forms of awe do not involve feelings of threat, fear, or apprehension and are considered by researchers to have a positive emotional tone (Gordon et al., 2017; Keltner & Haidt, 2003), supporting the facilitative effect of positive awe on prosocial behavior.

In summary, most previous research has considered awe a positive emotional state (Cao et al., 2020; Piff et al., 2015). However, some recent studies have focused on awe’s negative aspect—threat-based awe. This is a fear-tinged awe typically evoked by destructive natural disasters (e.g., tsunamis and tornadoes) or authoritarian dictators (Gordon et al., 2017). Can threat-based awe increase prosociality? Some researchers believe threat-based awe can also promote prosociality (Guan et al., 2019; Piff et al., 2015; Seo et al., 2022; Wang et al., 2022). For example, Piff et al. (2015) examined the effect of negative and unnatural awe experiences on prosocial tendencies. During the study, they used threatening natural stimuli (tornadoes, volcanoes) and unnatural stimuli (collisions of colored water droplets with a bowl of milk) to induce awe. The results indicated that both negative and unnatural awe significantly increased participants’ prosocial tendencies. Subsequent researchers compared negative and positive forms of awe. Participants watched videos inducing positive awe (natural panoramas), negative awe (natural disasters), or neutral control videos. The negative awe-inducing videos, taken from BBC’s *Planet Earth*, consisted of footage filmed during natural disasters such as volcanoes, tornadoes, and tsunamis (Gordon et al., 2017; Jiang et al., 2018; Piff et al., 2015). Emotional assessments confirmed that positive and negative videos successfully evoked different types of awe, with participants in the negative awe condition experiencing stronger feelings of threat. They then completed prosocial tendency measures. The results

showed that participants in both positive and negative awe conditions tended to donate more money to an unemployed stranger than those in the neutral condition, with no significant difference between the two awe conditions (Guan et al., 2019). These studies provide direct empirical evidence for the prosocial effect of threat-based awe.

Other researchers, however, argue that threat-based awe is associated with fear, lower self-control, and higher situational control, leading to reduced prosociality (Gordon et al., 2017; Septianto, Nasution, et al., 2022; Septianto, Seo, et al., 2022). For example, Septianto, Nasution, et al. (2022) manipulated threat-based awe in charitable advertisements by including (or not including) flood images to elicit high (or low) levels of threat-based awe, and manipulated construal level by emphasizing “why” or “how” information in the advertisements. Although the main effect of threat-based awe was not significant, under low construal level conditions, the researchers found that participants who experienced high-level threat-based awe made fewer charitable donations. In summary, threat-based awe produces two opposing effects on prosocial behavior, likely mediated by different psychological mechanisms.

3. Psychological Mechanisms of Awe’s Influence on Prosocial Behavior

According to the social functional approach to emotion, emotions influence self-related cognition, enabling individuals to adapt to changing social environments (Bai et al., 2017). Research shows that transient emotional states can systematically affect self-concept (Oveis et al., 2010; Tracy et al., 2014). In other words, emotions can facilitate solutions to various social problems in human group living by affecting the self as a core mediator (Bai et al., 2017). Does awe’s prosocial effect operate through this core mechanism of the self? Researchers have answered affirmatively (Jiang & Sedikides, 2022; Piff et al., 2015; Shiota et al., 2007; Stellar, 2021).

3.1 The Small-Self Hypothesis

By focusing attention on the vast stimuli that evoke awe experiences, awe promotes a feeling of “small self”—a sense of feeling small, diminished, and insignificant (Tyson et al., 2022). The small-self hypothesis proposes that this “small self” is the core mechanism through which awe experiences promote prosocial responses (Bai et al., 2017; Piff et al., 2015). According to this view, awe promotes prosociality by reducing self-directed attention, which in turn makes more attention available for other-directed attention (Perlin & Li, 2020). Although different researchers have operationalized the small-self concept differently (i.e., vastness relative to self, self-diminishment, and perceived self-size), the mediating role of the small self has received substantial empirical support. For example, research has found that viewing breathtaking landscape images or videos, standing in nature gazing at towering trees, and taking daily awe walks all help

generate feelings of self-smallness and promote prosociality (Bai et al., 2017; Piff et al., 2015; Sturm et al., 2022). Specifically, Piff et al. (2015) used video methods to induce awe, randomly assigning participants to awe, amusement, or neutral conditions. In the awe condition, participants were presented with nature clips from the BBC Earth series composed of scenic vistas, mountains, plains, forests, and grand canyons. They then completed measures of small self, such as “I feel small or insignificant” or “I feel there is something greater than myself,” reflecting vastness relative to self (perception of something greater than oneself) and consequent self-diminishment (one’s existence and goals are relatively insignificant). Finally, prosocial levels were assessed using the Dictator Game. The results showed that participants who watched awe videos behaved more generously than those in amusement and neutral conditions. More importantly, mediation analyses indicated that this effect was mediated by the small self. Subsequent research further adopted non-verbal methods to measure the small-self construct, termed perceived self-size, finding that participants who experienced awe used smaller circles, drew smaller figures, or signed smaller “I’s” to represent themselves, thereby promoting positive social effects. These findings, originating in individualistic cultures, also apply to collectivistic cultures (Bai et al., 2017). In summary, as studies like these (Bai et al., 2017; Piff et al., 2015) demonstrate, the small self is a feeling of self-smallness, diminishment, and insignificance caused by perceiving stimuli more vast than the self (Tyson et al., 2022). Empirical evidence has preliminarily confirmed that feelings of small self mediate awe’s prosocial effects.

However, as research has progressed, scholars have found that the explanatory power of the “small self” is insufficient for certain questions. One issue is that awe has transformative capacity—it marks a critical moment in one’s life, initiating a process of change (Chirico & Yaden, 2018; Keltner & Haidt, 2003; Maslow, 1962; Stellar et al., 2017). Keltner and Haidt (2003) noted that awe can transform people, reorient their goals and values, and that awe-inspiring events may be among the fastest and most powerful methods for personal growth and change. Other qualitative and theoretical work supports this view, suggesting that awe provides individuals opportunities to reflect on their lives and reevaluate their self-worth (Bonner & Friedman, 2011). In short, awe experiences may prompt people to openly explore the external world and contemplate deeper questions (Danvers & Shiota, 2017; Nelson-Coffey et al., 2019)—in essence, growth. But how do these growth and change processes actually unfold, and how might they affect awe’s prosocial effects? These questions cannot be explained by the small-self mechanism’s emphasis on attentional shift (Perlin & Li, 2020). In other words, if the self feels diminished and insignificant, what drives individuals to reflect and initiate change? The mediating role of the small self cannot provide a satisfactory answer. More broadly, the small self’s effect has been criticized in three aspects (Perlin & Li, 2020). First, self-directed and other-directed attention are not mutually exclusive. Shifting attention away from oneself does not require focusing on others, and vice versa. Second, attending to others does not necessarily increase motivation to benefit them. Third,

similar to the above arguments, the small self cannot explain awe's transformative capacity. If it could, as Tyson et al. (2022) concluded, the small self would reflect "psychological expansion of the self, rather than diminishment."

3.2 The Authentic-Self Hypothesis

Addressing the limitations of the "small self," researchers have proposed the authentic-self hypothesis, arguing that the authentic self triggered by awe may be key to achieving self-transformation, personal growth, and psychological maturity (Jiang & Sedikides, 2022). The authentic self is defined as an individual's perception of alignment with their true or genuine self—that is, the feeling that one's self is authentic or unadorned (Sedikides et al., 2019). This hypothesis posits that awe inspires individuals to pursue their authentic selves, which reminds them that their core values are being upheld and motivates them to act accordingly, such as by attending to others' interests (Schmader & Sedikides, 2018; Sedikides et al., 2019). Specifically, awe experiences facilitate self-transcendence, shifting individuals' attention from everyday trivialities toward a larger spiritual presence (Chirico & Yaden, 2018; Jiang et al., 2018; Yaden et al., 2017). This provides an opportunity for self-distancing or role-distancing, allowing individuals to maintain psychological distance from themselves and creating space for reflection, ultimately promoting the pursuit of the authentic self (Emmerich & Rigotti, 2017; Kross & Ayduk, 2017). The pursuit of the authentic self may manifest growth through processes of self-reflection and self-exploration. Some researchers speculate that awe motivates the search for meaning in life, which includes the search for the authentic self (Danvers et al., 2016). Perlin and Li (2020) argue that this search for meaning and authentic self actually reflects a process of deep self-exploration and change, further contending that when people engage in self-reflection and exploration, attention is directed toward deeper, more core aspects of the self—that is, exploration of what individuals find valuable and important. Therefore, the authentic-self pursuit triggered by awe may compel us to re-explore and re-evaluate our deepest personal goals and core values, making us realize "what matters most" in life, thereby achieving self-growth and transformation. By emphasizing personal core values and motivating corresponding actions (Erickson, 1995; Schmader & Sedikides, 2018; Sedikides et al., 2019), the pursuit of the authentic self subsequently influences two types of prosocial behavior: on one hand, it promotes general prosociality—behaviors aimed at benefiting others or the collective—because these are believed to be broadly connected to people's authentic selves and core values. Indeed, authenticity has been found to positively correlate with concern for others' welfare (Koltko-Rivera, 2006; Lenton et al., 2013). On the other hand, it hinders inauthentic prosociality—behaviors that benefit others or the collective but violate the authentic self, such as writing a letter of recommendation that contradicts one's genuine opinion of a candidate (Schmader & Sedikides, 2018; Sedikides et al., 2019). This is because reminding individuals of their authentic selves makes them unwilling to act in ways that conflict with it.

The basic tenets of the authentic-self hypothesis have received preliminary empirical support. In correlational studies, Jiang and Sedikides (2022, Study 14) examined the role of the authentic self between awe and two types of prosocial behavior, finding that the mediating effect of authentic-self pursuit was significant for both prosocial behaviors. Awe-induced authentic-self pursuit led to increased general prosociality and decreased inauthentic prosociality. These findings were further verified in laboratory settings, where researchers used recall tasks to manipulate awe and found that authentic-self pursuit mediated awe's effect on general prosociality (Jiang & Sedikides, 2022, Study 11). Moreover, authentic-self pursuit triggered by awe manipulations could also reduce inauthentic prosociality. In follow-up studies, researchers continued using the same method to manipulate awe and measure authentic-self pursuit. They also measured inauthentic prosociality by presenting participants with a dilemma story and asking them to vividly imagine themselves as the protagonist. In the story, Chen's supervisor asks him for materials on other candidates for a regional manager promotion evaluation. Here, the helping behavior violates Chen's deeply valued principle of fairness, but refusing to help would harm his career development in the company. Participants' helping intentions were then measured to obtain an index of inauthentic prosociality. The results showed that awe-induced authentic-self pursuit reduced inauthentic prosociality (Jiang & Sedikides, 2022, Study 12).

3.3 Integration of Small Self and Authentic Self Under the “Big Two” Framework

The small-self and authentic-self hypotheses provide different answers regarding the psychological mechanisms through which awe promotes prosocial behavior, from the perspectives of attention and growth respectively. So what is the relationship between the two in the process of awe promoting prosociality? Current research hypotheses can be refined and integrated within the “Big Two” framework, which suggests that awe promotes prosocial behavior through the parallel mediation of small self and authentic self across different dimensions of the self.

The “Big Two”—agency and communion—can help integrate the roles of small self and authentic self in awe's prosocial effects. Agency refers to individuals pursuing independence through power and control, while communion refers to individuals integrating into society and groups through care and communication (Abele et al., 2016). From an evolutionary perspective, agency and communion capture two core challenges in human life: pursuing personal goals and belonging to social groups (Azoulay et al., 2022; Hogan, 1982). The agency and communion dimensions have proven effective for analyzing personality, social cognition, values, and motivation (Abele & Wojciszke, 2014; Fiske et al., 2007; Paulhus & John, 1998). Importantly, as fundamental patterns of human behavior, agency and communion have been shown to map onto the self. Content analyses of self-descriptions have found they can be reliably categorized into these two dimensions (Abele & Bruckmüller, 2013; Diehl et al., 2004; Uchrowski, 2008).

This indicates that agency and communion are fundamental dimensions of the self and can be consciously used in individuals' self-representations (Diehl et al., 2004). Theoretical and empirical research suggests that the small self belongs to the communion dimension, reflecting the resolution in the self of the first challenge humans face (belonging to social groups), while the authentic self, as an autonomous, self-determined self, belongs to the agency dimension, reflecting the resolution in the self of the second challenge (pursuing personal goals) (Diehl et al., 2004; Stell, 2018).

The small self is typically represented as an affiliative, compliant self belonging to the communion dimension of self-concept (Diehl et al., 2004; Stell, 2018). Theoretically, the small self originates from an adaptive and functional orientation toward awe (Bai et al., 2017; Keltner & Haidt, 2003). This orientation suggests that awe may have initially emerged as a deferential response to powerful, high-status others before gradually expanding to other vast stimuli (Keltner & Haidt, 2003). This response involves a tendency to subordinate one's own interests and goals to powerful leaders, which is adaptively significant because it constructs a collective hierarchy through non-violent means, important for human survival (Fiske, 1991; Keltner & Haidt, 1999). Small-self research identifies the core of these theoretical features as the small-self feeling induced by awe (Bai et al., 2017). In awe experiences, contact with vast stimuli is accompanied by a perception of self-diminishment in comparison, making experiencers feel they possess a "small self" and promoting orientation toward others and integration into collectives (Stellar et al., 2017). According to its theoretical formulation, this self-representation is considered an affiliative, compliant self and thus belongs to the communion dimension of self-concept. Additional evidence also supports that the small self can be classified as awe's effect on the communion dimension of self (Bai et al., 2017; Diehl et al., 2004; Perlin & Li, 2020). For instance, Diehl et al. (2004) compiled a vocabulary list for coding self-characteristics based on previous scales measuring agency and communion dimensions, in which adjectives reflecting the small self such as "submissive" and "humble" were identified as typical representatives of the communion dimension. Thus, the small self is a communal self-representation.

The authentic self is typically considered unique and self-determined, thus belonging to the agency dimension of self (Maslow, 1962). Theoretically, the authentic-self hypothesis was proposed to address a question that the small-self hypothesis struggles to explain: awe's transformative capacity (Jiang & Sedikides, 2022). The authentic-self hypothesis contends that by motivating the authentic self, awe can influence people's key goals and values, thereby promoting self-growth and change (Danvers & Shiota, 2017; Nelson-Coffey et al., 2019). Growth and change are considered important aspects of the agency dimension (Bakan, 1966). Moreover, when individuals become their true selves and feel they are creative centers of activity and perception, they have greater self-determination, more agency, and more "free will" than at other times (Maslow, 1962). This perspective emphasizes the uniqueness and self-determination of the authentic self triggered by awe, indicating that the authentic self should be

classified as an agentic self-representation. Empirical research has found that dispositional awe positively correlates with agency and negatively correlates with conformity tendencies (Stell, 2018). Compliance with external pressure is often considered contrary to authenticity (Jongman-Sereno & Leary, 2019). Thus, the authentic self is an agentic self-representation.

Agency and communion belong to two different dimensions of the self, developing in an interactive, mutually balanced, and mutually reinforcing manner; individuals who integrate agency and communion in a balanced way often exhibit profound prosocial motivation (Frimer et al., 2011; Mansfield & McAdams, 1996). This suggests that positive awe promotes prosociality simultaneously through two parallel pathways across the two fundamental dimensions of self: in the communion dimension, awe promotes the small self, leading to prosocial behavior; in the agency dimension, awe promotes the authentic self, leading to prosocial behavior. Preliminary empirical evidence indirectly supports this view, finding that the small self cannot mediate awe's effect on authentic-self pursuit (Jiang & Sedikides, 2022). This result indicates that the small self cannot explain the authentic self's role, which is substantiated well beyond the small self's effects. This empirically verifies that the authentic-self hypothesis indeed points to another pathway from awe to prosociality—the agentic path. The agentic path helps explain awe's different effects on general and inauthentic prosociality, particularly regarding inauthentic prosociality. Specifically, awe's inhibiting effect on inauthentic prosociality suggests that if a behavior violates one's authentic self and core values, individuals will not choose to perform it despite its benefits to others or the collective. This reflects that prosocial behavior motivated by the authentic self is autonomous and self-determined rather than controlled (Van den Bosch & Taris, 2018). Therefore, awe's prosocial effects cannot be based solely on self-smallness and attentional shift toward others; rather, through evoking the authentic self, these prosocial effects may simultaneously be based on a deepened understanding of one's true self and core motivations (Perlin & Li, 2020). This also demonstrates that the authentic self connects awe to prosocial behavior through an agentic pathway. Consequently, positive awe promotes prosocial behavior through two parallel pathways: via the agency dimension (mediated by the authentic self) and the communion dimension (mediated by the small self).

Why does threat-based awe produce two diametrically opposed effects on prosociality? The “Big Two” framework also helps understand the underlying mechanism. Similar to positive awe, in the communion dimension, negative awe promotes prosocial behavior through the small self (Piff et al., 2015). Specifically, threat-based awe is also triggered by a stimulus appraised as vast (Shiota et al., 2007) and is believed to promote small-self feelings and increase attention to others (Piff et al., 2015), leading to higher prosociality. However, unlike positive awe, in the agency dimension, threat-based awe leads to increased feelings of powerlessness or reduced efficacy (the opposite of agency), thereby decreasing prosocial behavior (Septianto, Nasution, et al., 2022; Septianto, Seo, et al., 2022). Specifically, when attempting to accommodate a vast, threatening stim-

ulus, threat-based awe is accompanied by fear (Chaudhury et al., 2022; Gordon et al., 2017). Fear is associated with lower sense of control (Keltner et al., 2003), which leads to heightened feelings of powerlessness (Gordon et al., 2017) and reduces individuals' perception of their actions' efficacy (Briñol et al., 2007). If people feel they lack sufficient efficacy to change the situation (i.e., they do not believe their actions can effectively promote help), they may not pursue prosocial behavior (Jin & He, 2018; Septianto, Nasution, et al., 2022; Septianto, Seo, et al., 2022). Therefore, high-level threat-based awe induces feelings of powerlessness, which in turn reduce prosocial behavior.

In the agency dimension, negative awe functions differently from positive awe because this negative awe experience is characterized primarily by threat, leading to reduced control and certainty, increased feelings of fear and anxiety, and sympathetic nervous system arousal (Gordon et al., 2017). In threatening contexts, awe's impact on the self is more negative and fear-based; reduced self-control and certainty ultimately trigger individuals' feelings of powerlessness (Gordon et al., 2017)—that is, reduced agency orientation (Briñol et al., 2007). Consequently, unlike the consistent findings in positive awe research, threat-based awe produces different effects on prosocial behavior: on one hand, by promoting small-self feelings in the communion dimension, people desire to act prosocially; on the other hand, due to the presence of threat, actors simultaneously experience powerlessness in agency orientation, feeling they lack sufficient efficacy to make changes, which inhibits prosocial behavior (Septianto, Nasution, et al., 2022; Septianto, Seo, et al., 2022). Given this contradiction, negative awe's prosocial effects may depend on individuals' experience of and coping with threat. For example, individuals with incremental theories view threats and challenges as opportunities for growth; in response to threats and challenges, they demonstrate more positive judgments of their action efficacy when completing specific tasks (Martocchio, 1994). Therefore, when encountering stimuli that elicit threat-based awe, actors with incremental theories (versus entity theories) are more likely to expect higher efficacy from their prosocial behavior, which increases their prosocial behavior when experiencing threat-based awe (Septianto, Seo, et al., 2022).

4. Summary and Outlook

Awe is a complex, self-related emotion. A large body of empirical evidence shows that positive awe can promote various forms of prosocial behavior. Regarding the psychological mechanisms involved, the small-self hypothesis posits that the vast stimuli that evoke awe experiences lead to feelings of self-smallness, shifting individuals' attention from themselves to others and thereby promoting prosocial behavior. The authentic-self hypothesis, conversely, suggests that awe inspires individuals to pursue their authentic selves, which reminds them that their core values are being upheld and motivates them to act in ways that attend to others' interests. These two hypotheses can be integrated within the “Big Two” framework, which suggests that awe promotes prosocial behavior

through two parallel pathways across the agency dimension (authentic self) and communion dimension (small self).

Research in this field helps illuminate the core role of emotion in human sociality and has heuristic significance for developing effective interventions to promote prosocial behaviors such as donations, offering valuable insights for implementing the third distribution strategy. However, research in this area still has limitations that require further investigation.

First, future research needs to further examine the generalizability of awe's effects on prosocial behavior. Although most studies have confirmed positive awe's facilitative effect on prosociality, preliminary evidence shows that awe's prosocial effects are reliably found in both explicit and implicit prosocial measures (Lin et al., 2020; Prade & Saroglou, 2016). However, some studies have obtained inconsistent findings (Joye & Bolderdijk, 2015; Luo et al., 2022; Meng & Wang, 2022). For example, Joye and Bolderdijk (2015) found that awe did not increase people's willingness to help disaster victims, donate money, goods, or blood. Although researchers argue this was likely due to interference from special measurement methods used in the experiment, what other factors might influence awe's prosocial effects requires further examination. Notably, as research has deepened, awe's prosocial research has expanded from traditional positive awe to fear-tinged threat-based awe. Currently, there are two distinct findings regarding the relationship between threat-based awe and prosocial behavior: some argue that, like positive awe, threat-based awe can also increase prosocial behavior, while others find it leads to less prosocial behavior. Preliminary evidence suggests that factors such as implicit theories play a moderating role (Septianto, Seo, et al., 2022). Future research should more deeply explore its boundary conditions to harness the facilitative effect of threat-based awe on prosocial behavior.

Second, the roles of small self and authentic self between awe and prosocial behavior require further theoretical and empirical enrichment. Small-self research emphasizes that awe reduces self-directed attention, thereby increasing other-directed attention, which pits self-directed and other-directed attention against each other (Perlin & Li, 2020). However, humans evolved in cooperative, interdependent environments where attending to self and others are inseparable and closely intertwined (Over, 2016). Human concerns include not only "me-focus" (selfish concern for one's own welfare) and "you-focus" (prosocial concern for others) but also "we-focus"—concern for the interdependent collective that encompasses our interests (Tomasello, 2016, 2019). Therefore, awe may promote prosocial behavior by shifting "me-focus" to "we-focus." Whether this view holds requires future theoretical and empirical investigation. Regarding authentic-self research, it is important to note that the authentic self often contains many contradictory components—both good, socially desirable parts and bad, socially undesirable parts (Jongman-Sereno & Leary, 2019). So how does awe promote prosocial behavior through the authentic self? Understanding the authentic self from a motivational transformation perspective may help

answer this question. Awe may trigger a series of motivational shifts; research has found that awe promotes attention to higher-level motives in individuals' goal hierarchies and reduces attention to lower-level motives (Bai et al., 2021; Shiota et al., 2007; Van Cappellen & Saroglou, 2012). Because people's socially ideal motives are often more important and prioritized in goal hierarchies than non-ideal motives, by promoting higher-level motives in the goal hierarchy, awe motivates pursuit of the good, socially desirable aspects of the authentic self, ultimately leading to prosocial behavior. This perspective refines the role of authentic self in awe's prosocial effects at the motivational level but requires further empirical investigation. More importantly, theory under the "Big Two" framework suggests that individuals who have achieved a balanced integration of agency and communion often exhibit profound prosocial motivation. The view that awe promotes prosocial behavior through parallel mediation of small self and authentic self across the communion and agency dimensions of self needs thorough empirical testing.

Third, this field of research holds heuristic significance for developing more effective interventions to promote prosocial behaviors like donations. Scholars have already developed an intervention called "awe walks" (Sturm et al., 2022). This eight-week intervention involves 15-minute outdoor walks each week, guiding participants to actively discover feelings of wonder during their walks and encouraging them to change locations weekly to cultivate awe. Research shows that "awe walks" facilitate small-self experiences and promote more prosocial positive emotions. Importantly, beyond producing momentary emotional changes during the walks, this intervention's effects even extend beyond the intervention context, encouraging prosocial emotions such as empathy in daily life. This finding has important practical significance for shaping prosocial behavior in everyday life. Additionally, virtual reality technology (Chirico & Gaggioli, 2019) has proven effective for promoting awe. This technology can generate a sense of presence in virtual environments, which can increase awe intensity and thereby promote prosocial behavior. Other evidence suggests that mindfulness training or daily journaling may be effective interventions. For example, Waller et al. (2021) found that practicing mindful breathing can increase feelings of awe. Daily journaling may also be a simple and effective intervention, potentially increasing awe by introducing participants to the definition of awe and guiding them to complete daily awe journals describing their awe experiences (Bai et al., 2017). Beyond intervening on awe itself, developing self-transformation-centered intervention strategies targeting the core mechanism through which awe triggers small-self and authentic-self changes to promote prosociality should be an important direction for future research. The psychological mechanism of authentic self suggests that for prosocial behavior to be most effectively implemented, it needs to align with one's authentic self (Schmader & Sedikides, 2018). Therefore, charitable organizations may need to analyze potential donors' authentic-self pursuits and tailor their charitable activities accordingly, making them intersect with or partially satisfy these pursuits (Jiang & Sedikides, 2022). Furthermore, natural disasters are important triggers of threat-based awe, gen-

erating enormous needs for assistance. An effective intervention is to customize high-construal-level charitable advertisements. Research has found that when participants are presented with advertisements emphasizing “why,” those experiencing threat-based awe report higher donation intentions (Septianto, Nasution, et al., 2022). In summary, developing interventions in this field will help fully utilize awe’s positive effects on prosocial behaviors such as donations, thereby providing scientific psychological strategies for advancing the third distribution strategy centered on charitable giving.

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