

Approaching awe, a moral, spiritual, and aesthetic emotion

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In this paper we present a prototype approach to awe. We suggest that two appraisals are central and are present in all clear cases of awe: perceived vastness, and a need for accommodation, defined as an inability to assimilate an experience into current mental structures. Five additional appraisals account for variation in the hedonic tone of awe experiences: threat, beauty, exceptional ability, virtue, and the supernatural. We derive this perspective from a review of what has been written about awe in religion, philosophy, sociology, and psychology, and then we apply this perspective to an analysis of awe and related states such as admiration, elevation, and the epiphanic experience.

In the upper reaches of pleasure and on the boundary of fear is a little studied emotion—awe. Awe is felt about diverse events and objects, from waterfalls to childbirth to scenes of devastation. Awe is central to the experience of religion, politics, nature, and art. Fleeting and rare, experiences of awe can change the course of a life in profound and permanent ways. Yet the field of emotion research is almost silent with respect to awe. Few emotion theorists consider awe in their taxonomies and those who do have done little to differentiate it from other states.

In this paper we offer a conceptual approach to awe. To do so we first review what has been written about awe outside of psychology, which turns out to be significant and illuminating. This literature review identifies two themes that are central to awe—that the stimulus is vast and that it requires accommodation—as

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well as five other themes that account for variation in awe-related states. Drawing upon this review, we propose a prototype-based approach that explicates how varieties of awe are felt towards powerful individuals, nature, and art, and how awe differs from admiration, elevation, and epiphanic experience.

EARLY TREATMENTS OF AWE

Awe in Religion

Awe figures prominently in religious discussions of the relationship between humans and their gods. One of the earliest and most powerful examples of awe is found in the dramatic climax of the *Bhagavadgita*, which is an episode in the Hindu epic the *Mahabarata*, about a struggle between two branches of a royal family for control of a kingdom. As the hero of the story, Arjuna, is about to lead his forces into a cataclysmic battle, he loses his nerve and refuses to fight. The *Bhagavadgita* is the story of how Krishna (a form of the god Vishnu) persuades Arjuna that he must dutifully lead his troops, even though many of his kinsmen will die. Krishna lectures to Arjuna about duty and the workings of the universe. Arjuna is unmoved. Arjuna asks Krishna if he can see this universe for himself, and Krishna grants him his wish. Krishna gives Arjuna a “cosmic eye” that allows him to see God and the universe as they really are.

Arjuna then experiences something that sounds to a modern reader like a psychotic break or psychedelic experience. He sees gods, suns, and infinite time and space. He is filled with amazement (*vismitas*). His hair stands on end. Disoriented, he struggles to describe the wonders he is beholding. Arjuna is clearly in a state of awe when he says “Things never seen before have I seen, and ecstatic is my joy; yet fear-and-trembling perturb by mind” (II.45). He prostrates himself before Krishna, begs for forbearance, and hears Krishna’s command: “Do works for Me, make Me your highest goal, be loyal-in-love to Me, cut off all [other] attachments . . .” (II.55). For the rest of the *Bhagavadgita* Arjuna wholeheartedly honours Krishna’s commands.

A similar case of awe-inspired transformation can be found in the well-known story of Paul’s conversion on the road to Damascus. Paul (as Saul) had been a rabid persecutor of early Christians (as heretic Jews). One day while journeying to Damascus to identify and persecute more Christians, Paul experiences the following:

suddenly a light from heaven flashed about him. And he fell to the ground and heard a voice saying to him, “Saul, Saul, why do you persecute me?” And he said, “Who are you, Lord?” And he said, “I am Jesus, whom you are persecuting; but rise and enter the city, and you will be told what you are to do.” The men who were traveling with him stood speechless, hearing the voice but seeing no one (Acts 9.3–7).

Saul is blinded by the brightness of the light for three days. When he regains his sight he becomes the most devoted and prolific disciple of Jesus.

In both of these narratives, the individual experiences contact with a higher power. This contact triggers an overpowering and novel sensory experience that causes confusion and amazement. When the confusion lifts, the person is transformed and embraces new values, commands, and missions.

Awe in sociology

Sociological treatments locate awe within power dynamics and the maintenance of the social order. Max Weber offered one of the most nuanced and insightful treatments of awe in his analysis of charisma and charismatic leaders. Weber noted that, throughout history, social groups tend to settle into patriarchal or bureaucratic modes of organisation, which are fairly stable. Bureaucratic movements can transform society through changes “from the outside”: first the material and social orders are changed, and in response, over time, people change too. But in times of crisis people sometimes overthrow these stable forms of power, transferring their allegiance to a charismatic leader who awes the masses by **performing miracles or acts of heroism**. Charismatic leaders bring about revolution “from the inside”, by changing people, who then go on to change society:

[Charisma] manifests its revolutionary power from within, *from a central metanoia [change] of the followers' attitudes*. The bureaucratic order merely replaces the belief in the sanctity of traditional norms by compliance with rationally determined rules and by the knowledge that these rules can be superseded by others . . . and hence are not sacred. But charisma, in its most potent forms, disrupts rational rule as well as tradition altogether and overturns all notions of sanctity. Instead of reverence for customs that are ancient and hence sacred, *it enforces the inner subjection to the unprecedented and absolutely unique and therefore divine*. In this purely empirical and value-free sense charisma is indeed the specifically creative revolutionary force of history. (Weber, 1978, p. 1117, emphasis added).

Weber's analysis illuminates how **one charismatic person** (Buddha, Jesus, Joan of Arc, Gandhi, Hitler, King, Mandela) **can stir the souls of thousands, inspiring awe and reprogramming them to take on heroic and self-sacrificing missions.**

Emile Durkheim likewise brought into focus the importance of powerful emotions in creating political, social, and religious movements. Durkheim (1887/1972) theorised about two kinds of social affects. **A first class, including love, fear, and respect, binds one individual to other individuals.** The objects of these emotions are individual concerns, such as an individual's safety, or position relative to others. **A second class of affects binds the individual to social entities, such as communities and nations.** Here, the object of the emotion is

Group Dynam
pro-social benef
awe

collective concerns. Within this second class of emotions, Durkheim considered feelings that closely resemble awe. Like Weber, Durkheim posited that certain collective emotions have transformative powers; they change people's attitudes and inspire them to follow something larger than themselves:

A man who experiences such sentiments feels that he is dominated by forces which he does not recognize as his own, and which he is not the master of, but is led by . . . Following the collectivity, the individual forgets himself for the common end and his conduct is directed by reference to a standard outside himself (p. 228).

Through religious rites and other processes, Durkheim observed, these collective sentiments shape religious thought and organisation.

Perhaps what is most novel about Durkheim's analysis, and most informative for our approach to awe, is his contention that the elicitors of these social sentiments have to do with collective interests. Collective sentiments are triggered by stimuli that are associated with collective values (e.g., statements of ideological principles at a political rally), goals (e.g., rooting for the same sports team), and outcomes (e.g., suffering together through a natural disaster). Even the many natural elicitors of awe-like states, such as thunder, Durkheim suggested, are awe-inspiring because they have the potential of influencing the well-being and outcomes of whole groups. The elicitors of awe are vast in their meaning and effect.

More recent sociologists have extended these ideas about awe and social order. **Awe can motivate alienated individuals to become impassioned members of fringe groups and cults.** Clark (1990) has theorised that emotions serve as "place markers" designating individuals' roles and positions within social hierarchies. In this framework, awe designates the subject's subordinate status *vis-à-vis* others.

Benefits of
Awe:
changes
role in group

Awe in philosophy

Compare and Contrast: Awe alone and awe with a group
Different effects? This could be an independent variable or separate condition for experiment.

One of the main puzzles of awe is that it is so easily felt in **nonsocial situations**, for example, while hiking in the mountains or experiencing art. This emotional response has long been an interest of philosophers studying aesthetics (for a review, see Beardsley, 1966).

The most systematic early treatment of an awe-like aesthetic emotion can be found in the Irish philosopher Edmund Burke's (1757/1990) treatise on the sublime. Burke defined the sublime as the feeling of expanded thought and greatness of mind that is produced by literature, poetry, painting, and viewing landscapes). Burke's treatment of the sublime advances our discussion of awe in two ways.

First, Burke theorised that two properties endow stimuli with the capacity to produce the sublime experience. The first is power. Burke writes: "In short,

wherever we find strength, and in what light soever we look upon power, we shall all along observe the sublime the concomitant of terror . . . (p. 61)'. Power, and in particular the power to destroy and control the perceiver's will, accounts for why certain entities are more evocative of the sublime experience than others (e.g., the bull as opposed to the ox). Power also accounts for differences between the sublime and another aesthetic pleasure, the experience of beauty: "There is a wide difference between admiration and love. The sublime, which is the cause of the former, always dwells on great objects, and terrible; the latter on small ones and pleasing; we submit to what we admire, but we love what submits to us" (p.103).

The other stimulus property that produces the sublime experience is obscurity. Objects that are clear, anticipated, and certain in their origin, form, and design, Burke reasoned, do not produce the sublime experience. Rather, objects that the mind has difficulty grasping are more likely to produce the sublime experience. Burke relied on this notion to develop several interesting ideas. Obscure images in painting are more likely to produce sublime feelings than are clearly rendered images. A despotic government keeps its leader obscure from the populace, to enhance the leader's power. And many of the stimulus features that produce the sublime experience, such as vastness, magnificence, succession, infinity, and certain properties of light, colour, and sound, do so because they suggest power while at times obscuring it as well.

Burke advances our discussion of awe in a second important way by directing attention to a number of states that are close relatives of sublime experience. These include milder feelings of beauty, admiration, astonishment, reverence, and respect. Considering these states in a discussion of the sublime raises questions about how they resemble awe, and how they differ—an issue to which we will return.

Awe in psychology

Psychology has had surprisingly little to say about awe. Even where one would expect extensive treatments of awe, it is absent. In the literature on aesthetics and emotion, researchers have primarily been concerned with how specific emotions, such as sadness or anger, are registered in different artistic media, and whether artistically conveyed emotions can be reliably judged by observers (e.g., Gabrielson & Juslin, 2001).

One reason psychologists have devoted so little attention to awe may be that it has not yet been shown to have a distinctive facial expression (i.e., distinct from surprise). In *The Expression of the Emotions in Man and Animals* (1872), Darwin analysed admiration, a close relative of awe. Darwin defined admiration as a mixture of surprise, pleasure, and approval, as well as astonishment. His characterisation of the expression of astonishment was derived from fascinating observations, including descriptions of manic patients, whose hair would stand

Implications
and practical
applications
of this
research

on end prior to manic episodes, and accounts of Australian aborigines' expressions upon seeing Europeans for the first time. The expression of astonishment includes raised eyebrows, bright eyes, gaping mouth, and in extreme cases, hair standing on end, or goosebumps.

Only two major psychologists have offered detailed accounts of awe: McDougall (1910) and Maslow (1964). McDougall focused on admiration, which he described as a binary compound of "wonder" and "power". Describing people's feelings towards an object of admiration he observed:

we approach it slowly, with a certain hesitation; we are humbled by its presence, and, in the case of a person whom we intensely admire, we become shy, like a child in the presence of an adult stranger; we have the impulse to shrink together, to be still, and to avoid attracting his attention; that is to say, the instinct of submission, of self-abasement, is excited, with its corresponding emotion of negative self-feeling, by the perception that we are in the presence of a superior power, something greater than ourselves.

Perhaps the meaning of "admiration" has changed in the last 100 years; McDougall's emphasis on submissiveness and negative self-feeling sounds more like awe than what current English speakers mean by "admiration". Our own approach to awe will make McDougall's two components (power and wonder) central. McDougall goes on to discuss awe as a trinary compound that adds fear to the two components of admiration (power and wonder). We will suggest below that McDougall's awe is one kind of awe, but that **some states of awe do not involve fear.**

Abraham Maslow is well known for his descriptions of "peak experiences", which clearly involve awe. Based on his interviews with hundreds of people, Maslow (1964) listed 25 features of peak experiences. These include: disorientation in space and time, ego transcendence and self-forgetfulness; a perception that the world is good, beautiful, and desirable; feeling passive, receptive, and humble; a sense that polarities and dichotomies have been transcended or resolved; and feelings of being lucky, fortunate, or graced. We will return to many of these themes in our analysis of awe, in particular the emphasis on the transformative effects of peak experiences.

More recent emotion theorists have offered general definitions of awe, but have done little research. Lazarus (1991) treated awe as an ambiguous negative state that varies in valence depending on context and appraisal. Ekman (1992) posited that awe may be a distinct emotion but said little about its elicitors, meanings, or expressive behaviours. Izard (1977) suggested that awe is an intense variant of interest, and that it motivates curiosity and exploration. Frijda (1986) discussed wonder rather than awe, which he linked to surprise and amazement, and interpreted as a passive, receptive mode of attention in the presence of something unexpected.

Across disciplines, theorists agree that awe involves being in the presence of something powerful, along with associated **feelings of submission**. Awe also involves a difficulty in comprehension, along with associated feelings of confusion, surprise, and wonder. We now propose a prototype approach to awe based on these two elements.

A PROTOTYPE OF AWE: PERCEIVED VASTNESS AND ACCOMMODATION

Our brief literature review highlights three requirements of a conceptual approach to awe. Such an approach must account for the range of objects and events that trigger awe, which include religious encounters, charismatic political leaders, natural objects, and even patterns of darkness and light. Such an approach must explain how the many awe-related states, including admiration, astonishment, and more mild feelings of beauty, relate to and differ from each other. Finally, an adequate account of awe must explain how awe can be both profoundly positive and terrifyingly negative.

To meet these requirements, we will approach awe from a prototype perspective (e.g., Fehr & Russell, 1984; Shaver, Schwartz, Kirson, & O'Connor, 1987). According to this view, a prototypical instance of an emotion has certain specifiable components, themes, or features. Variants of the prototype occur in which certain features are missing, or other features are added (e.g., Ortony & Turner, 1991; see also Lakoff, 1987, on radial categories). Some variants may be so similar to the prototype that they still share the same name (e.g., embarrassment after a *faux pas*, and embarrassment at being the centre of attention). Other variants are different enough that they warrant a different name (e.g., embarrassment vs. shame as members of the “self-conscious emotion” family). However it is important to note that linguistic markers do not necessarily trace out the most important psychological boundaries. Languages differ greatly in how they carve up a region of emotional space into specific emotion words (Heider, 1991; Russell, 1991), but those carvings do not necessarily imply differences in emotion-related experience or behaviour (Haidt & Keltner, 1999).

We propose that two features form the heart of prototypical cases of awe: *vastness*, and *accommodation*. Vastness refers to anything that is experienced as being much larger than the self, or the self’s ordinary level of experience or frame of reference. Vastness is often a matter of simple physical size, but it can also involve social size such as fame, authority, or prestige. Signs of vastness such as loud sounds or shaking ground, and symbolic markers of vast size such as a lavish office can also trigger the sense that one is in the presence of something vast. In most cases vastness and power are highly correlated, so we could have chosen to focus on power, but we have chosen the more perceptually oriented term “vastness” to capture the many aesthetic cases of awe in which power does not seem to be at work.

Accommodation refers to the Piagetian process of adjusting mental structures that cannot assimilate a new experience (Piaget & Inhelder, 1966/1969). The concept of accommodation brings together many insights about awe, such as that it involves confusion (St. Paul) and obscurity (Burke), and that it is heightened in times of crisis, when extant traditions and knowledge structures do not suffice (Weber). We propose that prototypical awe involves a challenge to or negation of mental structures when they fail to make sense of an experience of something vast. Such experiences can be disorienting and even frightening, as in the cases of Arjuna and St. Paul, since they make the self feel small, powerless, and confused. They also often involve feelings of enlightenment and even rebirth, when mental structures expand to accommodate truths never before known. We stress that awe involves a *need* for accommodation, which may or may not be satisfied. The success of one's attempts at accommodation may partially explain why awe can be both terrifying (when one fails to understand) and enlightening (when one succeeds).

Brain Changes?
Psychology
research

We therefore propose that vastness and accommodation are the two central themes (e.g., Ekman, 1993; Smith & Ellsworth, 1985) of the awe family. Emotional experiences that involve perceived vastness and a need for accommodation, whether in response to a charismatic leader, a grand vista, or a symphony, are members of the awe family. Emotional experiences that lack one or both of these features are best called by some other name. For example, “surprise” involves accommodation without vastness. Feelings of deference involve vastness without accommodation. In Table 1 we represent 11 different awe-related situations, and we propose that the only ones that should properly be labelled as “awe” are the seven that include both vastness and accommodation.

How then do we account for differences among awe-related states, and how awe itself varies in its valence—our other two tasks in approaching awe? In Table 1 we propose that five additional themes alter or “flavour” an emotional experience, giving rise to the variety and diversity of awe experiences.

1. *Threat.* As discussed by Burke, threat and danger cause an experience of awe to be flavoured by feelings of fear. Variation in whether an entity is threatening or not might account for how charismatic leaders (e.g., Hitler vs. Ghandi) or natural scenes (e.g., an electrical storm vs. a sunset) evoke awe-related experiences of dramatically different valence.

2. *Beauty.* Beautiful people and scenes can produce awe-related experiences that are flavoured with aesthetic pleasure. We cannot give here an account of what makes something beautiful, although we think it likely that there will be at least two sources of intuitions about beauty, one stemming from “biophilia” (Wilson, 1984), and the other from the evolution of sexual desire and attraction (Buss, 1994).

TABLE 1
A prototype approach to awe and related states

<i>Eliciting situations</i>	<i>Central features</i>		<i>Peripheral or “flavouring” features</i>				
	<i>Vastness</i>	<i>Accom.</i>	<i>Threat</i>	<i>Beauty</i>	<i>Ability</i>	<i>Virtue</i>	<i>Supernatural</i>
Social elicitors							
1. Prototype: Powerful leader	X	X	?				
2. Encounter with God	X	X	?	?		X	X
3. Great skill (Admiration ^a)		X			X		
4. Great virtue (Elevation ^a)		X				X	
Physical elicitors							
5. Tornado	X	X	X	?			?
6. Grand vista	X	X		X			
7. Cathedral	X	X		X	X		?
8. Awe-inspiring music	X	X		X	X		
9. A beautiful painting (Aesthetic pleasure ^a)				X	?		
Cognitive elicitors							
10. Grand theory	X	X		?			
11. Seeing an object levitate (Uncanny ^a)		X	?				X

X Denotes that the appraisal is usually made in this case.

? Denotes that the appraisal is sometimes made in this case (and if it is made, it adds a flavour).

^a Denotes states that are related to awe, but should not be labelled as awe.

3. *Ability*. Perceptions of exceptional ability, talent, and skill will flavour an experience with admiration in which the perceiver feels respect for the other person that is not based on dominance and submission within a hierarchy. Exceptional ability may often trigger a need for accommodation, but if there is no perception of vastness, then the experience should simply be labelled “admiration”, not awe, as in line 3 of Table 1.

4. *Virtue*. People who display virtues or strength of character often trigger in other people a state that has been called “elevation” (Haidt, 2000, in press). Elevation is an emotional response to “moral beauty” or human goodness; it usually includes a warm and pleasant feeling in the chest and a desire to become a better person, or to lead a better life. Elevation appears to be a member of the family of awe-related states, but because experiences of elevation do not usually involve perceived vastness or power, they should be labelled as “elevation”, not awe, as in line 4 of Table 1.

5. *Supernatural causality.* Finally, the perception that God or some other supernatural entity is manifesting itself (e.g., seeing an angel or a ghost, or seeing an object levitate) will flavour an experience with an element of the uncanny. The uncanny is usually terrifying (Angyal, 1941), but it can be glorious if the entity is perceived as benevolent.

These five flavouring themes will be further explicated below, as we work out specific examples.

PRIMORDIAL AWE AND ITS ELABORATIONS

How do the aforementioned appraisal themes combine to form a family of awe-related states? To answer this question, we draw on an approach that distinguishes between “primordial” and “elaborated” forms of emotions (Keltner & Haidt, 1999, 2001; Rozin, 1996). Primordial emotion refers to the relatively hard-wired pre-cultural sets of responses that were shaped by evolution and built into the central and peripheral nervous systems of the human species. Elaborated emotion refers to the full set of culture-specific norms, meanings, and practices that cultures build up around primordial emotions. Primordial disgust, for example, refers to the emotional rejection of foods that either smell like decay or that are known to have come into contact with excrement or other disgust elicitors. Elaborated disgust for modern Americans, however, is a much richer emotion involving the emotional rejection of things based more on ideation than on perceptual qualities (e.g., racists, cheap wine, and political corruption). Rozin, Haidt, and McCauley (2000) tell a story about how primordial disgust (or core disgust) got elaborated and extended to become a social emotion that is primarily a response to the impure deeds of other people.

Following this sort of reasoning we propose that **primordial awe centers upon the emotional reaction of a subordinate to a powerful leader**. Such reactions have an obvious evolutionary history and adaptive function, traceable to the submissive and fearful expressions of subordinate primates in the presence of a powerful dominant conspecific (Keltner & Potegal, 1997; de Waal, 1986, 1988). These responses to powerful social entities solidify social hierarchies, which are important to human survival (Fiske, 1991; Keltner & Haidt, 2001). Much as humans are biologically prepared to respond to certain fear inducing stimuli (e.g., fast approaching objects, darkness), we argue that humans are prepared to respond to awe-inducing stimuli (e.g., large stature and displays of strength and confidence). From this perspective, various components of the subordinate’s response to the dominant individual, including passivity, heightened attention towards the powerful, and imitation (e.g., Keltner, Gruenfeld, & Anderson, in press), are biologically based action tendencies at the core of the experience of awe (see Frijda, 1986, on wonder).

The capacity to experience awe in response to cues of social dominance then generalises to other stimuli, such as buildings, operas, or tornadoes, to the extent

that these new stimuli have attributes associated with power (see Keltner & Anderson, 2000). More specifically, stimuli that are vast and that require accommodation will elicit the primordial awe response. To the extent that these new stimuli bring in additional components of meaning, as we suggest in Table 1, the primordial awe experience will acquire new flavours, and a new phenomenology. Thus supernatural ideation added to primordial awe yields the religious conversion and submission of Arjuna and St. Paul (line 2). The removal of threat and the addition of beauty yields the transcendent feelings described by naturalists (line 6). In this way, cultures elaborate upon primordial awe, becoming experts in certain kinds of awe-related states.

We now turn to the family of awe-related states, starting with what we consider to be the primordial form of awe: Awe felt towards powerful others. This hierarchical form of awe may rarely be experienced by people in industrialised Western democracies, but this response is (we suggest) the foundation for other forms of awe that are more familiar to modern readers.

Primordial awe: Awe towards power This is where I left off

Humans are hierarchical animals. Status hierarchies are evident across cultures (Brown, 1991), they appear early in development, and, contrary to some stereotypes, are as salient to women as to men (Anderson, John, Keltner, & Kring, 2001). “Authority Ranking” appears to be one of four basic and universal models of social relationships (Fiske, 1991). Some cultures are more hierarchical than others, but even among egalitarian hunter-gatherers, constant vigilance is necessary to keep hierarchical relationships from forming (Boehm, 1999).

Emotions contribute to the formation, maintenance, and change of hierarchies in that they act as internal and external signals of the individual’s social place (Clark, 1990; Keltner & Haidt, 1999; Ohman, 1986; Tiedens, 2001). Emotions, such as pride, signal the higher status individual’s stance towards the self *vis-à-vis* lower status individuals. Emotions, such as contempt, signal the higher status individual’s stance towards lower status individuals. Emotions, such as embarrassment and shame, signal the lower status individual’s stance towards the self *vis-à-vis* higher status individuals (Keltner & Buswell, 1997; Keltner, Young, & Buswell, 1997; Miller & Leary, 1992). Finally, there are those emotions that the lower status individual feels towards higher status individuals.

We propose that awe, or at least its prototype, falls into this fourth category of status-related emotion. Following Weber and Durkheim, we propose that the **primordial form of awe is the feeling a low status individual feels towards a powerful other**. This feeling is likely to involve reverence, devotion, and the inclination to subordinate one’s own interests and goals in deference to those of the powerful leader. Awe reinforces and justifies social hierarchies by motivating commitment to the leader, countervailing self-interested attempts to

overturn the social hierarchy (see Gonzaga, Keltner, Londahl, & Smith, 2001, for a similar commitment-based analysis of love).

This approach to primordial awe generates several testable hypotheses. Awe should be likely and intense in the presence of powerful individuals and in times when power is concentrated in the hands of one respected leader. Awe should be more frequent and intense during stages of development when individuals are especially concerned with entering into social hierarchies (e.g., adolescence, Ohman, 1986; or in the first year of college or military school). Awe should be more likely when there is a greater need for social hierarchy, for example when the allocation of abundant resources prompts the emergence of social hierarchy as a heuristic solution to the potential conflicts. This analysis also sheds light on certain social rituals that enhance the awe-inducing capacity of social leaders (e.g., architectural grandeur, the designed scarcity of access to leaders, and collective interactions such as public speeches).

The etymology of the English word “awe” is consistent with this focus on fearful submission to power. According to the *Oxford English Dictionary* “awe” is derived from related words in Old English and Old Norse that were used to express fear and dread, particularly towards a divine being. But as English developed, usage gradually began to connote “dread mingled with veneration, reverential or respectful fear; the attitude of a mind subdued to profound reverence in the presence of supreme authority, moral greatness or sublimity, or mysterious sacredness” (*OED*, “awe”, entry 2).

The first line of Table 1 describes this original form of awe, for example for a commoner who is in the presence of the king for the first time. The experience would involve perceptions of vastness, for example in rank and prestige. The experience would also involve accommodation, because it would fall outside of the individual’s everyday experience and knowledge. Any of the additional four appraisals could be in play as well: Powerful leaders can be perceived as more or less threatening, beautiful, supremely talented, and supernaturally (divinely) powerful, and any of these factors would alter the experience of awe systematically.

Yet, when modern Americans describe their own experiences of awe (Keltner et al., 2001), they rarely describe events defined by fear and dread. It is to the nonprototypical, nonprimordial cases of awe that we now turn.

Extensions to non-powerful people

Modern Westerners report or show signs of feeling awe-like emotions when in the presence of people who are famous (movie stars), exceptionally skilled (basketball stars, chess grandmasters), or morally admirable (heroes and altruists). All such cases involve accommodation, because these people are by definition out of the ordinary. None of these cases involves feelings of threat, fear, or dread; they seem, rather, to have a thoroughly positive affective tone.

People seek out contact with such awe-inspiring figures, asking for autographs, trying to touch (e.g., shake hands), and showing a variety of signs of positive contamination (Nemeroff & Rozin, 1994).

Are these examples of awe? We suggest that the determining factor is whether or not they involve perceptions of vastness. Celebrities often take on a “larger than life” presence which causes “awestruck” onlookers to gape, point, fawn, and act deferentially. In this case awe is elicited by the social size and importance of the individual—the extent to which they are known, and the extent to which their actions affect others. Celebrities who are exceptionally attractive may cause feelings of awe tinged with sexual desire as well.

But what about feelings elicited by people who are not famous, for example, a highly skilled craftsman, or a teenager who does good deeds for others? We suggest that these cases, shown as lines 3 and 4 in Table 1, should not be considered to be cases of awe. Instead, we treat these as cases of other states in the awe family. Admiration involves the accommodation required by witnessing extraordinary human talents, skills, or abilities. Admiration is often prompted by unexpected or unusual actions, but it differs from awe in that vastness in size or social power is not essential. Similarly, elevation is defined by the accommodation caused by witnessing extraordinary acts of virtue, but once again it does not involve perceived vastness or social power (see Haidt, in press).

Extensions to nature

Perhaps the most common experience of awe for contemporary Westerners in egalitarian societies is the response to natural and human-made objects. People feel awe in response to large natural objects, such as mountains, vistas, storms, and oceans. People also feel awe in response to objects with infinite repetition, as Burke suggested, including fractals, waves, and patterns in nature. In his essay “Nature” (1836/1982), the philosopher Emerson wrote:

In the woods, we return to reason and faith. There I feel that nothing can befall me in life—no disgrace, no calamity (leaving me my eyes), which nature cannot repair. Standing on the bare ground,—my head bathed by the blithe air and uplifted into infinite space,—all mean egotism vanishes. I become a transparent eyeball; I am nothing; I see all; the currents of the Universal Being circulate through me; I am part or parcel of God. The name of the nearest friend sounds then foreign and accidental; to be brothers, to be acquaintances, master or servant, is then a trifle and a disturbance. I am the lover of uncontained and immortal beauty. In the wilderness, I find something more dear and cognate than in the streets or villages. In the tranquil landscape, and especially the distant line of the horizon, man beholds somewhat as beautiful as his own nature. The greatest delight which the fields and woods minister is the suggestion of an occult relation between man and vegetable (p.39).

As in religious conversion (Spilka, Hood, & Gorsuch, 1985) and peak experiences (Maslow, 1964), nature-produced awe involves a diminished self, the giving way of previous conceptual distinctions (e.g., between master and servant) and the sensed presence of a higher power. Here again, our prototype of awe proves useful. Natural objects that are vast in relation to the self (e.g., vistas, waterfalls, redwoods) are more likely to produce awe, as are natural events that have effects upon many (e.g., tornadoes, earthquakes). Again accommodation plays a role: Natural objects that transcend one's previous knowledge are more likely to produce awe than are familiar objects.

Extensions to human art and artifact

Songs, symphonies, movies, plays, and paintings move people, and even change the way they look at the world. The same can be true of human creations, such as skyscrapers, cathedrals, stadiums, large dams, or even oddities, such as the world's largest ball of string. When do art and human creation elicit awe? First, size matters. Awe is more likely to occur in response to viewing art or artifact when the object is larger than the viewer is accustomed to seeing. The object itself may be large (e.g., Michaelangelo's David), or it may exemplify powerful or heroic forces and figures (as in Greek myths). In more subtle ways, art can produce awe by rendering exceptional moments in time that are signs of vast, powerful forces, as when seemingly trivial events foreshadow larger developments in the narrative. When art has these properties it should be more likely to produce awe, as opposed to, for example, aesthetic pleasure.

Accommodation also matters, and to the extent that an object or scene is not easily assimilated awe becomes more likely. Art and literature often present highly unusual or even magical and impossible events. Art can engage the spectator in a novel way of viewing things (e.g., Monet's water lilies; Virginia Woolf's prose). When the form and meaning of a work of art are familiar and easily graspable, the work may be entertaining, but it is unlikely to be considered great art. Works that challenge and that involve obscurity are more likely to induce awe.

Extensions to the epiphanic experience

In Table 1 we consider a final source of awe, cognitive elicitors. It is remarkable that people can feel awe as they realise the breadth and scope of a grand theory (e.g., psychoanalysis, feminism, evolutionary theory). Not coincidentally, the progenitors and apostles of these theories are often revered as charismatic leaders.

The experience of grand theory is captured in discussions of epiphany, which involve the revelation of something profound in something ordinary or seemingly routine. In his book *Stephen Hero* James Joyce defines epiphany as "the significance of trivial things" and as "a sudden spiritual manifestation, whether

in the vulgarity of speech or gesture or in a memorable phrase of the mind itself'. In preliminary work we have found that the epiphanic experience stems from the connection between comprehensive causal variables (e.g., social class, biological evolution) and seemingly remote, isolated events (a manner of speech, pregnancy sickness) (Wallit, Langner, & Keltner, 2001). We suggest that these kinds of **epiphanies** (line 10 in Table 1) are part of the awe family. They clearly involve accommodation and the alteration of knowledge structures. They also involve vastness in that comprehensive, powerful forces are realised to be the cause of some distal, ordinary object or event.

In Table 1 we also refer to the uncanny experience (line 11), which we think is not a case of awe but is nonetheless related to awe. Spooky or uncanny events, such as seeing an object levitate for no reason, cause a massive need for accommodation, combined with the appraisal that supernatural forces are at work.

A RESEARCH AGENDA

Thus far we have argued that awe, whether felt towards powerful individuals, nature, or art, involves vastness and **accommodation**. The variety of awe-related experiences reflects the operation of five additional appraisals, or flavouring elements: threat, beauty, ability, virtue, and the supernatural. We have developed this approach, with some trepidation, in the absence of empirical evidence. We therefore conclude with some recommendations for the empirical study of awe.

First, our analysis suggests that the frequency of appraisals of vastness and accommodation will help explain why some people are more likely to experience awe than others. One would expect people in the **upper echelons of social hierarchies to experience less awe than those in the lower strata of the same hierarchies** (and thereby lose one source of meaning and motivation). Awe should also be more likely in individuals whose knowledge structures are less fixed, for example, early in development or in times of tremendous social change.

Our analysis generates clear predictions regarding the valence of the experience of awe. The appraisal of threat or beauty should lead to more negative or positive experiences respectively. The content of the stimulus, for example, whether it is a virtuous action or an exceptional ability, will determine whether admiration or elevation is experienced. These are all propositions that could be tested in narrative recall studies or in laboratory experiments.

There is a clear need to map the markers of awe, as has been done with other emotions. Research needs to concentrate on the similarities and differences between awe and gratitude, admiration, elevation, surprise, fear, and perhaps even love. Darwin cited certain facial actions that may be associated with awe-related states. Perhaps more interesting are the autonomic responses that people

Is there a biological accomodation associated with awe? are there brain changes? what are they? what are the social effects?

ses affects frequency of awe

mention when describing awe, and in particular goosebumps. **Goosebumps**, or piloerection, are associated with sympathetic activity, suggesting that this may be a distinct autonomic nervous system marker of awe.

Finally, the consequences of awe should be of interest to emotion researchers, and to society in general. As the examples of Arjuna and St. Paul suggest, awe can transform people and reorient their lives, goals, and values. Given the stability of personality and values (e.g., John & Srivastava, 1999), awe-inducing events may be one of the fastest and most powerful methods of personal change and growth. The potential power of awe, combined with the mystery of its mechanisms, may itself be a source of awe, giving pleasure both to those who study it and to those who cultivate it in their lives.

look further
into role of
goosebumps

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