

Elevation Leads to Altruistic Behavior

Simone Schnall¹, Jean Roper², and Daniel M.T. Fessler³

¹University of Cambridge, ²University of Plymouth, and ³University of California, Los Angeles

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Abstract

Feelings of elevation, elicited by witnessing another person perform a good deed, have been hypothesized to motivate a desire to help others. However, despite growing interest in the determinants of prosocial behavior, there is only limited evidence that elevation leads to increases in altruistic behavior. In two experiments, we tested the relationship between elevation and helping behavior. Prior to measuring helping behavior, we measured elevation among participants in an elevation-inducing condition and control conditions in order to determine whether witnessing altruistic behavior elicited elevation. In Experiment 1, participants experiencing elevation were more likely to volunteer for a subsequent unpaid study than were participants in a neutral state. In Experiment 2, participants experiencing elevation spent approximately twice as long helping the experimenter with a tedious task as participants experiencing mirth or a neutral emotional state. Further, feelings of elevation, but not feelings of amusement or happiness, predicted the amount of helping. Together, these results provide evidence that witnessing another person's altruistic behavior elicits elevation, a discrete emotion that, in turn, leads to tangible increases in altruism.

Keywords

elevation, moral emotion, morality, prosocial behavior, helping, positive psychology

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Drawing on observations by Thomas Jefferson, Haidt and his collaborators (Algoe & Haidt, 2009; Haidt, 2003a, 2003b; Keltner & Haidt, 2003) employ the term *elevation* to describe a positive emotion experienced upon witnessing another person perform a virtuous act, principally one that improves the welfare of other people. Using participants' recollections of past experiences, responses to experimental stimuli, and reports of reactions to naturally occurring behavior, these investigators have presented considerable evidence from U.S. undergraduate students (and more limited evidence from interviews with villagers in India and individuals from multiple walks of life in Japan) of a coherent, time-limited change in emotional state in response to witnessing a virtuous act. Prototypically, participants report that witnessing a virtuous act leads them to feel inspired and uplifted, and, of central importance to our study, motivates them to perform a similarly prosocial act themselves.

Many contemporary theories of emotion emphasize that the behavioral concomitants of an emotion are key to understanding its origins, functions, or social consequences (e.g., Frijda, 1987; Lazarus, 1991; Nesse, 1990; Russell, 1991; Tooby & Cosmides, 2008). However, to date, there is only limited evidence that elevation affects prosocial behavior. Landis et al. (2009) found that, in a sample of U.S. undergraduates, self-reported frequency of experiencing elevation correlated with self-reported altruistic behavior. However, such measures are likely subject to impression-management considerations. Using a clip from an episode of "The Oprah Winfrey Show" in

which musicians thanked the teachers who had mentored them, Silvers and Haidt (2008) elicited elevation in nursing U.S. mothers; during the 5 min that followed viewing the video clip, these mothers directed more nurturant behaviors toward their infants than did mothers in a control condition. However, helping one's child is not the same as helping a stranger; hence, such behavior arguably falls short of true altruism. Silvers and Haidt also reported that elevation caused mothers to lactate more, suggesting that it increases levels of oxytocin, a hormone known to promote trust among strangers (e.g., Kosfeld, Heinrichs, Zak, Fischbacher, & Fehr, 2005). However, this constitutes only indirect evidence that elevation might lead to altruism.

Freeman, Aquino, and McFerran (2009) tested whether elevation induction could elicit donations to a Black charity from people normally unlikely to contribute, namely, Whites who are high in social dominance orientation, a construct linked to anti-Black racism (Pratto, Sidanius, Stallworth, & Malle, 1994). White U.S. undergraduates watched film clips recounting acts of compassion and then decided how much of a potential \$25 lottery prize they would donate to the United

Corresponding Author:

Simone Schnall, University of Cambridge, Department of Social and Developmental Psychology, Free School Lane, Cambridge, CB2 3RQ, United Kingdom
 E-mail: ss877@cam.ac.uk

Negro College Fund (UNCF). In a second experiment, participants read about acts of compassion and then were asked to donate some or all of their \$5 participation payment to the UNCF or another charity. In both experiments, relative to a control condition, the elevation-induction condition increased donations to the UNCF, counteracting the negative effects of high social dominance orientation. However, these studies did not test whether elevation affects altruism across divergent contexts, motivating helping outside of contexts that juxtapose compassion and group-based prejudice, or whether elevation motivates helping above and beyond the effect of general positive affect (cf. Isen, 1987).¹ Because no studies to date have unambiguously demonstrated that elevation actually produces altruistic behavior, we conducted two experiments designed to test this prediction. To avoid the possibility that men might exhibit increased helping behavior in the presence of the female researcher who ran these experiments (see Eagly & Crowley, 1986), we employed only female participants.

Experiment 1

Method

Participants. Fifty-nine women, ages 18 to 26 years ($M = 20.88$, $SD = 2.03$), were recruited from the University of Plymouth community and participated in exchange for £3.00. Data from 3 participants were excluded: One knew the experimenter and may have behaved prosocially for this reason, another had heard about the experiment, and one guessed the hypothesis.

Materials. The stimulus for the elevation condition was the 7-min clip from “The Oprah Winfrey Show” used by Silvers and Haidt (2008). The stimulus for the control condition was the first 7 min of “The Open Ocean,” David Attenborough’s (1984) nature documentary describing a journey through the deepest part of the ocean.

A rating scale was constructed to assess feelings and cognitive appraisals associated with elevation, as discussed by Haidt (2003a, 2003b). Participants were asked to report how they felt immediately after watching the clip, using a scale from 1 (*didn’t feel at all*) to 9 (*felt very strongly*); ratings were made for the following items “moved,” “uplifted,” “optimistic about humanity,” “warm feeling in chest,” “want to help others,” and “want to become a better person.” To assess the effect of

condition on general positive affect, we also asked participants to rate how happy they felt, using the same scale. These seven ratings served as our manipulation check.

Procedure. Participants were given the cover story that the experiment was an investigation of episodic memory in different contexts and would involve watching a film clip and completing a writing task. Tested individually, participants were randomly assigned to view the elevation-inducing clip (elevation condition) or the control clip (control condition). After viewing the clip, participants wrote a short essay recalling as much as they could about it. This task was timed to 5 min. The experimenter then said that she had to briefly leave the room to photocopy another form. Before doing so, she paid the participants in cash and asked them to complete a payment receipt. This receipt contained the dependent measure, a check box asking if the participant was willing to take part in an additional, unpaid, study (“yes” or “no”). On her return, the experimenter administered the manipulation check. The experimenter’s ostensive photocopy errand provided a rationale for the completion of the receipt in advance of the manipulation check (whose items were on the form the experimenter supposedly went to photocopy). This setup also afforded privacy during completion of the dependent measure, in an attempt to reduce demand characteristics. At the end of the experiment, participants were questioned concerning suspicions regarding the purpose of the study and were then debriefed.

Results

Manipulation check. Compared with participants in the control condition, participants in the elevation condition reported higher ratings on all items indicative of elevation (see Table 1 for means). Specifically, they gave higher ratings for feeling moved, $F(1, 54) = 18.54$, $p_{\text{rep}} = .99$, $\eta_p^2 = .26$; uplifted, $F(1, 54) = 18.45$, $p_{\text{rep}} = .99$, $\eta_p^2 = .26$; optimistic about humanity, $F(1, 54) = 29.00$, $p_{\text{rep}} = .99$, $\eta_p^2 = .35$; and warm in the chest, $F(1, 54) = 18.09$, $p_{\text{rep}} = .99$, $\eta_p^2 = .25$, as well as for wanting to help others, $F(1, 54) = 34.90$, $p_{\text{rep}} = .99$, $\eta_p^2 = .39$, and wanting to become a better person, $F(1, 54) = 23.69$, $p_{\text{rep}} = .99$, $\eta_p^2 = .31$. In contrast, the groups did not differ in their reported happiness, $F(1, 54) = 2.68$, $p_{\text{rep}} = .87$, $\eta_p^2 = .05$. Thus, relative to the nature documentary, the Oprah clip effectively induced the desired emotion of elevation.

Table 1. Means for Self-Ratings in Experiment 1

Condition	Rating						
	Moved	Uplifted	Optimistic about humanity	Warm feeling in chest	Wanting to help others	Wanting to become a better person	Happy
Elevation	6.88 (1.48)	7.12 (1.18)	7.46 (1.24)	6.38 (2.00)	7.04 (1.68)	7.35 (1.67)	6.92 (1.44)
Control	4.57 (2.37)	5.13 (2.08)	4.97 (2.06)	3.97 (2.22)	4.00 (2.10)	4.57 (2.46)	6.20 (1.81)

Note: Standard deviations are given in parentheses.

Intention to volunteer. As predicted, more participants in the elevation condition, compared with the control condition, volunteered for the subsequent unpaid study (Fisher's exact test, $p_{\text{rep}} = .93$, two-tailed; see Fig. 1 for frequencies).

Discussion

Experiment 1 provides initial evidence that elevation, elicited by exposure to other people's good deeds, motivates altruism. Nevertheless, this study has several limitations. First, because elevation has a positive valence, and positive mood increases helping behavior (Isen, 1987), we cannot rule out the possibility that our results were driven by general mood differences rather than unique properties of elevation, and our single self-report item measuring happiness may not have sufficed to eliminate this confound. In fact, the nature documentary used in the control condition may have elicited mild positive feelings rather than being strictly neutral. Second, because Experiment 1 employed a binary dependent measure, we were unable to assess the dose-dependent effects on behavior that are characteristic of most emotions. Third, Experiment 1 involved a commitment to help, rather than actual helping behavior; given that commitments can be broken, measures of actual helping behavior would more convincingly demonstrate the consequences of elevation. Finally, the association between being in the process of participating in a study and the opportunity to behave altruistically by agreeing to participate in a future study could generate demand characteristics. We therefore conducted a second experiment that employed the same mildly positive control condition (nature documentary) and a stronger positively valenced control condition; a continuous measure of actual helping behavior; and subterfuge designed to dissociate the opportunity to behave altruistically from the study in which participants were currently involved.

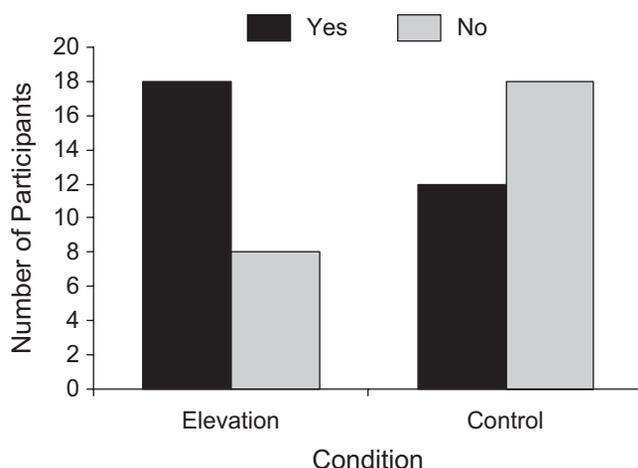


Fig. 1. Number of participants in Experiment 1 who were willing to volunteer for an unpaid study as a function of condition.

Experiment 2

Method

Participants. Thirty-six female students from the University of Plymouth participated for course credit. Their ages ranged from 18 to 26 years ($M = 20.28$, $SD = 1.63$). Data from 4 participants were excluded because postexperimental probes revealed suspicion regarding the subterfuge.

Procedure and materials. Participants were informed that they were taking part in a 1-hr experiment on episodic memory in which they would watch a film clip, write about it, and complete a 30-min computer task. Tested individually, participants were randomly assigned to watch the elevation film clip (elevation condition), the control film clip (control condition) used in Experiment 1, or a clip from a British comedy ("Fawlty Towers") intended to induce mirth (mirth condition). Participants then completed the manipulation check used in Experiment 1, which was modified to include a rating of how amused they felt, followed by the same essay task used in Experiment 1. The experimenter then feigned three unsuccessful attempts to open the computer file that ostensibly needed to be completed by the participant. She then told the participant that, because it was impossible to complete the next part of the study, the participant was free to leave, but would still receive the full hour's worth of course credit. Following the procedure outlined in Bartlett and DeSteno (2006), when the participant got up to leave, the experimenter asked, apparently as an afterthought, whether she would be willing to complete another questionnaire, ostensibly from another study for which the experimenter needed to establish norms. The experimenter noted that the questionnaire was, unfortunately, rather boring, emphasizing that the participant was under no obligation, and was free to stop whenever she wanted, but that completing any number of the items would greatly assist the experimenter. If the participant agreed to help, she was seated at a desk, reminded that she was free to stop whenever she wished, and given 85 elementary math problems. The participant's work on the problems was secretly timed. The participant was then probed for suspicions regarding the purpose of the study and debriefed.

Results

Manipulation check. The emotion-induction conditions were successful: Participants reported high levels of elevation only in the elevation condition, and high levels of amusement only in the mirth condition (see Fig. 2 for means). Participants in the three conditions did not differ in reported happiness.

Helping behavior. A one-way analysis of variance with minutes spent on the boring math questionnaire as the dependent variable and emotion condition (elevation, mirth, control) as the independent variable revealed a main effect for condition, $F(2, 29) = 6.84$, $p_{\text{rep}} = .98$, $\eta_p^2 = .32$. Participants in the

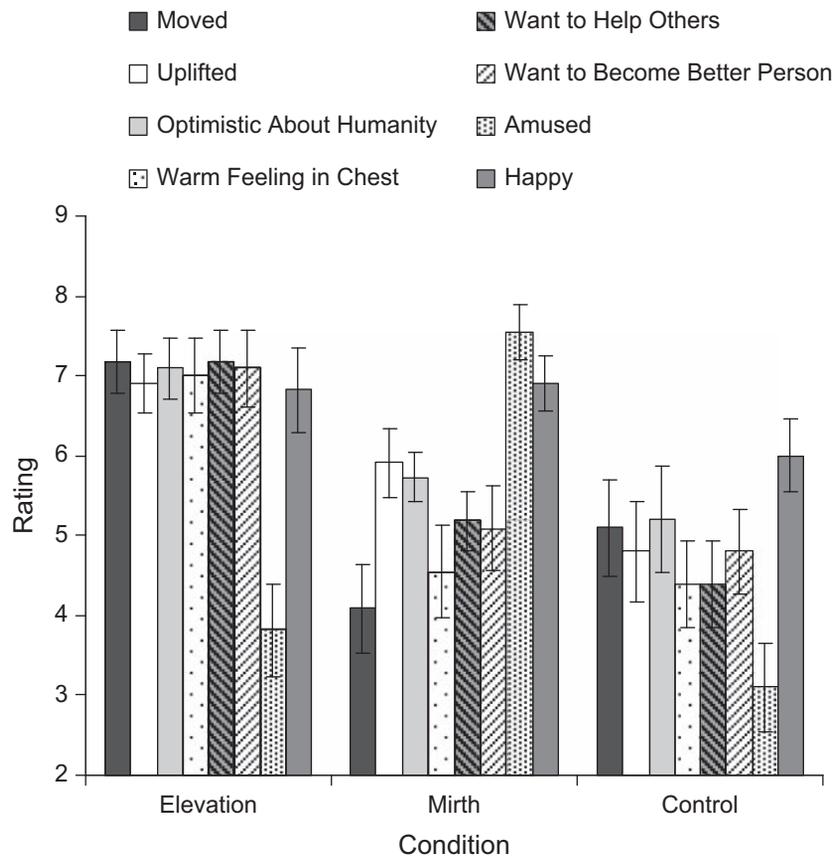


Fig. 2. Mean self-reported feelings and appraisals from participants in Experiment 2 as a function of condition. Error bars indicate standard errors.

elevation condition spent roughly twice as much time on the questionnaire ($M = 40.64$ min, $SD = 17.09$) as participants in the control condition ($M = 19.90$ min, $SD = 8.46$) or the mirth condition ($M = 23.73$ min, $SD = 14.03$; see Fig. 3). Post hoc Scheffé tests showed that although the elevation condition differed significantly from both the control condition, $p_{rep} = .97$, and

the mirth condition, $p_{rep} = .94$, the mirth and control conditions did not differ, $p_{rep} = .56$.

Correlational analyses. To assess the relationship between reported feelings of elevation and subsequent helping behavior, we computed the correlation between each of the elevation

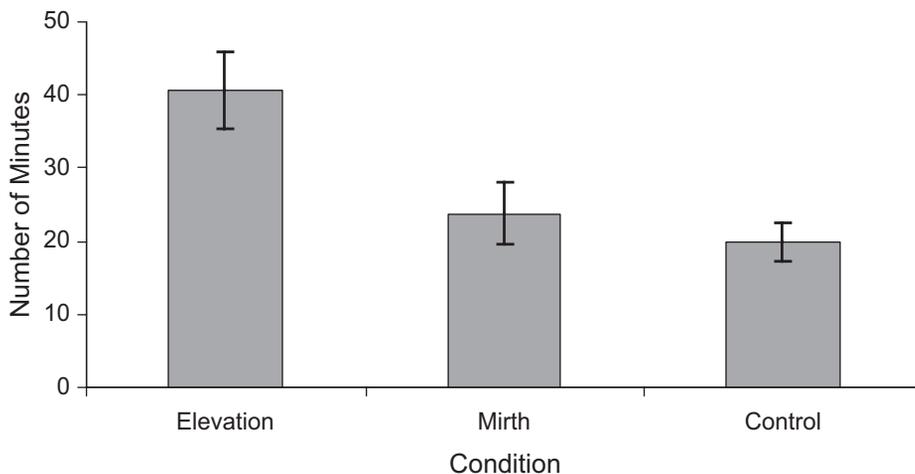


Fig. 3. Mean number of minutes spent filling out a boring questionnaire to help the experimenter in Experiment 2 as a function of condition. Error bars indicate standard errors.

items and the number of minutes spent helping with the math questionnaire. Five of the six items were significantly correlated with time spent on the questionnaire, and the remaining item, wanting to become a better person, showed a trend in the same direction (see Table 2). In contrast, feelings of happiness and amusement showed no such correlations. Items from the manipulation check were further subjected to a principal components analysis with an oblique promax rotation. Two factors emerged: Factor I, with an eigenvalue of 4.79, accounted for 59.87% of the variance, and Factor II, with an eigenvalue of 1.43, accounted for 17.90% of the variance. The following items loaded on Factor I (primary loadings from the pattern matrix are in parentheses): moved (.89), uplifted (.70), optimistic about humanity (.76), warm feeling in chest (.88), want to help others (.87), and want to become a better person (.91). Two items loaded highly on Factor II: amused (.98) and happy (.59). The composite score of items loading on Factor I correlated significantly with the number of minutes spent helping the experimenter, $r = .49$, $p < .005$, whereas the composite score of items loading on Factor II did not, $r = .23$, $p < .20$.

Discussion

Experiment 2 provides strong support for the claim that elevation increases helping behavior. Participants who reported feeling elevated spent more time helping the experimenter than participants who either felt amused or were in a control condition and had a mildly positive affective state. This difference in helping was quite substantial, such that participants in the elevation condition spent about twice as much time helping the experimenter with the boring questionnaire as participants in the other conditions. Participants had signed up for a 1-hr experiment, but found themselves free to leave after only 10 to 15 min. In the mirth and control conditions, participants spent another 20 to 25 min voluntarily completing the additional questionnaire, and thus were still able to leave quite early, given their 1-hr commitment. In contrast, participants in the elevation condition spent so much time on the helping questionnaire (on average, 40 min) that many of them stayed well beyond the hour for which they had signed up.

Table 2. Correlations Between Number of Minutes Spent on the Questionnaire and Self-Ratings in Experiment 2

Item rated	Correlation coefficient	<i>p</i> value
Moved	.46	.008
Uplifted	.36	.045
Optimistic about humanity	.44	.012
Warm feeling in chest	.47	.007
Wanting to help others	.41	.019
Wanting to become a better person	.31	.089
Amused	.15	.412
Happy	.29	.109

Note: The *p* values in the table are two-tailed.

Participants in all conditions reported roughly similar levels of happiness; however, only participants in the elevation condition reported the feelings and cognitive appraisals hypothesized to be associated with elevation (Algoe & Haidt, 2009; Haidt, 2003a, 2003b), namely, feeling moved and uplifted, having a warm feeling in the chest, wanting to become a better person, and wanting to help others. These feelings were highly correlated with subsequent helping behavior, whereas feelings of amusement or happiness were not.

General Discussion

These two experiments provided convincing evidence that elevation, elicited by learning of another person's good deeds, leads to increased altruistic behavior among members of a British university community. Our results indicate that, both subjectively and with regard to objective consequences, elevation is a discrete state, distinct from mere positive mood. Our findings cannot be explained as due to simple modeling or imitation: Participants who experienced elevation engaged in helping behaviors (volunteering for an unpaid study or completing a math questionnaire) that bore no similarity whatsoever to the behaviors presented in the elevation-eliciting stimulus (mentoring underprivileged youths). Thus, elevation inspired helping in spirit, not in kind. For methodological reasons, we confined our investigation to female participants. However, given that men also behave prosocially in many contexts, we expect that they share the same underlying motivational systems, including elevation. That said, given that previous work (Silvers & Haidt, 2008) points to a possible role for oxytocin in elevation, there may be sex differences in the magnitude of this emotion's influence on behavior.

Practical Implications and Future Directions

Prior research suggests that empathizing with the plight of individuals in need plays a central role in motivating altruism (e.g., Batson et al., 1997). However, creating an empathic connection is often difficult in large societies characterized by anonymity and cultural heterogeneity. In contrast, as illustrated by mass-media accounts of heroic efforts by first responders following the September 11 terrorist attacks, it is relatively easy to publicize acts of moral excellence. Our findings suggest that, by eliciting elevation, even brief exposure to other individuals' prosocial behavior motivates altruism, thus potentially providing an avenue for increasing the general level of prosociality in society. Given the substantial implications of such increases for the health and well-being of the populace, it is important for future investigations to explore determinants of the distribution, extent, and duration of elevation's positive effects.

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Declaration of Conflicting Interests

The authors declared that they had no conflicts of interests with respect to their authorship and/or the publication of this article.

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Note

1. Although both proximate and ultimate reasons why positive affect enhances helping remain underexplored, for our purposes it is sufficient to recognize that this effect is elicited by events, such as the weather (Cunningham, 1979), that are clearly unrelated to witnessing prosocial behavior).

References

- Algoe, S.B., & Haidt, J. (2009). Witnessing excellence in action: The 'other-praising' emotions of elevation, gratitude, and admiration. *Journal of Positive Psychology, 4*, 105–27.
- Attenborough, D. (Writer; Director). (1984). The open ocean [Television series episode]. In R. Brock (Producer), *The living planet: A portrait of the earth*. London: British Broadcasting Corp.
- Bartlett, M.Y., & DeSteno, D. (2006). Gratitude and prosocial behavior: Helping when it costs you. *Psychological Science, 17*, 319–325.
- Batson, C.D., Sager, K., Garst, E., Kang, M., Rubchinsky, K., & Dawson, K. (1997). Is empathy-induced helping due to self-other merging? *Journal of Personality and Social Psychology, 73*, 495–509.
- Cunningham, M.R. (1979). Weather, mood and helping behavior: Quasi-experiments with the Sunshine Samaritan. *Journal of Personality and Social Psychology, 37*, 1947–1956.
- Eagly, A., & Crowley, M. (1986). Gender and helping behavior: A meta-analytic review of the social psychological literature. *Psychological Bulletin, 100*, 283–308.
- Freeman, D., Aquino, K., & McFerran, B. (2009). Overcoming beneficiary race as an impediment to charitable donation: Social dominance orientation, the experience of moral elevation, and donation behavior. *Personality and Social Psychology Bulletin, 35*, 72–84.
- Frijda, N.H. (1987). Emotion, cognitive structure, and action tendency. *Cognition & Emotion, 1*, 115–143.
- Haidt, J. (2003a). Elevation and the positive psychology of morality. In C.L.M. Keyes & J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived* (pp. 275–289). Washington, DC: American Psychological Association.
- Haidt, J. (2003b). The moral emotions. In R.J. Davidson, K.R. Scherer, & H.H. Goldsmith (Eds.), *Handbook of affective sciences* (pp. 852–870). Oxford, England: Oxford University Press.
- Isen, A.M. (1987). Positive affect, cognitive processes and social behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 20, pp. 203–253). San Diego, CA: Academic Press.
- Keltner, D., & Haidt, J. (2003). Approaching awe: A moral, spiritual, and aesthetic emotion. *Cognition & Emotion, 17*, 297–314.
- Kosfeld, M., Heinrichs, M., Zak, J.P., Fischbacher, U., & Fehr, E. (2005). Oxytocin increases trust in humans. *Nature, 435*, 673–676.
- Landis, S.K., Sherman, M.F., Piedmont, R.L., Kirkhart, M.W., Rapp, E.M., & Bike, D.H. (2009). The relation between elevation and self-reported prosocial behavior: Incremental validity over the five-factor model of personality. *Journal of Positive Psychology, 4*, 71–84.
- Lazarus, R.S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Nesse, R.M. (1990). Evolutionary explanations of emotions. *Human Nature, 1*, 261–289.
- Pratto, F., Sidanius, J., Stallworth, L.M., & Malle, B.F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology, 67*, 741–763.
- Russell, J.A. (1991). Culture and the categorization of emotion. *Psychological Bulletin, 110*, 426–450.
- Silvers, J.A., & Haidt, J. (2008). Moral elevation can induce nursing. *Emotion, 8*, 291–295.
- Tooby, J., & Cosmides, L. (2008). The evolutionary psychology of the emotions and their relationship to internal regulatory variables. In M. Lewis, J.M. Haviland-Jones, & L.F. Barrett (Eds.), *Handbook of emotions* (pp. 114–137). New York: Guilford Press.