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Elevation Leads to Altruistic Behavior, Above and Beyond General Positive Affect

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Abstract

Feelings of elevation, elicited by witnessing another perform a good deed, have been hypothesized to motivate a desire to help others (Haidt, 2003a; 2003b). However, despite growing interest in the determinants of prosocial behavior, there is only limited evidence that elevation leads to increases in actual altruism. In two experiments, we tested the relationship between elevation and helping behavior. 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's altruistic behavior elicits elevation, a discrete emotion that, in turn, leads to tangible increases in altruism.

Key words: Elevation; Moral Emotion; Morality; Prosocial Behavior; Helping; Positive Psychology

Drawing on observations by Thomas Jefferson, Haidt and collaborators (Haidt 2003a, 2003b; Keltner & Haidt, 2003; Algoe & Haidt, 2009) 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 others. Using recollections of past experiences, responses to experimental stimuli, and reports of reactions to naturally-occurring behavior, these investigators present 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: prototypically, participants report feeling inspired and uplifted, and, of central importance here, being motivated to perform a similarly prosocial act themselves.

Many contemporary theories of emotion stress that the behavioral concomitants of an emotion are key to understanding its origins, functions, or social consequences (e.g., Fridja, 1987; Lazarus, 1991; Nesse, 1990; Russell, 1991; Tooby & Cosmides, 2008). However, to date, there is only limited evidence that elevation actually 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 minutes that followed, 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 (2008) also report 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, linked to anti-

Black racism (Pratto, Sidanius, Stallworth, & Malle, 1994). White U.S. undergraduates watched film clips recounting acts of compassion, then decided how much of a potential $25 lottery prize they would donate to the United Negro College Fund (UNCF). In a second experiment, participants read about acts of compassion, then were asked to donate some or all of their $5 participation fee to the UNCF or another charity. In both experiments, relative to a control condition, elevation induction increased donations to the UNCF, counteracting the negative effects of high Social Dominance Orientation. However, these studies did not test first, whether elevation has an effect across the board, motivating helping outside of contexts juxtaposing compassion and group-based prejudice, and second, whether elevation motivates helping above and beyond general positive affect (cf. Isen, 1987)[1]. Hence, because no studies to date have unambiguously demonstrated that elevation actually produces altruistic behavior, we conducted two experiments designed to test this prediction.

Experiment 1

Method

Participants

Because men might exhibit increased helping behavior in the presence of the female researcher (see Eagly & Crowley, 1986), both studies employed only female participants. Fifty-nine women, aged 18 to 26 (M = 20.88, SD = 2.03), and recruited from the University of Plymouth community, participated in exchange for £3.00. Data from three participants were excluded: one knew the experimenter and may accordingly have behaved prosocially; another had heard about the experiment; and one guessed the hypothesis.

Materials

Stimuli. The stimulus for the elevation condition was the 7 minute *Oprah Winfrey* clip used by Silvers and Haidt (2008). The stimulus for the control condition was the first 7 minutes of *The Open Sea* nature documentary by David Attenborough, describing a journey through the deepest part of the ocean.

Manipulation Check. 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 film, using a scale from 1 (didn't feel at all) to 9 (felt very strongly) for the items *moved*; *uplifted*; *optimistic about humanity*; *warm feeling in chest*; *want to help others* and *want to become a better person*. Critically, to assess the effect of condition on general positive affect, participants also rated how *happy* they felt.

Procedure

Participants were given the cover story that the experiment investigated episodic memory in different contexts, and would involve watching a film clip and completing a writing task. Tested individually, participants were randomly assigned to either an elevation-inducing clip or a control clip. After viewing the clip, and ostensibly to test memory, participants wrote a short essay recalling as much as they could about the clip; this task was timed to five minutes. The experimenter then said she had to briefly leave the room to photocopy another form; before doing so, she paid the participant in cash and asked her to complete a payment receipt; this receipt contained the dependent measure, namely a tick box asking if the participant was willing to take part in an additional, unpaid, study ("yes" or "no"). The experimenter's ostensive photocopy errand provided a rationale for the completion of the receipt in advance of the manipulation check (the aforementioned "other form"); this also afforded privacy for completion of the dependent measure in order to reduce demand characteristics. On her return, the experimenter administered the manipulation check. Participants were then questioned concerning suspicions regarding the purpose of the study, and debriefed.

Results

Manipulation Check

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

Intention to Volunteer

As predicted, compared to the control condition, more participants in the elevation condition

volunteered for the subsequent unpaid study (Fisher's Exact Test, p_{rep} = 93, two-tailed; see Figure 1 for frequencies).

Discussion

Experiment 1 provides initial evidence that elevation, elicited by exposure to others' good deeds, motivates altruism. Nevertheless, this study suffered from several limitations. First, because elevation is positively valenced, 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 in this regard. In fact, the nature documentary of 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 type of dose-dependent effects on behavior 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 the given study and the opportunity to behave altruistically (the tick box on the payment receipt) could generate demand characteristics. We therefore conducted a second experiment that employed both the previous, mildly positive control condition 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 given study.

Experiment 2

Method

Participants

Thirty-six female students from the University of Plymouth aged between 18 and 26 (M = 20.28, SD = 1.63) participated for course credit. Data from four participants were excluded because post-experimental probes revealed suspicion regarding the subterfuge.

Procedure and Materials

Participants were informed that they were taking part in an hour-long experiment on episodic memory in which they would watch a film clip, write about it, and complete a 30-minute computer task. Tested individually, participants were randomly assigned to watch either the elevation or control film clips used in Experiment 1, or a clip from a British comedy (*Fawlty Towers*) intended to induce mirth. Participants then completed the manipulation check used in Experiment 1, modified to include *amused*, followed by the same essay task. The experimenter then feigned three unsuccessful attempts to open the computer file that ostensibly needed to be completed; 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 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, and unfortunately rather boring. It was emphasized that the participant was under no obligation, and was free to finish whenever she had had enough, 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. Participants were secretly timed from the point at which they started the questionnaire to the point at which they stopped. 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 Figure 2 for means). The three conditions did not differ in reported happiness.

Helping Behavior

A one-way ANOVA with minutes spent on the boring math questionnaire as dependent variable and emotion condition (elevation, mirth vs. control) as independent variable revealed a main effect for condition, $F(2, 29) = 6.84$, $p_{rep} = .98$, $\eta_p^2 = .32$. Participants in the elevation condition spent roughly twice as much time on the questionnaire (M = 40.64, SD = 17.09) as participants in the control condition (M = 19.90, SD = 8.46) or the mirth condition (M = 23.73, SD = 14.03). Post-hoc Scheffé tests showed that, although the elevation condition differed significantly from both the control ($p_{rep} = .97$) and the mirth ($p_{rep} = .94$) conditions, mirth did not differ from the control condition ($p_{rep} = .56$).

Correlational Analyses

To assess the relationship between reported feelings of elevation and subsequent helping behavior, correlations were computed for each of the items on the Elevation Scale and minutes spent helping with the math questionnaire. Five out 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 of the elevation scale 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; 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 pattern matrix in parentheses): *Moved* (.89), *Uplifted* (.70), *Optimistic about Humanity* (.76), *Warm Feeling in Chest* (.88), *Want to Help Others* (.87), *Want to Become Better Person* (.91). Two items loaded highly on Factor II: *Amused* (.98) and *Happy* (.59). The composite score of items loading on Factor 1 correlated significantly with minutes spent helping the experimenter, $r = .49$, $p < .005$, whereas the composite score of items loading on Factor 2 did not, $r = .23$, $p < .20$.

Discussion

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

All participants reported roughly similar levels of happiness; however, only participants in the elevation condition reported the feelings and cognitive appraisals hypothesized to be associated with the elevation (Algoe & Haidt, 2009; Haidt, 2003a; 2003b), namely feeling moved, uplifted, with 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

Two experiments provide convincing evidence that elevation, elicited by learning of another'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 its 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 experiencing elevation engaged in helping behaviors (volunteering for an unpaid study; 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 on many occasions, we expect that they will 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 9/11 terrorist attacks, it is relatively easy to publicize acts of moral excellence. Our findings suggest that, by eliciting elevation, even brief exposure to others' 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 wellbeing of the populace, it is therefore

important for future investigations to explore determinants of the distribution, extent, and duration, of elevation's positive effects.

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Footnote

[1] Although both proximate and ultimate reasons why positive affect enhances helping remain under-explored, 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).

Table 1: *Means (and standard deviations) for self-reported elevation ratings, Experiment 1.*

Condition	Moved	Uplifted	Optimistic about Humanity	Warm Feeling in Chest	Wanting to Help Others	Wanting to Become 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)

Table 2: *Correlation between minutes spent on questionnaire and self-reported elevation ratings, Experiment 2*

Rating	Correlation Coefficient
Moved	.46 (.008)
Uplifted	.36 (.045)
Optimistic about Humanity	.44 (.012)
Warm Feeling in Chest	.47 (.007)
Want to Help Others	.41 (.019)
Want to Become Better Person	.31 (.089)
Amused	.15 (.412)
Happy	.29 (.109)

Note. $n = 32$ for each condition. Scores for elevation items were on scale from 1 to 9. Two-tailed *p*-levels appear in parentheses.

Figure 1. Number of participants willing to volunteer for unpaid study, Experiment 1.

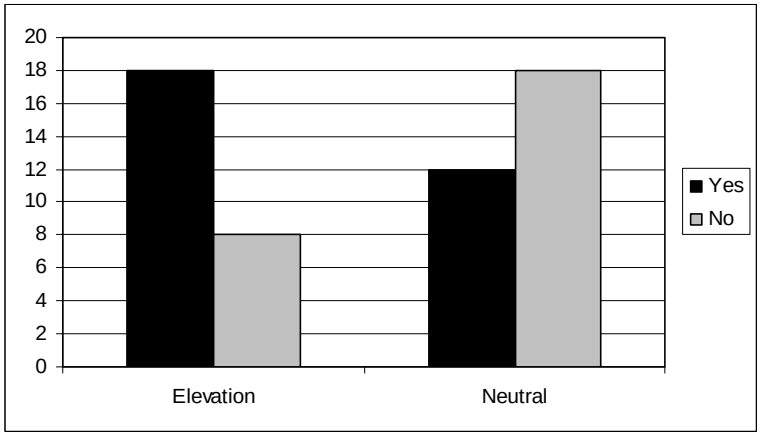

Figure 2. Self-reported Feelings and Appraisals, Experiment 2

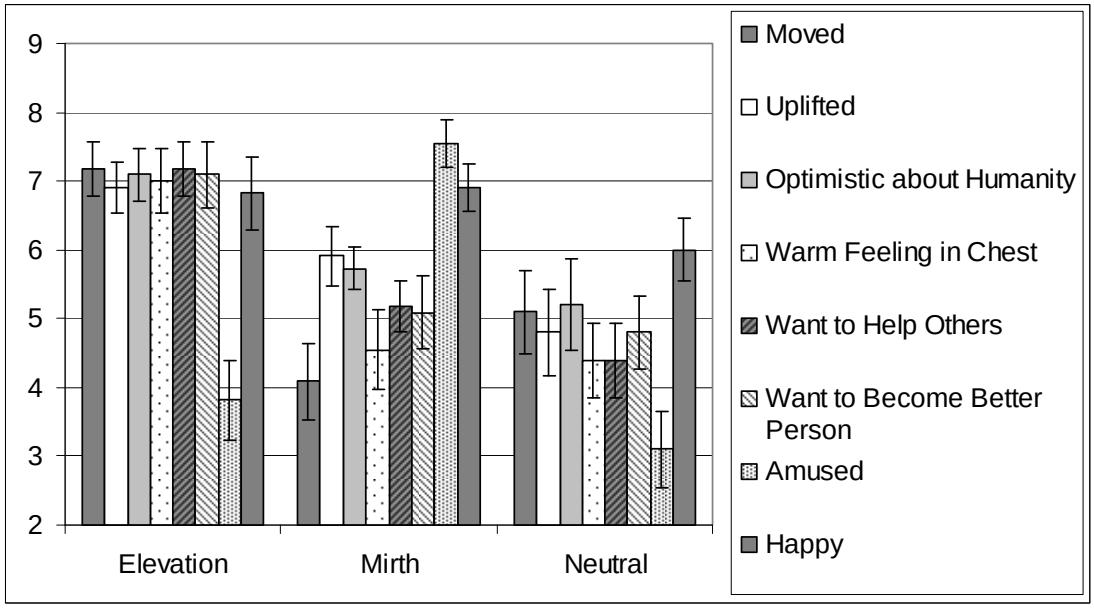

Figure 3. Minutes spent filling out boring questionnaire to help experimenter, Experiment 2.