

Impact of Awe Induction on Creativity

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Overview

This was a two-part study that attempted to find a link between awe induction, perceived time availability, and creative thinking. The first study sought to replicate the findings of a 2018 study by Rudd and colleagues, which found that awe can enhance people's perception of time. We evaluated the effect of awe induction on creativity using the Alternative Uses Test. The second study was performed for the same purposes and utilized the same creativity measure, but also included the Creative Achievement Questionnaire and Dispositional Positive Emotion Scale.

Study 1 was conducted in the spring of 2023 with a sample of Wabash students and participants recruited from the online site, Prolific (n = 116). Study 1 successfully induced awe and greater perceived time availability in participants assigned to the awe-induction group but failed to show any effect of awe on creativity. In the fall of 2023, we attempted another replication of this study with a total of 60 participants, all of whom were recruited from Wabash. This study was unsuccessful in inducing awe, influencing perceived time availability, and affecting creativity. Since the awe induction of Study 2 was unsuccessful, the results are inconclusive.

Although both replications of the study were unsuccessful in showing any effect of awe induction on creative thinking, the induction of awe was only successful in the first study, which warrants further testing to determine if these results stand. While the measure of creativity may be modified to better fit the participant body, the findings of Rudd and colleagues could still potentially be replicated with further experimentation.

Procedure for Study 1

- Participants were recruited from Wabash College and via Prolific (n = 116). The awe induction was administered to induce awe in the awe-induction group.
 - "Please try to recall an event in your life when you saw a particular panoramic view for the first time. Some examples might be seeing the Grand Canyon, seeing the view from high up on a mountain, or seeing the skyline of a big city for the first time. Please recall a specific event when you saw this view for the first time, rather than a general period of time."
- The Current Emotion Scale was administered next to determine participants' feelings of the following emotions: happiness, amusement, awe, fear, sadness, and enthusiasm. The Future Time Perspective and Perceived Time Availability Scale was given to determine the effect of the awe induction.
 - The Alternative Uses Test was given lastly as a measure of participants' creativity to determine the effectiveness of the awe and amusement induction.

Procedure for Study 2

- The Dispositional Positive Emotion Scale was administered first to get an initial impression of participants' feelings in emotions including joy, contentment, pride, love, compassion, amusement, and awe.
- The Creative Achievement Questionnaire was given next to establish a baseline level of creative thinking for participants.
- The awe-induction, Current Emotion Scale, Future Time Perspective and Perceived Time Availability Scale, and the Alternative Uses Test proceeded in the same order as in Study 1

Conclusions

- Largely inconclusive due to unsuccessful induction of awe in Study 2
- Potential link between awe-induction and perceived time availability
- Modify Alternative Uses Test measure of creativity
 - Implement time limit, a new object, analyze the quality of responses rather than quantity
- Better incentivize study participation to recruit more participants and ensure that responses are genuine and effort is maximized
- Could improve method of awe-induction to have a more significant effect on participants assigned to the Awe-induction group
 - Potentially induce awe with visual or audible stimuli
 - Could pursue further research regarding the significant correlation between DPES awe and PTA, as shown in Table 2.5

Results for Study 1

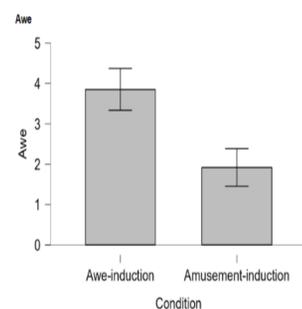


Figure 1.1. The Awe-induction group (M = 3.9, SD = 1.9) had significantly higher ratings of awe (t(115) = 5.574, p < 0.001, d = 1.034) than the Amusement-induction group (M = 1.9, SD = 1.8).

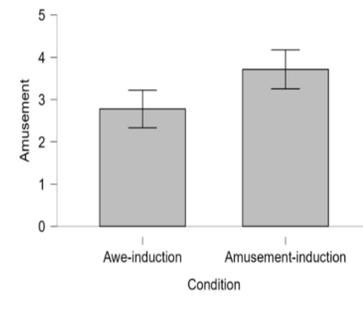


Figure 1.2. The Amusement-induction group (M = 3.7, SD = 1.8) had significantly higher ratings of amusement (t(115) = -2.894, p = 0.005, d = -0.537) than the Awe-induction group (M = 2.778, SD = 1.6).

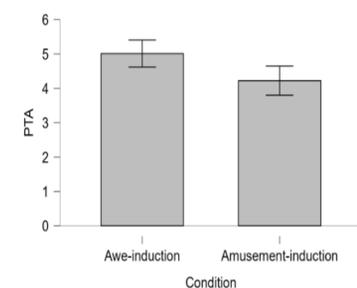


Figure 1.3. The Awe-induction group (M = 5.0, SD = 1.4) had significantly higher PTA ratings (t(115) = 2.699, p = 0.008, d = 0.501) than the Amusement-induction group (M = 4.2, SD = 1.7).

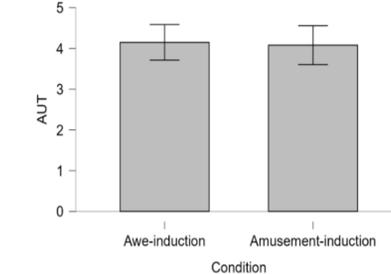


Figure 1.4. The Awe-induction group (M = 4.1, SD = 1.6) did not have significantly higher AUT scores (t(115) = 0.210, p = 0.834, d = 0.039) than the Amusement-induction group (M = 4.1, SD = 1.9).

Results for Study 2

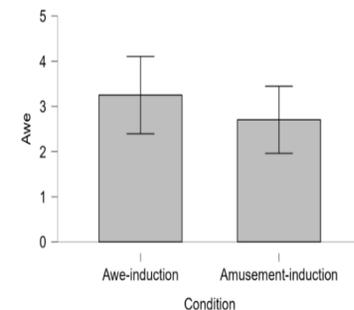


Figure 2.1. The Awe-induction group (M = 3.3, SD = 2.0) reported significantly higher ratings of awe (t(49) = 0.999, p = 0.323, d = 0.280) than the Amusement-induction group (M = 2.7, SD = 1.9).

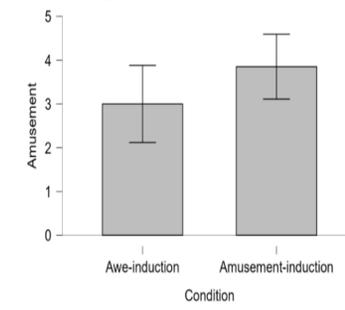


Figure 2.2. The Amusement-induction group (M = 3.0, SD = 1.9) did not have significantly higher scores (t(49) = -1.536, p = 0.131, d = -0.431) than the Awe-induction group (M = 3.0, SD = 2.1).

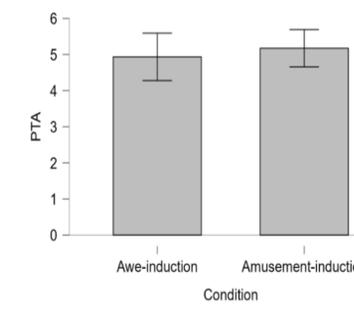


Figure 2.3. The Amusement-induction group (M = 5.2, SD = 1.3) did not have significantly higher PTA ratings (t(49) = -0.595, p = 0.555, d = -0.167) than the Awe-induction group.

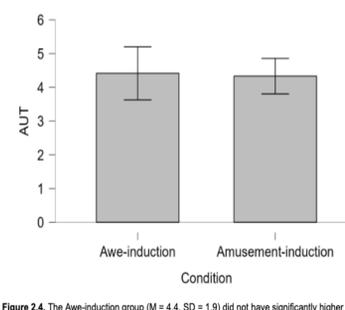


Figure 2.4. The Awe-induction group (M = 4.4, SD = 1.9) did not have significantly higher scores (t(49) = 0.185, p = 0.854, d = 0.052) than the Amusement-induction group (M = 4.3, SD = 1.3).

Variable		Awe	DPES.ave	CAQ	AUT	PTA
1. Awe	Pearson's r	—	—	—	—	—
	p-value	—	—	—	—	—
2. DPES.ave	Pearson's r	0.365 **	—	—	—	—
	p-value	0.009	—	—	—	—
3. CAQ	Pearson's r	0.068	0.094	—	—	—
	p-value	0.634	0.510	—	—	—
4. AUT	Pearson's r	-0.053	0.091	0.123	—	—
	p-value	0.710	0.525	0.388	—	—
5. PTA	Pearson's r	0.126	0.305 *	-0.136	-0.075	—
	p-value	0.380	0.029	0.340	0.600	—

Table 2.5. * p < .05, ** p < .01, *** p < .001

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Acknowledgments

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