

Abstract

42 undergraduate participants typed descriptions of a negative emotional situation that varied in agency (self vs. other) and object (self vs. other) and then rated their emotions in that situation with adjective ratings, global measures and forced choice implicit measures. Outcome, but not agency, played a major role in emotional response especially on the pleasure and dominance dimensions. Participants also rated the subordinate words faster in self outcome conditions. The implicit measures of emotion did not reveal significant reaction time results. Future research should focus on how outcome, rather than agency, is related to emotion experience and perception.

Introduction

The three dimensional model of emotion, called PAD (Pleasure, Arousal, Dominance) (Valdez & Mehrabian, 1994) uses ratings of emotion words categorized as high and low on each of these three dimensions in order to document the scope of emotion. The research reported here goes beyond simply documenting emotion as three dimensions, to the actual manipulation of the dominance dimension in terms of personal causal relationships, agent and object. However there is a confound in this conception of agent vs. object. The agent is the cause, but typically does not experience the outcome. The object receives the outcome and has no causal power. This study includes the additional conditions, agents who cause their own harm, and objects who received harm from someone else. It was hypothesized that being the agent of negative outcomes to others will produce the most dominant emotion, followed by being the agent of self outcomes. The most subordinate emotions will be produced by being the object of outcomes experienced by the self, and there should be relatively little subordinate or dominant emotions experienced in situations where others caused negative outcomes to others.

A second purpose of this study was to compare direct measures of assessing emotions (adjective ratings) to more implicit measures using the reaction time for choices between emotion adjectives that are similar on two of the three emotion dimension but differ on the third.

Method

Undergraduates ($n = 42$) completed the experiment as part of their course requirements. After an informed consent form, participants spent four minutes recalling a time when they (someone else) had done something that caused themselves (another person) to feel bad. Mood induction instructions were presented via a computer screen. Next participants indicated their feelings in the situation by rating 64 emotion adjectives displayed one at a time (randomly ordered) on the screen with a rating scale ranging from 0 (not at all descriptive) to 6 (describes very well). The adjectives were selected from those used by Valdez & Mehrabian (1994) and an additional 24 words were selected from the ANEW (Bradley, 1999) and (Cuddy, Fiske, & Glick, 2007). This was followed by three global rating measures, pleasure, arousal and dominance, each on a five point scale (not at all to extremely).

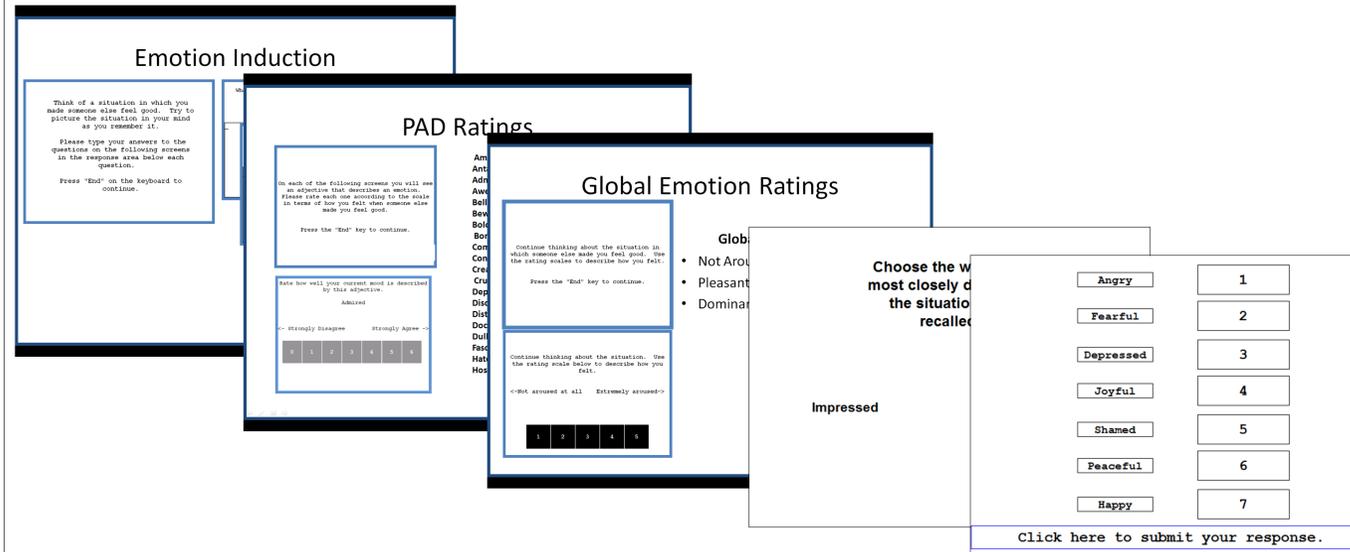
The Implicit Emotion Test (IET) was based on the Implicit Attitude Test (IAT) procedures used by Greenwald (Greenwald, McGhee, & Schwartz, 1998). Before this task participants reinforced the emotion induction by re-reading what they had written before. The task consisted of 96 trials of word pairings which matched words on two of the three PAD dimensions but which differed on the third dimension. Finally, the participants wrote a mood repair essay describing a good outcome and were debriefed.

The Dominance Dimension of Emotion: Agency Tangled with Outcome

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Procedure



Results

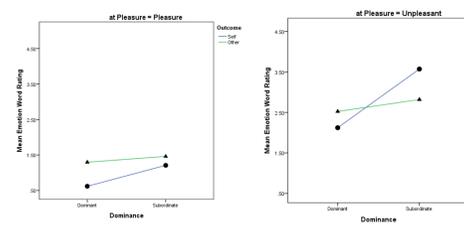


Figure 1. Pleasure x Dominance x Outcome Interaction on PAD Word Ratings

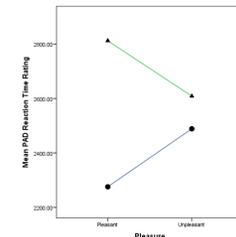


Figure 2. Pleasure x Outcome Effect on PAD RT

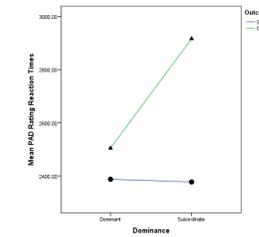


Figure 3. Dominance x Outcome Effect on PAD RT

A 2x2x2x2 mixed ANOVA was conducted with between subjects variables of agency and outcome and repeated measures on the emotion dimensions of pleasure, arousal and dominance. Only significant effects involving agency and outcome will be reported. Outcome interacted with the emotion dimensions of pleasure and dominance (Pleasure x Outcome $F(1, 38) = 5.37, p = .026, \eta^2 = .12$; Dominance X Outcome $F(1, 38) = 27.72, p < .001, \eta^2 = .42$; and Pleasure x Dominance x Outcome interaction $F(1, 38) = 7.47, p = .009, \eta^2 = .16$). As shown in Figure 1 dominant pleasant words were rated very low when the outcome was to self. Subordinate unpleasant words were rated as more descriptive of outcomes to self. Figure 2 shows that participants were faster to rate pleasant adjectives when the outcome was to self as compared to another. However they were about the same, intermediate speed in rating unpleasant adjectives regardless of who received the outcome ($F(1, 38) = 5.15, p = .029, \eta^2 = .12$). Figure 3 shows that participants were fast at rating dominance related adjectives except for subordinate adjectives when the outcome was to another ($F(1, 38) = 5.64, p = .023, \eta^2 = .13$).

Analysis of the global measures of the emotion dimensions, pleasure arousal and dominance, revealed only a significant main effect of outcome on dominance ($F(1, 38) = 20.93, p < .001, \eta^2 = .35$). Participants felt less dominant when they received the negative outcome ($M = 1.67, SD = 1.35$) than when another did ($M = 3.33, SD = .97$). Agency did not produce this affect at all. Dominance is not so much a function of control of the outcomes as it is of being the recipient of the outcome.

Analysis of the IET Reaction times for the arousal dimensions revealed no statistically significant effects. However there was a main effect of outcome for the choice of picking the high dominant adjective of the pair ($F(1, 38) = 9.43, p = .004, \eta^2 = .20$). Participants in the self outcome condition only selected the high dominant option on 31% of the trials as compared to 44% of the trials for those in the other outcome trials.

Conclusions

In this study we sought to untangle the often confounded variables of agency (control over an outcome) and being the recipient of that outcome. We expected that people who caused negative events to happen would have report feeling greater emotional dominance regardless of whether the outcome was to themselves or another. This was not the case. Agency had very little impact when outcome (self vs. other) was explicitly manipulated. Emotions were reported as more unpleasant and subordinate when the outcome was experienced by the participant and not another.

Overall, this study supports the PAD model of emotion, showing that outcome, but not agency, plays a major role in emotional response when manipulated in a laboratory setting. This result held for both simple ratings of emotion adjectives and for the reaction times for making those ratings. Surprisingly, very little additional information was gained through implicit measures of emotion. Participants in the self outcome conditions did choose the subordinate choice more often than did those in the other outcome conditions. There were no differences in reaction time for the IET choice trials. Perhaps the emotions did not persist through 96 forced choice trials. It could also be that forcing a choice between two adjectives is not an effective implicit measure when neither of the two words is an apt description of the emotion actually felt.

References

- Bradley, M. M., & Lang, P.J. (1999). Affective norms for English words (ANEW): Stimuli, instruction manual and affective ratings *Technical report C-1*, . Gainesville, FL.: The Center for Research in Psychophysiology, University of Florida.
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2007). The BIAS map: Behaviors from intergroup affect and stereotypes. *Journal of Personality and Social Psychology*, 92(4), 631-648. doi: 10.1037/0022-3514.92.4.631
- Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology*, 74(6), 1464-1480. doi: 10.1037/0022-3514.74.6.1464
- Valdez, P., & Mehrabian, A. (1994). Effects of color on emotion. *Journal of Experimental Psychology: General*, 123(4), 394-409.

Acknowledgements:

The project was supported by a grant from the National Science Foundation, and a Westminster College Faculty Research grant. For more information contact Sandra K. Webster at websters@westminster.edu.

