Abstract

Sixty-eight undergraduates from Linfield College participated in the study. The materials consisted of a modified Positive and Negative Affect Schedule (PANAS-X, Watson & Clark, 1994). Participants were randomly assigned to one of two conditions: a positive mood condition or a neutral control condition. The positive mood condition was induced by viewing a video featuring positive emotions. The neutral control condition was induced by viewing a video featuring neutral emotions. Participants then completed a variant of the Navon (1977) letter task, which involved identifying a target letter presented in a composite figure. The task consisted of 120 trials, with the target letter being either the smaller or the bigger letter in the composite figure. Participants were told that they would be measured on their ability to solve insight problems, and that the number of correct solutions given (0-3) would be used to measure insight problem solving performance.

Methods

Participants: Sixty-eight undergraduates from Linfield College.

Materials: Mood measurement consisted of administering the Positive and Negative Affect Schedule (PANAS-X, Watson & Clark, 1994). Participants were randomly assigned to one of two conditions: a positive mood condition or a neutral control condition. The positive mood condition was induced by viewing a video featuring positive emotions. The neutral control condition was induced by viewing a video featuring neutral emotions. The decision to use these specific mood induction techniques was based on past research that has shown that positive mood can enhance creativity, while negative mood can inhibit it.


Design and Procedure: This was a 2 (Attentional Focus [global, local]) x 3 (Mood [positive, neutral, negative]) between-subjects experiment. Participants completed a modified version of the PANAS-X to assess baseline positive and negative mood. Next, they completed a variant of the Navon letter task. The stimuli for this task were composite figures – big letters made up of smaller letters. Participants responded if the figure contained a target letter ("L" or "H") in either the global or local focus. The current research seeks to extend these findings to the ability to solve insight problems. Undergraduates were primed to focus globally or locally and induced with a mood before completing insight problems. Contrary to past research, participants primed to focus primarily on positive affect broadens attentional scope and enhances creativity. Positive moods also broaden attentional scope and facilitate the creative combination of concepts in memory (Martindale, 1995). Recently, Huntsinger (2013) challenged the view that positive affect always enhances creativity. Huntsinger (2013) showed that people in happy moods tended to adopt whichever scope of attention was dominant, whereas those in sad moods tended to counter it. The current study sought to determine if the flexible mood-attention relationship applies to insight problem solving.

Hypothesis 1: Participants in a positive mood will solve more insight problems when primed with a global versus local focus of attention.

Hypothesis 2: Participants in a negative mood will solve more insight problems when primed with a local versus global focus of attention.

Hypothesis 3: Participants in a neutral mood will solve more insight problems when primed with a global versus local focus of attention.

Results

Insight problem solving performance was measured by the number of correct solutions given (0-3). A univariate ANOVA was used to examine insight problem solving performance across conditions.

No significant interaction between attentional focus and mood, F(2, 45) = 1.27, p = .290, contrary to predictions based on the Affect-as-Information model and Huntsinger (2013).

No significant main effect of attentional scope, F(1, 45) = 7.58, p = .006. Participants primed to focus locally solved more insight problems (M = 1.24) compared to those primed to focus globally (M = .76).

No significant main effect of mood on insight problem solving ability, F(2, 45) = 1.96, p = .152.

Post hoc comparisons using the LSD test indicated that participants in the neutral control group solved significantly more insight problems (M = 1.18) than participants induced with a negative mood (M = .77).

Participants induced with a positive mood did not differ significantly in performance compared to both of these groups (M = 1.00).

Conclusions

Insight may be more distinct from creativity than once thought. The flexible mood-attention relationship may not affect insight problem solving.

Insight problem solving may be more closely related to convergent thinking and benefits from a narrower scope of attention.

Creativity as a research area, a local focus of attention significantly boosted participants’ ability to achieve insight.

Participants may not have differed in insight because they were equivalent on motivational intensity.

Recent studies suggest that motivational intensity moderates the creative benefits of positive mood (Gable & Harmon-Jones, 2011). Sadness and amusement are states of low approach motivation.

Future research should explore the relationship between motivational intensity, attentional focus, and insight in hopes of better understanding the nature of insight and how it is different from creativity.