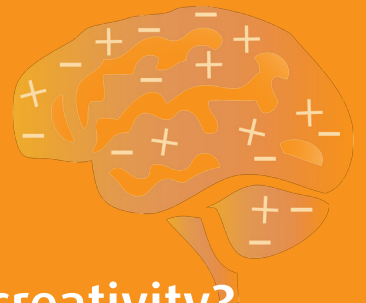


# The impact of emotions on creative thinking

Can induced mood change people's level of creativity?



## Introduction

**Research aim.** Investigate impact of mood on creative output by inducing positive or negative mood before undertaking a creative task.

**Hypothesis.** Positive moods lead to higher creative output than negative.

by Sue Langley



## Literature

### Creativity at work

Creativity is increasingly seen as vital to competitive advantage. Leaders are under growing pressure to generate creative output.

Employee moods influence several critical elements in organisations, from creativity to performance, collaboration and decision making (eg Amabile et al 2005).

Positive moods help with creative tasks, likely to generate a greater number of arguments/options; more receptive, big picture thinking (eg Fredrickson 2001; Jung-Beeman 2007; Subramaniam et al 2009; Caruso & Salovey 1990).

### Emotions impact creative thinking



Neutral or slightly negative moods result in a more careful, systematic, bottoms up processing; better quality arguments (eg Forgas & Wyland 2006).

## Method

**Participants.** Normal adult sample (N=43; 70% female), EIW database.

### Materials

**Stait-Trait-Cheerfulness Inventory** (Ruch, Kohler & van Thriel 1996). Assessment of current mood based on cheerfulness and bad mood subscale. Short form.

**Myers Briggs indicator** (Myers 1990). N (iNtuiting) or S (Sensing).

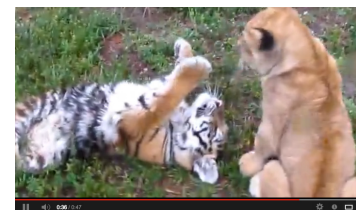
**Positive and negative mood videos.** Selected by researcher.

**Creative output task.** List things a random shape could represent.

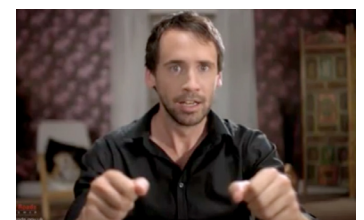
**Procedure.** Online research activity. Invitation to participate, demographic survey, personality preference. Incentive offered (paper), hypothesis not provided.

- 1 **Positive and negative mood groups** watched respective video, current mood questionnaire, creative output task.
- 2 **Creative task output** measured for quantity (number of ideas) and quality (subjective assessment and scoring by panel). Random outline of shapes.

**Analysis.** Non-parametric stats, Mann-Whitney U test, Spearman correlation.



Positive mood video: Tiger and lion cubs playing with humans.



Negative mood video: Sussex Roads Embrace Life ad simulating a father having a car crash.

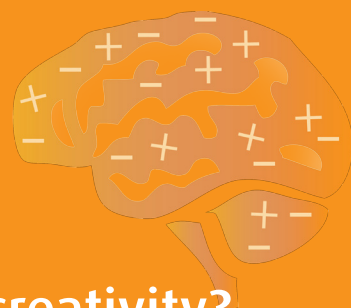


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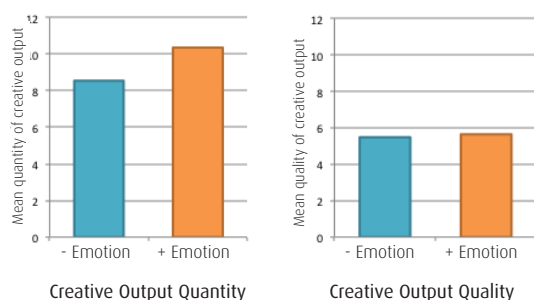
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## Results

**Key findings.** The positive mood group was significantly associated ( $r_s = .26, p = .049$ ) with higher quantity of creative output (mean rank 25.72) than the negative mood group (mean rank 19.32). Groups did not differ significantly on quality of creative output ( $p = .319$ ).

**Figure 1:** Mean differences in creative output between mood groups



The positive group was associated with a statistically significant ( $p = .015$ ) higher mean rank ( $M = 26.92$ ), in comparison to the negative group ( $M = 18.46$ ) on the CH subscale. Similar correlation occurred on the BM subscale.

Intuitive personality correlated positively and significantly with quality, not significantly with quantity. Sensing personality correlated positively and significantly with quantity, not significantly with quality.

Thus, higher intuition was associated with higher creative quality and higher sensing with lower absolute levels of creative output.

## Discussion

### Conclusions

Positive moods seem beneficial in generating creative output, both quantity and quality; and are more effective than negative moods in generating creative output. Higher levels of intuition appear associated with higher creativity quality; higher sensing appears associated with lower creative output.

### Challenges and learnings

Mood induction appeared efficacious. Limitations included access to validated mood videos. Online technical difficulties likely to have impacted mood.

### Applications

Results have informed teaching interventions to show how positive and negative mood impacts creativity at work. These activities have been highly effective in replicating results and demonstrating key concepts.

## Followup Studies

### Impact of brain training, mindfulness and positive mood on creative insight

**Study 2.** Investigated impact that neuroscience training, attentional focus and emotional state can have on creative insight. Using Random Control Trial methodology to establish if teaching people about brain regions that fire during moments of insight, along with attentional focus in this area, could induce higher incidences of insight above what could be achieved by inducing positive mood.

We found promising initial support for the novel hypothesis that brain training and attentional focus could increase creativity.

### Study 3 (upcoming project, participant call still open).

Refines Study 2 methodology, conducting research over an 8 week intervention.

**Want to contribute or join the next study? Contact us!**

## Acknowledgements

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