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Mood and Creativity: An Appraisal Tendency Perspective

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ABSTRACT

There is a strong relationship between the mood one is in, and the way one performs creatively. Previous research has shown that this relationship is complex. In this paper we argue that this complexity partly lies in a faulty conceptualization of mood. We will argue that an appraisal tendency perspective on moods will help to further clarify the relationship between mood and creativity. To support this argument we will highlight some inconsistencies in previous research, and use the appraisal tendency perspective on mood to develop predictions that help explain these inconsistencies and develop new directions for mood-creativity research. Future research is required to assess the accuracy of these predictions.

Author Keywords

Creativity, Mood, Appraisal Tendencies

ACM Classification Keywords

J.4 Social and Behavioral Sciences: Psychology.

General Terms

Theory

INTRODUCTION

At times, creativity seems to flow naturally, while at other times, creativity is effortful, or even blocked. One of the factors that are believed to play an important role in such situations is the mood one is in [1]. Moods are considered to be relatively long lasting, global, and diffuse states, that emerge from the accumulation of emotions and other affective responses over time. Moods function as a temporary disposition to have certain cognitions [15]. These dispositions therefore impact the processes from which creativity emerges. However, empirical findings show many inconsistencies, which suggests that the way in which this happens is complex [1]. This paper discusses how an appraisal tendency perspective on moods can help to further uncover the complexities of the relationship between mood and creativity.

MOOD AND CREATIVITY

Early research on the relationship between mood and

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creativity focused on general positive and negative moods. The overall pattern of findings was that positive moods are associated with broadened attention, a flexible, inclusive, and heuristic way of processing and generating information, and the motivation to approach difficult tasks [1]. This suits the need to process much and diverse information in early stages of the creative process [cf. 11]. In contrast, negative moods are associated with narrowed attention, strict and systematic information processing and generation, and increased effort investment [1]. This suits the creative need to evaluate and monitor usefulness and appropriateness in later stages of the creative process [cf. 11]. There are however also many contradictory findings. For instance, a positive mood state such as relaxation is shown to impede creative performance compared to a negative mood state such as anger in early stages of the creative process [7]. In turn, anger is associated with relatively unstructured and heuristic processing [2], which is inconsistent with the notion that negative moods overall promote systematic processing. Findings such as these show us that there is more to the relationship between mood and creativity than can be inferred from their positive and negative character alone. This pinpoints the current challenge in research on the relationship between mood and creativity.

One research trend that attempts to deal with this challenge looks at the range of factors that differ between different moods, and how these factors individually impact the processes from which creativity emerges. Within this trend, one line of research explains a mood in terms of its positive and negative tone, as well as the overall level of activation of the sympathetic nervous system. Overall, findings indicate that activation might be a necessary condition for creativity to occur. Here, activation is thought to reflect engagement [1]. Positive moods high in activation (e.g. joy) are associated with increased creative performance during ideation through increased flexibility, whereas activating negative moods (e.g. anger, fear) increases performance during ideation through perseverance. Moods associated with lowered activation (e.g. sadness) do not enhance ideation. A second line of research adds that the regulatory focus that is associated with a mood, i.e. whether a mood induces a focus on promotion or prevention, can further explain the relationship between mood and creativity. Moods with a promotion focus (e.g. joy, anger) tend to benefit ideation through increased flexibility [1]. Those with a prevention focus that are activating (e.g. fear) benefit ideation through increased perseverance, whereas those with a prevention focus that are deactivating (e.g. sadness)

are detrimental to ideation [4]. This indicates that a more detailed perspective on the constituents of moods can further help to explain the relationship between mood and creativity. There are however still contradictory findings. A case in point is that a simple model combining valence, activation and regulatory focus cannot easily explain why a high activation, prevention focus, negative mood state such as anxiety is detrimental to creative ideation [1, 7].

We argue that the way mood-creativity research has conceptualized moods is detrimental to the aim of fully explaining the relationship between mood and creativity. However, we believe that an *appraisal tendency* perspective on moods, as set out in the literature on mood and cognition [15] can help further explain this relationship. This approach has not yet been explicitly taken in mood-creativity research.

MOODS AS APPRAISAL TENDENCIES

The appraisal tendency perspective on moods states that moods serve as temporary dispositions to have congruent emotions [14]. For instance, people in happy moods are more likely to experience happy emotions, even when the situation only slightly lends itself to it [14].

According to appraisal theory, emotions typically emerge from appraising an event in terms unexpectedness, intrinsic and goal relevance, goal congruence, certainty, urgency, cause (self, other, chance), coping potential, and compatibility with norms and values. There are many more emotion-relevant appraisals, but the aforementioned ones are sufficient to distinguish between common emotion labels such as happiness, anger, and sadness. For instance, one becomes angry when an event is unexpected, goal-relevant, certain, obstructive to goal attainment, caused by a person, and one believes that a desired outcome can be produced, i.e., removal of the obstruction. These appraisals in turn promote an adaptive response, e.g. encountering something intrinsically pleasant promotes incorporation, goal obstruction promotes reactivity, and a sense of power weighs in with the belief that one can produce a desired outcome with the resources at hand. For a review on appraisal profiles for common emotion labels, and the adaptive responses that are promoted by appraisals, see [14].

Empirical findings show that moods are the accumulation of emotions and other affective events (including appraisals), and also serve as dispositions to have congruent emotions. Therefore moods reflect a tendency to appraise situations in a way that is congruent with the emotions and affective events from which they emerge [14]. For instance, an angry mood is characterized by a tendency to appraise events as unexpected, goal-relevant, obstructive to goal attainment, certain, caused by other people, and the belief that a desired outcome can be produced. Empirical findings support this way of conceptualizing moods. For instance, sad moods increase the likelihood that an event is thought

to have situational cause, whereas angry moods promote the tendency to think an event is caused by other people [9]. This directs the selection of strategies to deal with a situation. People in a sad and fearful mood have the tendency to appraise situations as uncontrollable, whereas angry and happy moods lead people to think that a situation is controllable, which impacts motivation [10]. Moods characterized by (un)certainly lead people to appraise the outcome of events accordingly, which promotes either a heuristic or systematic processing style [3]. This is in line with the way in which appraisals are known to facilitate emotion [cf. 14]. The appraisal tendency perspective states that it is tendencies such as the above that characterize what we label as particular moods, and mediate the influence of moods on cognition [15]. For further reviews on appraisal tendencies and their effects on cognition, see [10, 15].

In comparison to the dominant conceptualizations of moods used in mood-creativity research, the appraisal tendency perspective implies that the valence of a mood (whether it is positive or negative) cannot be viewed as a unitary construct. Positivity-negativity may arise from a tendency to appraise events as intrinsically (un)pleasant, goal (in)congruent, or (in)compatible with one's normative standards [cf. 14]. Furthermore, activation is moderated by many appraisals, e.g. unexpectedness, goal obstruction, and uncertainty increase activation [13]. Regulatory focus could also be influenced by appraisal tendencies, e.g. intrinsic (un)pleasantness may help promote incorporation or rejection, and coping related tendencies moderate the likelihood that one approaches or avoids a situation on the grounds of ability beliefs. The appraisal tendency perspective shows that these common conceptualizations hold some relation to mood, but it is in the underlying appraisal tendencies that we can learn more about the relationship between moods and human adaptive behaviors.

Given the presented evidence, we believe that the appraisal tendency perspective on moods provides an empirically valid and productive conceptualization of moods, which can be used to further uncover how mood, through its constituents, impacts the processes from which creativity emerges.

MOOD AND CREATIVITY: AN APPRAISAL TENDENCY PERSPECTIVE

The appraisal tendency perspective on the relationship between mood and creativity breaks away from previous approaches that were anchored in the positivity or negativity of a mood, and associated constructs at a fundamental level. Appraisal tendencies provide a detailed empirically validated platform that explains the constituents of moods in a fine-grained manner. We argue that this is essential to the aim of explaining the seemingly complex relationship between mood and creativity, because it is these appraisal tendencies that impact human behavior, and therefore the processes from which creativity emerges. To deliver the first steps of an explanation of the relations

between mood and creativity mediated by appraisal tendency theory, and to illustrate its potential, we develop some predictions that can help explain inconsistencies in previous research, and provide some directions for future work. We have divided these predictions along the following themes: 1) Generation and evaluation, 2) engagement, self-motivation, and stress, and 3) direction and content. Note that future research is required to assess the accuracy of these predictions.

Generation and Evaluation

An important theme throughout mood-creativity research is how some moods promote flexible and heuristic thought, which benefits creative performance in early stages of the creative process (e.g. idea generation) whereas others promote systematic thought, which benefits later stages of the creative process (e.g. idea evaluation) [1]. It was argued earlier that the reviewed research could not explain why anxiety impeded idea generation, while in theory, it should benefit creative performance. The appraisal tendency perspective on moods can be used to shed new light on this problem.

According to appraisal theory, anxiety differs from other emotions through the appraisal of events as uncertain [14]. Therefore, moods related to anxiety facilitate a tendency to appraise events as uncertain. Empirical evidence shows that when moods with an uncertainty component are induced, people tend to generate ideas in a systematic manner [3]. Moods characterized by certainty (e.g. happiness, anger) promote less systematic, heuristic approaches [1, 3]. The tendency to appraise the outcome of situations as uncertain or certain therefore moderates the likelihood that one engages in a systematic approach, or relies on heuristics. We therefore predict that moods that are characterized by uncertainty (e.g. anxiety) may therefore benefit later stages of the creative process that require a more systematic approach to information processing.

Flexibility is often opposed to systematic thought. As the above indicates however, being certain does not necessarily promote flexible thought. There is some evidence that appraisals related to goal congruence impact flexibility. The argument is that when an important goal is attained, people relax and become more flexible, which helps finding new goals to pursue, or easily switching to the pursuit of other pending goals, which is also facilitated by flexibility [cf. 14]. Recent findings indicate that flexibility varies among positive moods as a function of goal-directedness [12]. We therefore predict that moods characterized by the tendency to appraise a situation as goal-congruent (e.g. happiness) may increase the likelihood of a flexible approach to creativity, which can benefit creative performance in early stages of the creative process.

Engagement, Self-Motivation, and Stress

A second important theme that arises in mood-creativity research and creativity research in general, is the function

of engagement as a requirement for creativity to occur [1]. Current research has linked engagement to activation, which is, as we have tried to show, a problematic construct in mood research. We argue that there is a potential link between two major factors in engagement, namely stress and motivation, within the context of an appraisal tendency perspective on mood and creativity.

Stress occurs when the required adaptation to a situation exceeds or burdens one's ability to cope with that situation. Mild stress levels benefit engagement, too little diminishes it, while too much interferes with cognition overall [6]. The relation between mood and stress is in the interactions between appraisal tendencies that regulate the perception of pressure (e.g. urgency), and appraisal tendencies related to coping. For instance, angry moods promote the tendency to appraise situations as urgent, but at the same time facilitate high perceived control, power, and adaptability to manage that pressure [cf. 14]. Anxiety also promotes a tendency to perceive events as urgent, but is low on perceived power and adaptability, which increases the likelihood that an event exceeds or burdens coping, and increases stress [cf. 14]. We therefore predict that moods such as anger that are characterized by a balance between appraisal tendencies that moderate the taxation of cognition, and appraisal tendencies related to coping potential, are more likely to maintain engagement with a creative activity.

Situations that are self-motivating also benefit creativity though increased engagement with the task at hand [5]. One aspect of self-regulation in motivation that may be particularly susceptible to moods is the belief in one's own ability to produce a desired outcome [5]. Appraisal tendencies related to control and power moderate the belief that a desired outcome can be produced [10]. Moods characterized by the tendency to perceive events as uncontrollable (e.g. sadness, fear) increase the likelihood that one believes that no desirable outcome can be produced. This increases the likelihood that one does not engage in or prematurely disengages with a creative activity. Moods characterized by a tendency to appraise events as controllable (e.g. happiness, anger) increase the likelihood that one believes that a desirable outcome can be produced. This increases the likelihood that one engages in, and remains engaged with a creative activity. We therefore predict that moods characterized by high controllability and power benefit creative engagement.

Direction and Content

An entirely new focus in mood-creativity research could be based on the way appraisal tendencies bias the attribution of a cause and emphasis on particular normative standards. The influence of different moods may thus impact the content and direction of a creative process, and eventually its outcome.

The identification of causes of a situation facilitates the allocation of the appropriate knowledge to deal with a

situation [11]. This gives direction to the content of a creative process in an open ended creative situation. When a specific problem is a given, the identification of essential causes determines the quality of a creative outcome [11]. Moods are characterized by a tendency to attribute the cause (e.g. self, other, chance) of a situation in a mood congruent way. For instance, people in angry moods tend to attribute the cause of an event to other people and assume intent [9]. It follows that people in an angry mood tend to retrieve knowledge relating to that other person or group of people, their intentions, and heuristics to deal with that specific situation. Other appraisal tendencies towards causality follow this pattern accordingly [9]. We therefore predict that moods characterized by a tendency to attribute a particular cause, can impact the direction and content of a creative activity.

Direction and content can also depend on the standards applied in evaluative aspects of the creative process, which shape what is deemed relevant or appropriate [11]. There is some evidence for appraisal tendencies that emphasize a particular set of normative standards in different moods [8]. For instance, angry moods emphasize socio-moral concerns relating to justice, rights, and autonomy. For an overview on the relationship between different moods and tendencies toward emphasizing different socio-moral concerns, see [8]. The emphasis put on specific normative standards may bias evaluation of creative ideas, and influence the content of a creative process, and ultimately its outcome. Therefore, we predict that the standards emphasized in different moods influence evaluative modes of thought, which in turn influences the direction and content of a creative activity.

CONCLUSION

Past research shows that the relationship between mood and creativity is complex. A brief but illustrative review has shown that further progress in this field is impeded by the way moods and their constituents have been conceptualized. We have argued that an appraisal tendency perspective on moods provides an empirically valid and productive alternative to previous conceptualizations of mood, with which we can further attempt to uncover the impacts of moods' constituents on the processes from which creativity emerges. To support our arguments we have developed predictions that offer a new perspective on inconsistencies found in previous work, and point towards some new directions for research on the relationship between mood and creativity. Future research is required to assess the accuracy of the developed predictions.

REFERENCES

1. Baas, M., De Dreu, C.K.W., and Nijstad, B.A. A Meta-Analysis of 25 Years of Mood-Creativity Research: Hedonic Tone, Activation, or Regulatory Focus? *Psychol. Bull.* 134, 6 (2008), 779-806.
2. Baas, M., De Dreu, C.K.W., and Nijstad, B.A. Creative production among angry people peaks early on, decreases over time, and is relatively unstructured. *J. Exp. Soc. Psychol.* 47, (2011), 1107-1115.
3. Baas, M., De Dreu, C.K.W., and Nijstad, B.A. Emotions that associate with uncertainty lead to structured ideation. *Emotion* 2, 5 (2012), 1004-1014.
4. Baas, M., De Dreu, C.K.W., and Nijstad, B.A. When prevention promotes creativity: The role of mood, regulatory focus, and regulatory closure. *J. Pers. Soc. Psychol.* 100, 5 (2011), 794-809.
5. Bandura, A. *Self-Efficacy: The Exercise of Control*. Freeman, New York, NY, USA, 1997.
6. Byron, K., Khazanchi, S., and Nazarian, D. The relationship between stressors and creativity: A meta-analysis examining competing theoretical models. *J. Appl. Psychol.* 95, 1 (2010), 201-212.
7. De Dreu, C.K.W., Baas, M., and Nijstad, B.A. Hedonic tone and activation in the mood-creativity link: Towards a dual pathway to creativity model. *J. Pers. Soc. Psychol.* 94, (2008), 739-756.
8. Horberg, E.J., Oveis, C., and Keltner, D. Emotions as moral amplifiers: An appraisal tendency approach to the influence of distinct emotions upon moral judgment. *Emot. Rev.* 3, 3 (2011), 237-244.
9. Keltner, D., Ellsworth, P.C., and Edwards, K. Beyond simple pessimism: Effects of sadness and anger on social perception. *J. Pers. Soc. Psychol.* 64, 5 (1993), 740-752.
10. Lerner, J.S. and Keltner, D. Fear, anger, and risk. *J. Pers. Soc. Psychol.* 81, 1 (2001), 146-159.
11. Mumford, M.D., Medeiros, K.E., and Partlow, P.J. Creative thinking: Processes, strategies, and knowledge. *J. Creative. Behav.* 46, 1 (2012), 30-47.
12. Price, T.F. and Harmon-Jones, E. The Effect of Embodied Emotive States on Cognitive Categorization. *Emotion* 10, 6 (2010), 934-938.
13. Scherer, K.R., Dan, E.S., and Flykt, A. What determines a feeling's position in affective space? A case for appraisal. *Cogn. Emot.* 20, 1 (2006), 92-113.
14. Scherer, K.R. The dynamic architecture of emotion: Evidence for the component process model. *Cogn. Emot.* 23, 7 (2009), 1307-1351.
15. Siemer, M. Mood experience: Implications of a dispositional theory of moods. *Emot. Rev.* 1, 3 (2009), 256-263.