

**The Receiving Side of Creativity: The Mediating Role of Cognitive Flexibility Between
Positive Trait-Affect and Idea Evaluation**

Daan Liam Fiedler

s4758129

University of Groningen

d.l.fiedler@student.rug.nl

Supervisor: Dr. E.F. Rietzschel

Second Evaluator: Prof. Dr. Russell Spears

24.06.2024

Abstract

The importance of the receiving side of creativity, more specifically, the evaluation of creative ideas in the organizational context, is becoming more recognized in research. The tension between novelty and usefulness during evaluations results in inhibited innovative outcomes for organizations. This study explores this by examining the mediating role of cognitive flexibility between positive trait-affect and the evaluation of ideas based on novelty versus usefulness. Data from 112 employees across 33 organizations were collected via a cross-sectional survey. While no significant direct relationship was found between positive trait-affect and idea evaluation (H1), the relationship with cognitive flexibility was significant (H2). However, cognitive flexibility did not mediate the relationship between positive trait-affect and idea evaluation (H3). These findings suggest that while positive trait-affect is related to cognitive flexibility, it is not related to appreciating novelty over usefulness in creative ideas. Further research is recommended to investigate contextual factors and affect in more reliable research designs.

Keywords: idea evaluation, positive trait-affect, cognitive flexibility, novelty, usefulness

The Mediating Role of Cognitive Flexibility Between Positive Trait-Affect and Idea Evaluation

Creativity, a construct that has gained much attention in recent years, has been a major influence on development throughout history and is still a driving force in our current society (Neill, 2007). The word creativity stems from the Latin verb "creo," which means "to produce" or "to make." Historically, creativity was identified as an individual trait of geniuses and artists. Conversely, now creativity is important in a broad spectrum of fields. Therefore, research on creativity expanded across different areas, and its application in the organizational context has become increasingly complex (Zhou et al., 2019). As Amabile (1996) already identified, "Creativity is the seed of all innovation." (p. 1155). Leading organizations all over the world emphasize creativity and innovation as keys to economic success (Williams & McGuire, 2010). The generation of creative ideas shapes innovation within organizations. Equally important for economic success is the evaluation of creative ideas to determine their potential (Zhou et al., 2019). Understanding the factors that influence why an idea is selected over another is important for enhancing innovation in organizations.

Perry-Smith and Mannucci (2017) describe a creative idea's life cycle in an organization as moving from idea generation through elaboration to eventual championing and implementation. In each phase, an idea is shaped through detailed evaluations by oneself, fellow employees, or supervisors. A creative idea is both novel and useful and is therefore evaluated based on those characteristics (Hennessey & Amabile, 2010). The constant evaluation and refinement during the lifecycle of an idea within organizations underscore the importance of examining the evaluation of creative ideas in terms of their novelty and usefulness.

The Evaluation of Ideas

The creative evaluation process in organizations is defined by the expected outcome of an idea. Choosing ideas that are either useful or novel can create tension during the creative evaluation process. Both dimensions are negatively correlated and value opposing things in an idea, which makes their evaluation criteria paradoxical (Mueller et al., 2012). On one hand, novel ideas have a greater long-term innovative effect and result in more economic progress but bring greater risk (Zhou et al., 2019). While useful ideas, on the other hand, often have less but immediate impact, with lower risks (Zhou et al., 2019). Thus, the creative outcome for an organization depends on the extent to which the evaluator emphasizes the different dimensions and navigates their paradoxical demands effectively to produce original ideas while maintaining their feasibility (Miron-Spektor et al., 2011).

A balanced evaluation of an idea is often hindered by the so-called “bias against creativity,” which claims that evaluators tend to prioritize practical ideas over those that are novel and highly original (Mueller et al., 2012). A highly novel idea often comes with risks and uncertainty, which creates resistance from the evaluators (Baer, 2012). Conversely, the usefulness of an idea, its potential value, and its feasibility predict acceptance and possible implementation (Baer, 2012; Litchfield et al., 2015). The preference of evaluators to minimize risk for themselves and their company reduces the overall innovative outcomes in an organization (Rietzschel et al., 2010). Therefore, balancing the two dimensions requires integration rather than competition to effectively decide which ideas are put forward and which are not. As Smith & Lewis (2011) propose in their article, this integration is often impossible for evaluators to accomplish. The natural tendency to resolve a paradoxical dilemma or tension in organizations is to prioritize one over the other (Smith & Lewis, 2011). In the case of novelty and usefulness, this tension mostly leads to choosing useful ideas over novel ones. Therefore this

paper examines this problematic trade-off between novelty and usefulness by studying positive affect and cognitive flexibility as possible predictors that influence the evaluations of the paradoxical demands on creative ideas.

Affect as a Precondition for Effective Idea Evaluation

Affect is the umbrella term for dispositional affective traits and affective states (Barsade & Gibson, 2007). It encompasses a broad spectrum of emotions and moods. Trait-affects are stable predispositions toward experiencing affective states, extending momentary mood states (affective states) to shape cognitive processes and behaviors over extended periods (Watson et al., 1988). Affect can differ in its valence and intensity, leading to differing relations to creativity, cognitive flexibility, and the evaluation of ideas (Nijstad et al., 2010; Russell, 1980). According to Fredrickson (2004), positive affect broadens individual thought processes and enhances general openness and exploratory thinking.

Multiple publications propose that positive affective states can enhance effective idea evaluations (Buisonjé et al., 2017; Mastria et al., 2019). Buisonjé and colleagues (2017) conducted a field study examining the idea evaluation process. They tested the relations of self-affiliation, promotion-focus, and positive affective states in an idea evaluation task. The results showed that participants in the positive affective state condition, complemented by promotion focus and self-affirmation, chose more original ideas than participants with no induced affects. Therefore, positive affective states contribute to shifting evaluators' opinions towards appreciating novelty while maintaining the same appreciation for usefulness (Buisonjé et al., 2017). Additionally, research by Mastria et al. (2019) investigated how affective states influence external idea evaluation in terms of rating ideas based on their creativity. They found that participants in the positive affect condition rated ideas as more creative than participants in

the negative affect or neutral conditions, but only if the idea was moderately creative. These findings suggest that induced positive affective states can impact the evaluation of moderately creative ideas toward appreciating their originality more.

While presented studies support positive affect as a precondition to influence the evaluation of ideas, it is unclear how and to what extent positive affect and idea evaluation are related. Literature on behalf of positive affect and idea evaluation is rare. However, there is a body of research suggesting that cognitive flexibility is enhanced by positive affect, possibly facilitating effective idea evaluation and selection (Ashby et al., 1999; Baas et al., 2008; Fredrickson, 2004; Ionescu, 2012; Nijstad et al., 2010).

Positive Affect Impact on Cognitive Flexibility

Cognitive flexibility is a property of the cognitive system that emerges from the interaction of various cognitive mechanisms while enabling adaptive responses to changing environmental demands, for example, effectively evaluating highly novel ideas (Ionescu, 2012). The dual pathway to creativity model provides a detailed framework for how positive affect and negative affect influence creativity through cognitive flexibility and persistence (Nijstad et al., 2010). This model illustrates that positive affective states such as joy or excitement enhance creativity by promoting cognitive flexibility, while negative affective states such as sadness or fear improve creativity by strengthening cognitive persistence. The model integrates both pathways to creativity within a framework that focuses on the variability in creative performance between an individual's affective state and their cognitive processes (Nijstad et al., 2010). However, it remains unclear whether the pathways function the same way on the receiving side of creativity.

According to the broaden-and-build theory by Fredrickson (2004), positive emotions broaden an individual's momentary thought-action repertoire, increasing cognitive flexibility and enhancing exploratory thinking. Isen (1987) empirically examined this in her study and found that participants in the positive affective state condition, compared to neutral and negative states, were more effectively engaged in creative problem-solving. They experienced enhanced integration of unrelated ideas during standardized creative problem-solving tasks. These findings propose that positive affect enhances cognitive flexibility, which then might be responsible for creating novel associations that are less likely to occur in a neutral or negative affective state. More specifically, positive affect increases cognitive flexibility, leading to greater openness to explore original ideas.

A series of three studies by Hirt et al. (2008) provides further insight into the underlying mechanisms of positive affect and cognitive flexibility, emphasizing the role of hedonic contingency theory (HCT). The theory posits that individuals engage in activities to maintain or enhance their current positive moods. Participants in a happy mood condition were more inclined to choose creative tasks and exhibited greater cognitive flexibility if they engaged in creative thinking processes to maintain their positive affective state (Hirt et al., 2008). They suggest that the desire to maintain a positive mood is inherent and drives individuals to embrace cognitive flexibility. This aligns with the research by Nijstad et al. (2010) and supports the broader framework that positive affect enhances cognitive flexibility and creative thinking.

Moreover, Ashby et al. (1999) explored the neurobiological underpinnings of positive affect's influence on cognitions while explaining the role of the dopaminergic system in facilitating cognitive flexibility. The results showed that positive affect, by modulating dopamine levels, contributes to a reduction in latent inhibition and enhances the brain's ability to engage

with unconventional ideas. This dopaminergic activity facilitates cognitive states that are highly beneficial to creative cognitions and enhances the individual's capacity for both generating a multitude of potential solutions and viewing problems from multiple, often novel perspectives, while switching flexibly between them (Ashby et al., 1999).

Building on the presented theories and studies, cognitive flexibility intercedes the relationship between positive affective states and creativity (Nijstad et al., 2010). More specifically, cognitive flexibility enhances processing styles and creative thinking, which may facilitate effective idea evaluation (Isen, 1987; Fredrickson, 2004; Ashby et al., 1999). However, it remains unclear to what extent cognitive flexibility influences the judgments, evaluations, and choice of creative ideas regarding novelty and usefulness.

Cognitive Flexibility and Creative Judgment

Cognitive flexibility as a property of the cognitive system allows individuals to adaptively shift their cognitive processes and decision-making strategies in response to varying demands and opportunities. It incorporates cognitive mechanisms like attention shifting, conflict monitoring, and perception (Ionescu, 2012). These mechanisms allow individuals to evaluate ideas from diverse perspectives and effectively monitor the conflicting demands of novelty and usefulness through integration rather than competition.

Previous research suggests a relationship between cognitive flexibility and creative judgment. Isen and Daubman (1984) found that participants in positive affective states experienced an increase in cognitive flexibility, which led to faster and more accurate results in a categorization task. In the context of idea evaluation, this could lead to an enhanced ability to categorize an idea as novel or useful and switch between the two classifications. Additionally, Laureiro-Martínez and Brusoni (2018) investigated the role of cognitive flexibility in adaptive

decision-making. They found that individuals with higher cognitive flexibility were better at adapting decision-making strategies in response to changing environmental demands. For example, in a company with a changing market demand, this could lead to more adaptive decisions about novel ideas while being more open toward originality. Furthermore, cognitive flexibility was associated with better performance in a task requiring the integration of new information and the adjustment of strategies (Laureiro-Martínez & Brusoni, 2018). Therefore, the study provides empirical support for the relation between cognitive flexibility, decision-making, and monitoring conflicting demands, possibly influencing the choice of ideas based on their novelty and usefulness.

Moreover, Yang et al. (2013) tested the working memory capacity of participants in neutral and positive affective states and found that positive affect significantly enhances the working memory capacity. The study shows that participants in a positive affect condition show enhanced controlled cognitive processing of information, which is strongly related to cognitive flexibility (Ionescu, 2012; Yang et al., 2013). The increased working memory capacity enhances cognitive performance, which might apply to the effective evaluation of ideas as well.

Collectively, the presented research provides evidence that positive affective states increase cognitive flexibility, which leads to enhanced cognitive processing, decision-making, conflict monitoring, and perceptions resulting in effective creative judgment. This impact on creative judgments suggests a shift toward effective evaluations of creative ideas appreciating novelty more to mitigate the bias against creativity and support more dynamic and innovative decision-making in organizations (Ionescu, 2012; Laureiro-Martínez & Brusoni, 2018; Yang et al., 2013). Therefore, cognitive flexibility, enhanced by positive affective states, seems to

influence idea evaluation towards appreciating originality more while effectively controlling for usefulness.

Cognitive Flexibility: Bridging Affect and Creative Evaluation

In sum, the presented research builds the foundation for this thesis, exploring the mediating role of cognitive flexibility between positive trait-affect and idea evaluation based on novelty versus usefulness in the organizational context. However, while research does establish links between the individual concepts, this particular relationship has never been examined. By examining these relationships, this paper contributes to the understanding of the affect-cognition-behavior link in an organizational, innovative context. Moreover, previous research has disregarded the implementation of positive trait-affect as a stable measurement for positive affective states and its relationship with cognitive flexibility. Furthermore, the extent to which cognitive flexibility mediated the impacts on the evaluation of ideas in the organizational context presents a notable research gap.

This thesis aims to extend previous literature by conducting a field study about the evaluation of ideas in organizations, more specifically by investigating: *Does cognitive flexibility mediate the relationship between positive trait-affect and the evaluation of creative ideas in terms of novelty versus usefulness?* Specifically, I hypothesize that: H1: *Positive trait-affect is positively associated with evaluating ideas more in terms of their novelty than usefulness*; H2: *Positive trait-affect is positively associated with cognitive flexibility*; H3: *The relationship between positive trait-affect and evaluating ideas as novel versus useful is mediated by cognitive flexibility* (Figure 1, Appendix B).

Methods

This study is one of six independent research projects all part of a larger bachelor thesis project (Bruinsma, 2024; Meerema, 2024; Spijkerman, 2024; Spratt, 2024; van Weers, 2024). The survey was constructed by a research group of undergraduate students also assessing multiple other variables that are not relevant to this research paper. The study used a cross-sectional survey instrument translated into Dutch, German, and English, thus, participants could choose the language they preferred.

Participants

The sample of participants consisted of employees from 28 Dutch and five German organizations. A total of 170 employees took part in the study. However, based on one final attention check question, applied straight-line criteria, incomplete responses, participants exhibiting response times, and informed consent declines, data from 58 participants was removed. No outliers were excluded. The use of these criteria aimed to ensure data quality while maximizing the inclusion of valid responses. Therefore, the final dataset included an effective sample size of 112 participants, between the ages of 18 and 61+, with 61 females (54.5%), 51 males (45.5%), and no non-binary/third gender (0%). The final data set included data from a total of 33 organizations.

Procedure

The procedure started with the development of a questionnaire consisting of all relevant variables for our study and acquiring approval from the Ethics Committee of the University of Groningen. After that, we began recruiting participants using a convenience sampling method by contacting people in our network. Data was collected from the 6th of May, 2024, until the 3rd of June, 2024. Completion of the survey took about 10 to 15 minutes. The respondents received an informed consent stating the anonymity of their information and the purpose of the study, which

they read and agreed with before completing the questionnaire. Moreover, participation was voluntary and no kind of compensation was provided. The participants completed scales concerning positive trait-affect, entrepreneurial curiosity, need for closure, cognitive flexibility, paradoxical climate, role ambiguity, efficiency work climate, work satisfaction, and our self-made idea evaluation scale. After they completed the questionnaire the participants could read the debriefing. Later on, the recorded data was cleaned and analyzed using SPSS and PROCESS macro.

Measures

Idea Evaluation

We constructed a 6-item scale based on the literature on the evaluation of creative ideas (Amabile, 1983; Litchfield et al., 2015; Mueller et al., 2012). The scale consists of 2 items for each part of the creative evaluation: novelty, feasibility, and value. Participants responded by indicating to what extent they agreed with each of the items ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). An example item was “*When evaluating ideas, I focus on the novelty of an idea.*”. To assess the degree to which participants tended to focus on usefulness at the cost of novelty, we calculated a ratio by dividing the mean score on the two novelty items by the mean score of the 4 usefulness (feasibility and value) items. A value higher than one implies that participants focused more on novelty than on usefulness; a value lower than one implies that participants focused more on usefulness than on novelty. The intercorrelations between the items for novelty, feasibility, and value were .49, .25, and .32 respectively, suggesting low internal consistency for these scales. In line with this, Cronbach's alpha for feasibility and value combined was only $\alpha = .48$.

Positive Trait-Affect

Positive trait-affect was measured with the 10-item PANAS-Scale developed by Watson et al., (1988). The original PANAS-Scale consisted of 20 items; the 10 items measuring negative affect were not used because of irrelevance for and length of the study. Participants responded by indicating, on a 5-point Likert scale, to what extent they agreed with each of the items 1 (*very slightly*) to 5 (*extremely*). An example item is “*Please indicate to what extent you generally feel this way (e.g. Excited), that is, how you feel on average*”. The Cronbach’s alpha of $\alpha = .63$ indicates moderate reliability of the scale.

Cognitive Flexibility

Cognitive flexibility was measured with the 13-item Cognitive Flexibility Inventory developed by Dennis & Vander Wal (2010). To suit the study's purpose and reduce its length, I only used the alternative subscale, consisting of 13 items about (a) “the ability to perceive multiple alternative explanations for life events and human behavior”; and (b) “the ability to generate multiple alternative solutions to difficult situations.”. The control scale was excluded because the 7 included items measured “the tendency to perceive difficult situations as controllable,” which is unrelated to the concept of idea evaluations, e.g., “*I am capable of overcoming the difficulties in life that I face*”. Participants responded by indicating, on a 5-point scale, to what extent they agreed with each of the items 1 (*strongly disagree*), and 5 (*strongly agree*). An example item is “*I have a hard time making decisions when faced with difficult situations*”. The reliability of $\alpha = .79$ is relatively strong, indicated by Cronbach’s alpha.

Results

The mediation model (Appendix B, Figure 1) was analyzed using PROCESS macro Model 4 by Andrew Hayes in SPSS. All other statistics, including preliminary assumption checks and descriptive statistics, were computed using SPSS.

Preliminary Analysis

Before analyzing the results of the study, I cleaned the data excluding participants as described in the method section. Additionally, Cooks' distance indicated no influential outliers in the data set. Therefore, I ended up with 112 complete responses. After that, I checked the data of the primary variables of interest; positive trait-affect (affect), cognitive flexibility (flexibility), and the ratio of novelty to usefulness (ratio) for the four major assumptions of a regression analysis. Detailed tables and graphs concerning the assumption checks can be found in the supplementary materials document in the research project data folder. Firstly, linearity was examined via scatterplots. Besides some extreme values, there was no evidence of a severe violation. Secondly, the Shapiro-Wilk test was used to assess the normality of the residuals of each regression path in the mediation model. The p -value of path A (affect - flexibility) was significant ($p = .001$), which indicated a violation of normality. However, the visual inspection of the Q-Q plots showed no major violations of normality. Moreover, I used PROCESS macro for the mediation and regression analysis with bootstrapping (5000 samples), which is a robust technique that controls for violations. Next, the visual inspection of the standardized residual scatter plots showed no major violations of the homogeneity of variances. This indicated a consistent variance in error terms across different levels of predicted outcomes, thus no major violations were present. Lastly, the multicollinearity assumption was checked for all regression paths (Appendix B, Figure 1) with all VIF scores between 1 and 10, ensuring clean and reliable estimates of the regression coefficients. The VIF score for path A was $VIF = 1.0$ and for paths B and C $VIF = 1.06$.

Descriptive statistics

As detailed in Table 1 (Appendix A), the descriptive statistics for the three primary variables displayed very low standard deviations, which indicated low variance. Additionally, only the correlation between flexibility and affect was significant ($r = .24, p = .012$). Especially the nonsignificant low correlations between the dependent variable and the predictors were unexpected (Table 1, Appendix A). The mean score for the ratio of novelty and usefulness ($M = 0.73, SD = 0.22$) showed a general preference for usefulness over novelty in respondents.

Regression Analysis

I first examined the relationship between affect and flexibility with linear regression (Table 2, Appendix A). The coefficient indicated a positive association between the two predictors ($\beta = 0.24, p = .012$). The p -value of the relationship showed that the relationship between affect and flexibility is significant while explaining four percent ($R^2_{adj} = .04$) of the variance in flexibility, which is in line with H2. Next, I found a nonsignificant near-zero relation between flexibility and the ratio, controlling for affect ($\beta = -0.00, p = .974$). The regression model was overall nonsignificant ($R^2_{adj} = -.01, p = .701$). Therefore, higher scores of flexibility did not predict a higher score of the ratio (Table 3, Appendix A).

Mediation Analysis

After that, I examined the total, direct, and indirect effects of affect and flexibility on the ratio (Table 4). The direct effect represented the impact of affect on the ratio controlled for cognitive flexibility was not statistically significant ($\beta = 0.05, p = .409, 95\% CI = [-0.09, 0.17]$). This indicated that there was no significant association between affect and the ratio. Moreover, the indirect effect was nonsignificant as well, representing the association of affect with the ratio mediated by flexibility (H3). The bootstrapped confidence interval did include zero (BootLLCI = -0.12; BootULCI = 0.11) which means that the mediation effect was not significant, rejecting

H3. The total effect from affect on the ratio was not significant either, suggesting that affect was not associated with the ratio at all ($\beta = 0.05, p = .398, 95\% \text{ CI} = [-0.06, 0.16]$). Therefore, the mediation analysis showed that neither positive trait-affect nor cognitive flexibility is associated with an evaluation of ideas appreciating novelty over usefulness (Table 4, Appendix A).

Post-Hoc Analysis

In addition to the main analysis, I conducted a post-hoc analysis examining positive activating trait-affect as a variable to see if the results might indicate a positive association with the ratio. The mean and standard deviation for the activating positive affect were conducted from six items of the PANAS scale ($M = 3.52, SD = 0.41$). In the post-hoc analysis, the relationship between the activating positive affect and cognitive flexibility was a little bit stronger and more significant ($\beta = 0.25, p = .003, R^2_{adj} = .07$) compared to the initial analysis (Table 2 and Table 5, Appendix A). Moreover, the mediator in this model did not significantly predict the ratio ($\beta = -0.01, p = .891$) (Table 6, Appendix A), and the direct effect remained nonsignificant but was a little stronger as well ($\beta = 0.06, p = .277$). The total effect of the new variable on the ratio was also nonsignificant ($\beta = 0.06, p = .273$) (Table 7, Appendix A). These results suggested that while positive activating trait-affect had a slightly stronger association with cognitive flexibility, neither positive trait-affect nor activating positive trait-affect significantly affected the evaluation of ideas based on their novelty versus usefulness, either directly or through mediation by cognitive flexibility.

Discussion

In this field study, the mediating role of cognitive flexibility between positive trait-affect and the evaluation of ideas based on novelty versus usefulness using a cross-sectional survey instrument was examined. My analysis revealed a significant but small positive association

between positive trait-affect and cognitive flexibility supporting the hypothesis that positive trait-affect enhances cognitive flexibility (H2). However, contrary to my expectations, the results showed no significant association regarding the influences of positive trait-affect on idea evaluation (H1) and the mediating role of cognitive flexibility between positive trait-affect and the evaluation of ideas in terms of novelty versus usefulness (H3). The following post-hoc analysis examined activating positive affects as possible predictors and found no significant results either, although they indicated a slight increase in significance and slightly stronger associations.

Theoretical implications

To begin with, a possible explanation for the nonsignificant direct relationship between positive trait-affect and idea evaluation could be the focus on self-reported trait affect rather than induced affective states. Trait-affect examines a stable predisposition whereas previous studies often manipulated momentary affective states which might have a more immediate impact on idea evaluation. The duration and persistence of affective influences might be different for trait affect and affective states concerning idea evaluation.

As Baas et al. (2008) found in their meta-analysis, activating positive affect results in enhanced creative performance. Although the post-hoc findings in this study were nonsignificant, the results still suggest that activating positive affect could influence the receiving side of creativity, potentially explaining the overall nonsignificance in the main results. Comparing the results of the post-hoc analysis and the main analysis, the data showed slightly higher correlations and slightly greater nonsignificance when testing activating positive affect than general positive affect, in relation to idea evaluation. This suggests that with a more reliable research design, activating positive affect might have shown significant results.

A study by Wang et al. (2022) tested the relationship between low or high approach motivation positive affect (correlated to non-activating and activating positive affect) and creative idea evaluation. They found that positive affect, particularly under low-approach motivation has a deactivating impact on the prefrontal cortex, leading to a bias in evaluation where participants overestimated the usefulness of ideas and were less critical. This broad attentional scope may facilitate flexible thinking but also the acceptance of less creative ideas. In contrast, high-approach-motivated positive affect led to greater engagement during the evaluative process. Therefore, the findings propose that activating positive affect might have a greater impact on creative idea evaluations than general positive affect.

Besides the level of arousal, other possible factors influencing the results could be the valence and stability of affect. Montag et al. (2023) found in their study that positive affect enhances creative ideation, while at the same time negative affect and allowing natural fluctuations in mood benefit the evaluation of ideas. Lai et al. (2021) support this with their study about creative idea evaluation. They found that affective shifts from negative to positive have a beneficial impact on the evaluation of ideas in terms of participants appreciating the novelty of ideas. Therefore, negative or fluctuating moods might lead to a more effective idea evaluation. Furthermore, Nijstadt et al. (2010) proposed that negative affect enhances persistence in people, which might have a greater influence on the evaluation of ideas than positive affect and cognitive flexibility. A study by Bless et al. (1996) examined mood influences on cognition. They found that induced positive affect led to more reliance on general knowledge structures and scripts while completing a task. This did not influence the performance of participants in cognitive tasks but might suggest that positive affect creates reliance on existing knowledge structures and scripts while evaluating ideas as well. Past idea evaluation scripts and organizational culture and

policies might get activated through positive affect resulting in biased idea evaluations. On the contrary, negative affect might enhance the evaluation of ideas. Bless and colleagues (1996), propose that negative affect enhances cognitive processing and detail-oriented thinking, possibly leading to effective idea evaluation processes, and appreciation of novelty. Overall, Nijstadt et al. (2010), Bless et al. (1996), Montag et al. (2023), and Lai et al. (2021) provide theoretical foundations for hypothesis testing concerning negative affect, persistence, and fluctuating moods as personal factors in relation to idea evaluations in organizations.

The significant relationship between positive trait-affect and cognitive flexibility, although unrelated to creative idea evaluation, might be related to creative ideation and performance. As presented in the introduction and indicated by research from Nijstadt et al. (2010) and Montag et al. (2023), creative ideation is positively associated with positive affect and cognitive flexibility. This shows the differing requirements for creative ideation and evaluation, establishing the complexity of innovation in the organizational context. The process of creative ideation happens before the evaluation phase and therefore presents more freedom and is less influenced by contextual factors (Baer, 2012). The closer an idea gets to implementation, the more evaluators appreciate usefulness over novelty (Baer, 2012). Therefore, the two processes happen under very different external conditions and require different internal characteristics to produce efficient output. Contextual factors like organizational culture, policies, expectations, or rules might be the primary predictors for the evaluation of ideas, putting less emphasis on personal factors like positive trait-affect and cognitive flexibility which are related to creative ideation output (Baer, 2012; Montag et al., 2023). Often, organizations try to increase the creative ideation output, while in the next step, the evaluation of those ideas

requires more consideration about the feasibility of an idea, leading to more emphasis on risk assessment and less appreciation for novelty (Baer, 2012).

Practical Implications

Generally, this line of research purposefully tries to enhance creative processes in organizations while examining factors that might negatively impact the innovative process of idea evaluations. Besides the nonsignificant findings of this paper, organizations should create an awareness of the tension between novelty and usefulness. Independent of any type of predictors, the trade-off between novelty and usefulness should be known to evaluators so they can control for the bias against creativity and reach more innovative outcomes. Moreover, it is important to note that usefulness itself is very important for organizations and is in itself nothing bad. Furthermore, the findings of this study complimented by the presented research support the positive affect and creative ideation link through cognitive flexibility. Therefore, if organizations want to foster flexible thinking and consequently creative ideation, an environment that increases positive affect in employees should be implemented.

Limitations And Future Research

The conducted study faces some limitations influencing the research findings. Firstly, the sample size of 112 participants in only 33 organizations may limit the generalizability of the findings. Furthermore, the cross-sectional correlational study design limits the explanatory power so no causality can be established. Additionally, the study relied on self-report measures which can be subject to biases (for example, social desirability bias or response bias). The low internal consistency of the usefulness items and the low correlation between the novelty items could have influenced the results through measurement error, leading to reduced reliability and validity of the findings. Moreover, the results showed that participants responded very similarly to each

item, leading to a very low variance in scores. Consequently, the small amount of explainable variance could have led to an underestimation of the actual impact of the variables studied. Hence, using a 7-point Likert scale for all primary variables could have captured more accurate variations in the participant scores, leading to more interesting results. The cognitive flexibility inventory was an interesting instrument to use. However, the concept of cognitive flexibility as a property of the cognitive system might be hard to assess accurately, incorporating all of its different facets.

Future research should aim to include larger and more diverse samples and use a more internally coherent scale for novelty and usefulness improving and refining items to ensure they accurately measure the intended constructs. Moreover, mixed methods or longitudinal designs would provide more valid and reliable results, such as combining quantitative surveys with qualitative interviews. Additionally, if future studies try to incorporate cognitive flexibility in their models, I suggest using the whole scale and not only a subscale, which possibly increases the reported variance in the results. Looking at the theoretical implications for affect, future research should examine activating positive affect, fluctuating affect, and the combination of both valences concerning idea evaluations. More specifically, the relationship between negative affect, persistence, and idea evaluations could provide further insights into idea evaluation processes. Another possibility would be to investigate the role of promotion focus in relation to appreciating novelty versus usefulness in ideas. A study by Herman and Reiter-Palmon (2011) found that promotion-focused individuals, who strive for growth and accomplishment, are more likely to engage in risk-taking, working against the bias against creativity. Therefore, examining a model including positive or negative affect in an organizational climate that promotes promotion focus could connect contextual and individual factors influencing the evaluation of

ideas. However, looking at the different characteristics of creative ideation and evaluation, contextual factors like organizational climate, policies, and general influences might reduce the impact personal factors have on the evaluation of ideas. Furthermore, the personal interactions during the process including pitching ideas to other employees are another factor influencing idea evaluation in organizations and should be considered in future examinations. Therefore, examining organizational climates or even economic principles that drive organizations would be interesting. Furthermore, the presented model of this study could also be interesting to examine with creative ideation as the dependent variable.

Conclusion

To conclude, this study adds to a growing line of research. The evaluation of ideas' novelty and usefulness shapes innovative progress in organizations, while novelty is often disregarded. Although positive trait-affect and cognitive flexibility showed no significant associations with the trade-off between novelty and usefulness, given the limitations of this study, further examination of affective factors in idea evaluation in a more reliable research design could provide interesting insights. Additionally, the association between positive trait-affect and cognitive flexibility can be examined further and applied to different contexts in the organizational setting, for example, creative ideation. Overall, future research needs to examine innovative processes and the trade-off between novelty and usefulness in organizations further, incorporating different variables like contextual factors, negative affect, shifting affect, or promotion focus in their research.

Reference List

- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the Work Environment for Creativity. *The Academy of Management Journal*, 39(5), 1154–1184.
<https://doi.org/10.2307/256995>
- Amabile, T. M., Barsade, S. G., Mueller, J. S., & Staw, B. M. (2005). Affect and Creativity at Work. *Administrative Science Quarterly*, 50(3), 367–403.
<https://doi.org/10.2189/asqu.2005.50.3.367>
- Ashby, F. G., Isen, A. M., & Turken, A. U. (1999). A neuropsychological theory of positive affect and its influence on cognition. *Psychological Review*, 106(3), 529–550.
<https://doi.org/10.1037/0033-295x.106.3.529>
- Baas, M., De Dreu, C. K. W., & Nijstad, B. A. (2008). A meta-analysis of 25 years of mood-creativity research: hedonic tone, activation, or regulatory focus? *Psychological Bulletin*, 134(6), 779–806. <https://doi.org/10.1037/a0012815>
- Baer, M. (2012). Putting Creativity to Work: The Implementation of Creative Ideas in Organizations. *Academy of Management Journal*, 55(5), 1102–1119.
<https://doi.org/10.5465/amj.2009.0470>
- Barsade, S. G., & Gibson, D. E. (2007). Why does affect matter in organizations? The Academy of Management Perspectives, 21(1), 36–59. <https://doi.org/10.5465/AMP.2007.24286163>
- Bless, H., Clore, G. L., Schwarz, N., Golisano, V., Rabe, C., & Wölk, M. (1996). Mood and the use of scripts: Does a happy mood really lead to mindlessness? *Journal of Personality and Social Psychology*, 71(4), 665–679.
<https://doi-org.proxy-ub.rug.nl/10.1037/0022-3514.71.4.665>
- Bruinsma, I. (2024). *The effect of the need for closure on idea evaluation as moderated by role*

- ambiguity* [Bachelor Thesis, Department of Social and Behavioral Sciences, University of Groningen]. Thesis Research Portal. <https://gmwpublic.studenttheses.ub.rug.nl/>
- de Buissonjé, D. R., Ritter, S. M., de Bruin, S., ter Horst, J. M.-L., & Meeldijk, A. (2017). Facilitating creative idea selection: The combined effects of self-affirmation, promotion focus, and positive affect. *Creativity Research Journal*, 29(2), 174–181. <https://doi.org/10.1080/10400419.2017.1303308>
- Dreu, C. K. W. D., Nijstad, B. A., & Baas, M. (2011). Behavioral Activation Links to Creativity Because of Increased Cognitive Flexibility. *Social Psychological and Personality Science*, 2(1), 72-80. <https://doi.org/10.1177/1948550610381789>
- Estrada, C. A., Isen, A. M., & Young, M. J. (1997). Positive Affect Facilitates Integration of Information and Decreases Anchoring in Reasoning among Physicians. *Organizational Behavior and Human Decision Processes*, 72(1), 117–135. <https://doi.org/10.1006/obhd.1997.2734>
- Fredrickson, B. L. (2004). The broaden–and–build theory of positive emotions. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences*, 359(1449), 1367–1377. <https://doi.org/10.1098/rstb.2004.1512>
- Hennessey, B. A., & Amabile, T. M. (2010). Creativity. *Annual Review of Psychology*, 61, 569–598. <https://doi.org/10.1146/annurev.psych.093008.100416>
- Herman, A., & Reiter-Palmon, R. (2011). The effect of regulatory focus on idea generation and idea evaluation. *Psychology of Aesthetics, Creativity, and the Arts*, 5(1), 13–20. <https://doi.org/10.1037/a0018587>
- Hirt, E. R., Devers, E. E., & McCrea, S. M. (2008). I want to be creative: Exploring the role of hedonic contingency theory in the positive mood-cognitive flexibility link. *Journal of*

Personality and Social Psychology, 94(2), 214–230.

<https://doi.org/10.1037/0022-3514.94.2.94.2.214>

Hermalin, B., & Isen, A. (2008). A model of the effect of affect on economic decision making.

Quantitative Marketing and Economics (QME), 6(1), 17–40.

<https://ideas.repec.org/a/kap/qmktec/v6y2008i1p17-40.html>

Ionescu, T. (2012). Exploring the nature of cognitive flexibility. *New Ideas in Psychology*, 30(2),

190–200. <https://doi.org/10.1016/j.newideapsych.2011.11.001>

Isen, A. M., Daubman, K. A., & Nowicki, G. P. (1987). Positive affect facilitates creative

problem solving. *Journal of Personality and Social Psychology*, 52(6), 1122–1131.

<https://doi.org/10.1037//0022-3514.52.6.1122>

Isen, A. M. (2001). An Influence of Positive Affect on Decision Making in Complex Situations:

Theoretical Issues With Practical Implications. *Journal of Consumer Psychology*, 11(2),

75–85. https://doi.org/10.1207/s15327663jcp1102_01

Isen, A. M., & Daubman, K. A. (1984). The influence of affect on categorization. *Journal of*

Personality and Social Psychology, 47(6), 1206–1217.

<https://doi.org/10.1037/0022-3514.47.6.1206>

Jovanovic, T., Meinel, M., Schrödel, S., & Voigt, K.-I. (2016). The Influence of Affects on

Creativity: What Do We Know by Now? *Journal of Creativity and Business Innovation*,

46.

Lai, Y., Peng, S., Huang, P., & Chen, H. (2021). The Impact of Affective States and Affective

Shifts on Creative Ideation and Evaluation. *The Journal of Creative Behavior*, 55(1),

130–144. <https://doi.org/10.1002/jocb.440>

Laureiro-Martínez, D., & Brusoni, S. (2018). Cognitive flexibility and adaptive

decision-making:

- Evidence from a laboratory study of expert decision-makers. *Strategic Management Journal*, 39(4), 1031–1058. <https://doi.org/10.1002/smj.2774>
- Litchfield, R. C., Gilson, L. L., & Gilson, P. W. (2015). Defining Creative Ideas: Toward a More Nuanced Approach. *Group & Organization Management*, 40(2), 238–265. <https://doi.org/10.1177/1059601115574945>
- Mastria, S., Agnoli, S., & Corazza, G. E. (2019). How does emotion influence the creativity evaluation of exogenous alternative ideas? *PLOS ONE*, 14(7), e0219298. <https://doi.org/10.1371/journal.pone.0219298>
- Meerema, M. (2024). *Need for Closure en creatieve idee evaluatie* [Bachelor Thesis, Department of Social and Behavioral Sciences, University of Groningen]. Thesis Research Portal. <https://gmwpublic.studenttheses.ub.rug.nl/>
- Miron-Spektor, E., & Erez, M. (2011). Looking at Creativity through a Paradox Lens. In W. K. Smith, M. W. Lewis, P. Jarzabkowski, & A. Langley (Eds.), *Oxford Handbooks Online*. Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198754428.013.22>
- Montag-Smit, T., & Keith, M. G. (2023). Changes in Positive and Negative Affect during Creative Process Engagement. *Journal of Creative Behavior*. <https://doi.org/10.1002/jocb.610>
- Mueller, J. S., Melwani, S., & Goncalo, J. A. (2012). The Bias Against Creativity: Why People Desire but Reject Creative Ideas. *Psychological Science*, 23(1), 13–17. <https://doi.org/10.1177/0956797611421018>
- Neill, E. (2007). Book review. *History of European Ideas*, 33(1), 131–134. <https://doi.org/10.1016/j.histeuroideas.2006.07.002>

- Nijstad, B. A., De Dreu, C. K. W., Rietzschel, E. F., & Baas, M. (2010). The dual pathway to creativity model: Creative ideation as a function of flexibility and persistence. *European Review of Social Psychology*, 21(1), 34–77. <https://doi.org/10.1080/10463281003765323>
- Perry-Smith, J. E., & Mannucci, P. V. (2017). From Creativity to Innovation: The Social Network Drivers of the Four Phases of the Idea Journey. *Academy of Management Review*, 42(1), 53–79. <https://doi.org/10.5465/amr.2014.0462>
- Rietzschel, E. F., Nijstad, B. A., & Stroebe, W. (2010). The selection of creative ideas after individual idea generation: Choosing between creativity and impact. *British Journal of Psychology*, 101(1), 47–68. <https://doi.org/10.1348/000712609x414204>
- Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology*, 39(6), 1161–1178. <https://doi.org/10.1037/h0077714>
- Smith, W., & Lewis, M. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. *The Academy of Management Review*, 36. <https://doi.org/10.5465/AMR.2011.59330958>
- Spijkerman, W. (2024). *Rejecting or Rejoicing in Creativity: Paradox Climate as a Moderator of the Relation Between Need for Closure and Creativity Assessment* [Bachelor Thesis, Department of Social and Behavioral Sciences, University of Groningen]. Thesis Research Portal. <https://gmwpublic.studenttheses.ub.rug.nl/>
- Spratt, J. (2024). *Het Afwijzen of Erkennen van Creativiteit : de Modererende Rol van Rolduidelijkheid op het Effect van de Need for Closure op de Evaluatie van Ideeën* [Bachelor Thesis, Department of Social and Behavioral Sciences, University of Groningen]. Thesis Research Portal. <https://gmwpublic.studenttheses.ub.rug.nl/>
- van Weers, S. (2024). *Het verband tussen nieuwsgierigheid en de beoordeling van originaliteit*

- en bruikbaarheid van creatieve ideeën in een efficiënt werk klimaat* [Bachelor Thesis, Department of Social and Behavioral Sciences, University of Groningen]. Thesis Research Portal. <https://gmwpublic.studenttheses.ub.rug.nl/>
- Wang, X., Li, Y., Li, X., Dai, D. Y., & Hu, W. (2022). The influence of varying positive affect in approach-motivation intensity on creative idea generation and creative idea evaluation: an fNIRS study. *Thinking & Reasoning*, 56(2), 1–41.
<https://doi.org/10.1080/13546783.2022.2039293>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070. <https://doi.org/10.1037//0022-3514.54.6.1063>
- Williams, L. K., & McGuire, S. J. (2010). Economic creativity and innovation implementation: The entrepreneurial drivers of growth? Evidence from 63 countries. *Small Business Economics*, 34(4), 391–412. <https://doi.org/10.1007/s11187-008-9145-7>
- Yang, H., Yang, S., & Isen, A. M. (2013). Positive affect improves working memory: Implications for controlled cognitive processing. *Cognition & Emotion*, 27(3), 474–482.
<https://doi.org/10.1080/02699931.2012.713325>
- Zhou, J., Wang, X. M., Bavato, D., Tasselli, S., & Wu, J. (2019). Understanding the Receiving Side of Creativity: A Multidisciplinary Review and Implications for Management Research. *Journal of Management*, 45(6), 2570–2595.
<https://doi.org/10.1177/0149206319827088>

Appendix A

Table 1. *Descriptives and Correlations for Study 1*

	<i>M (SD)</i>	1	2	3
1. Positive Trait-Affect	3.539 (0.368)	.635	.236*	.081
2. Cognitive Flexibility	3.973 (0.377)		.794	.016
3. Ratio Novelty/Usefulness	0.736 (0.222)			—

Note. $N = 112$ respondents. Scale reliabilities are given in bold on the diagonal where applicable. ** $p < .01$; * $p < .05$; ° $p < .1$

Table 2. *Results of PROCESS makro, Regression Analysis on Cognitive Flexibility*

Model	coeff	SE	<i>t</i>	p	LLCI	ULCI	AdjR²	F	p
Constant	3.12	.34	9.24	.000	2.45	3.79			
Positive Trait-Affect	0.24	.09	2.55	.012	0.05	0.43			
							.04	6.49	.012

Note. $N = 112$. CI = 95%

Table 3. Results of PROCESS makro, Regression Analysis on the Ratio of Novelty and Usefulness

Model	coeff	SE	t	p	LLCI	ULCI	AdjR²	F	p
Constant	0.57	.27	2.08	.039	0.28	1.11			
Positive Trait-Affect	0.05	.06	0.83	.409	-0.06	0.11			
Cognitive Flexibility	-0.00	.06	-0.03	.974	-0.11	0.11			
							-.01	0.36	.701

Note. *N* = 112. CI = 95%

Table 4. *Total, Direct, and Indirect effects*

Effect	Effect	<i>SE</i>	<i>t</i>	p	LLCI	ULCI
Total Effect	0.05	.06	0.85	.398	-0.06	0.16
Direct Effect	0.05	.06	0.83	.409	-0.07	0.17
Indirect Effect	-0.00	.01*	-	-	-0.03*	0.02*

Note. *N* = 112. CI = 95% * = Bootstrapped (5000)

Table 5. Results of PROCESS macro, Post-Hoc Regression Analysis on Cognitive Flexibility

Model	coeff	SE	t	p	LLCI	ULCI	AdjR²	F	p
Constant	3.1	.29	10.50	.000	2.51	3.68			
Positive Activating affect	0.25	.08	2.99	.003	0.08	0.41			
							.07	8.95	.003

Note. *N* = 112. CI = 95%

Table 6. Results of PROCESS makro, Post-Hoc Regression Analysis on the Ratio of Novelty and Usefulness

Model	coeff	SE	t	p	LLCI	ULCI	AdjR²	F	p
Constant	0.56	.26	2.21	.029	0.06	1.07			
Positive activating affect	0.06	.05	1.09	.277	-0.05	0.16			
Cognitive Flexibility	-0.01	.06	-0.14	.891	-0.12	0.11			
							.00	0.61	.545

Note. *N* = 112. CI = 95%

Table 7. *Post-Hoc Total, Direct, and Indirect effects*

Effect	Effect	<i>SE</i>	<i>t</i>	p	LLCI	ULCI
Total Effect	0.06	.05	1.10	.273	-0.04	0.16
Direct Effect	0.06	.05	1.09	.277	-0.05	0.16
Indirect Effect	-0.00	.01	-	-	-0.03	0.02

Note. $N = 112$. CI = 95%

Appendix B

Figure 1. *Conceptual Framework of the Mediation Model*