The Effect of the Need for Closure on Idea Evaluation as Moderated by Role Clarity

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PSB3E-BT15: Bachelor Thesis

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June 24, 2024

Abstract

Creative ideas are important for many parts of our life, yet more creative ideas seem to be undervalued compared to their more practical counterparts. This study examines this finding, also known as the bias against originality. Specifically, the relationship between the need for closure (NFC) and idea evaluation is examined. Idea evaluation in this context measures the preference for usefulness over novelty when evaluating ideas. The study also looks at role clarity as a potential moderating factor. Data were collected through an online survey which was answered by 113 participants across 33 organizations in the Netherlands and Germany. Results show that the bias against creativity was present in our sample. However, the data showed no significant correlation between NFC and the preference for usefulness over novelty in idea evaluation, along with this role clarity was not found to significantly moderate this relationship. The results show no support for H1: *The need for closure is positively correlated to a preference for the usefulness of an idea over the novelty of an idea.* The results also show no support for *H2: This relationship is weaker for individuals with a higher role clarity.* These findings suggest that neither NFC nor role clarity significantly affects the preference for usefulness over novelty when evaluating ideas. Despite the expectations given by the theoretical background, this study indicates that the relationship between NFC and idea evaluation is more complex and influenced by factors not accounted for in this study.

Keywords: Need for closure, idea evaluation, role clarity, novelty, usefulness, value, feasibility.

The Effect of the Need for Closure on Idea Evaluation as Moderated by Role Clarity

All humans are creative, whether they themselves believe that or not, everybody uses creativity. Creativity is required for us to live our lives. Anytime we encounter a problem which does not have a predetermined solution we need to be creative. This could be a social problem, for example, if you forgot a friend's birthday, what you say to them and how you handle the situation is you using your creativity to come up with a solution. It can also be a physical problem, such as, if you are late to work and you have a flat tire, how you handle that situation is a creative solution fitting to your specific situation.

Creativity does not have a specific set definition in literature. However, the Cambridge dictionary defines it as: The ability to produce or use original and unusual ideas (Proctor, 2001). The positives of creative ideas are obvious. If nobody ever had a creative idea, we humans would not be where we are today, there would be no inventions such as the phone or the combustion engine. Creativity is what makes humans stand out from other species. The ability to think of something that is completely unique and not based on previous things that already exist is what makes us so advanced, as theorized in Runco (2004).

Because creativity is so important to us, one would expect that creative ideas are highly valued in daily life, but research by Mueller et al. (2011) shows that creative ideas are often undervalued compared to their more practical counterparts. This thesis will investigate this bias against creative ideas by measuring the relationship between the bias against creativity with certain personality and environmental predictors.

Creative idea evaluation

Creative ideas are generally not valued as highly as they should be. The gap between the importance of creative ideas and their average evaluation as found in Mueller et al. (2011) is the focus of this paper, specifically the evaluation stage of ideas is where this bias seems to lie, as theorized in West (2002a) and West (2002b), where it is argued the generation of ideas is not the problem, rather that the implementation is where most creative ideas fail, often due

to a lack of support or resources. No matter how many creative ideas are generated, none will have an impact without implementation, and to get implemented they need to be evaluated positively as stated in Rietzschel et al. (2019). Thus, evaluation could be seen as a filter or bottleneck that prevents all creative ideas from having an impact on the world, only letting some through. This is not always problematic since not all creative ideas are worth implementing. However, as found by Mueller et al. (2011), creative ideas tend to be undervalued in comparison to their more practical counterparts. Therefore, research on the evaluation part of the idea implementation process is important for finding which factors make people evaluate novel ideas more negatively and what factors mitigate that effect.

Classification of ideas

In order to get a good understanding of the theoretical background, some knowledge about the classification of ideas is useful. In idea evaluation literature, an idea is generally rated on three different aspects: the feasibility of an idea, the value of an idea, and the originality of an idea.

Firstly, the *feasibility* of an idea is how easy an idea is to implement or put into action.

Secondly, the *value* of an idea does not have a set definition in literature. It is generally seen as either the monetary value, such as profits an idea generates or the amount of money it saves. Alternatively, as used by C. Ford and Sullivan (2004), value could be subjectively rated by others through asking questions about to what extent an idea contributed to a current team goal.

Lastly, the *originality* of an idea refers to the extent to which ideas are described as unfamiliar or unusual as defined in C. M. Ford and Gioia (2000). Originality is sometimes also referred to as novelty.

Feasibility and value can be combined into the variable: *usefulness.* In this paper I will combine feasibility and value into usefulness, because using usefulness instead of value and feasibility separately makes for a better fit with the theoretical background.

Creativity is seen of a combination of the variables novelty and usefulness as stated by Runco and Jaeger (2012), of which novelty is seen as the largest contributor to what creativity is, as concluded in a literature review on creativity by Hennessey and Amabile (2010). However, a meta-analysis by Nijstad et al. (2010) found that novelty and usefulness were negatively correlated. Subsequently, a problem arises, since people want to maximize the usefulness of an idea in order to implement it, as found in a study by Rietzschel et al. (2010). This negative correlation could lead individuals to view more novel ideas as generally worse. This is based upon a paper on paradox theory by Smith and Lewis (2011) in which it is proposed that when a person is faced with a choice where the options seem to be negatively related, they often see it as an either/or situation, where both cannot be achieved simultaneously, so increasing one part will come at the cost of decreasing the other part. Since people tend to value novelty less than usefulness, and often see the choice as a dilemma where they can choose to prioritize one at the cost of the other, people could tend to favour usefulness in ideas, and tend to view novelty as a sign of an idea that is not useful, making them dislike novel ideas. However, the relationship between novelty and usefulness found in Mueller et al. (2011) is not a perfect negative correlation. Meaning there are many ideas which score high on both novelty and usefulness.

Bias against originality

The finding that we as humans consistently undervalue and reject more creative ideas is also dubbed: the bias against originality. Broadly, the bias against originality is the effect that people tend to undervalue and reject novel, original and creative ideas more often than their more familiar, conventional counterparts (Mueller et al., 2011).

This finding should be seen as a problem worth looking into, because not giving novel ideas a fair chance of being implemented can lead to the loss of time, money and innovation according to Levitt (2002) in his literature review on innovation.

One potential reason for this bias against originality is the finding that usefulness, which is the combination of the feasibility and value of an idea, is negatively correlated with the originality/novelty of an idea (Nijstad et al., 2010). That might partially explain why humans tend to have a bias against originality. Because individuals generally favour more useful ideas over more original ideas and if they are negatively correlated, that relationship could make people look more negatively upon more creative ideas (Nijstad et al., 2010; Rietzschel et al., 2010).

Another potential reason for the bias against originality could be that original ideas are paired with a lot of uncertainty. There is uncertainty whether the idea is feasible, has value, is free of errors and whether it will be consistently replicable in the future as stated in the book on the social psychology of creativity by Amabile (1996). In their article discussing the need for closure trait, Kruglanski and Webster (1996) state that people generally want to avoid uncertainty, finding it uncomfortable and wanting to reduce it as quickly as they can. Hence, individuals should prefer more useful ideas over more novel ideas. Logically then, the bias against original ideas should be stronger for those who are less comfortable with uncertainty. How comfortable one is with uncertainty is an important part of the need for closure trait. This trait should theoretically then be a predictor for the preference for the usefulness of an idea over the novelty of an idea.

The need for closure

The Need For cognitive Closure (NFC) is both a trait and a state which we as humans experience. It describes how comfortable a person is with uncertainty and in uncertain situations. A person high on need for closure tends to prefer predictable situations and would attempt to get out of unpredictable situations quickly. They like order and structure and possess a dislike for ambiguity, as found by Webster & Kruglanski (1994) in a study on the workings of the need for closure as a trait. An individual with a high need for cognitive closure tends to have a high need for decisiveness, wanting to reach a final decision on issues

quickly, this is called the urgency tendency as stated by Kruglanski (1990) in a literature review covering lay epistemic theory. They also tend to stick by a decision once it has been made according to Kruglanski and Webster (1996), which is called the permanence tendency.

That is where the link with the bias against originality is, as shown in a study by Mueller et al. (2011) where this bias is stronger when the evaluator experiences uncertainty. This could mean that the evaluators attempt to reduce the uncertainty by selecting more familiar, conventional ideas. Being uncomfortable with uncertainty and therefore looking for ways to reduce that uncertainty is a significant part of the need for closure. With individuals higher in the need for closure being more uncomfortable in uncertain situations when compared to individuals low in the need for closure as shown in Webster & Kruglanski (1994). It is therefore not unreasonable to assume that individuals higher in the need for closure will tend to have a stronger bias against more original or creative ideas. This relationship is supported by Chirumbolo et al. (2004) in which it was found that groups with a higher need for closure performed less creatively. No studies have been done on individuals need for closure and their evaluation of creative ideas, however the existence of a relationship is theorized in several works (Baer, 2012; Rietzschel et al., 2019; Runco & Dow, 2004).

The workings of the need for closure

The need for closure is positively associated with decisiveness as found in a study by Roets & Van Hiel (2007). However, how a decision made by people high in the need for closure is generally done with the help of mental shortcuts, also called heuristics as found in several studies on the topic (Kossowska et al., 2014; Kossowska, 2007; Roets & Van Hiel, 2011b). Research shows that once a person with a high need for closure finds enough information to make a decision, they will often stop looking for more information, which could cause them to miss important details and aspects of their decision. Indeed, a higher need for closure is associated with a less extensive search for information as found in a literature

review by DeBacker & Crowson (2009) among others (Klein & Webster, 2000; Van Hiel & Mervielde, 2002).

This finding could also affect the decision-making process more in favour of useful ideas as opposed to original ideas. More novel ideas tend to require more elaboration in comparison to more useful ideas, as stated by Amabile (1996). Both the tendency to try to avoid uncertainty and the urgency tendency could then affect how much people with a high need for closure prefer useful ideas over novel ideas.

However, the need for closure experienced by a person fluctuates in intensity depending on the situation they are in, also known as their state. A person tends to feel a higher need for closure when they are under significant time pressure, feel threatened, as well as when they are in an environment filled with distractions, as found by Kruglanski and Webster (1991). This causes a high cognitive load, which people want to reduce quickly by relying on heuristics and making quick decisions. In a literature review on the need for closure and learning DeBacker and Crowson (2009) find that the environment that a person finds themselves in is important for the need for closure they feel as a state. It is therefore important to look at an individual's environment when they are evaluating ideas. Specifically, their comfortability, perceived pressure and how threatened they feel. This paper will focus on how comfortable they feel in their environment at work.

Uncertainty

An important mechanism of the proposed relationship between the need for closure and the bias against original ideas is the feeling of uncertainty. Therefore, if somebody wants to reduce this bias, they could attempt to reduce the amount of uncertainty when evaluating an original idea. Therein lies the difficulty, as previously mentioned, because in original ideas there is inherent uncertainty as to whether the idea is feasible, has value, is free of errors, and if it will be consistently replicable in the future as stated in Amabile (1996).

Another way to reduce the strength of this bias could be to reduce how uncomfortable somebody feels in uncertain situations. Which can be achieved by reducing the need for closure somebody feels as a state. There are several ways to reach this goal for individuals with a high need for closure as a trait. For example, by giving this person more time to do their task, making them feel less threatened or making the environment around them less distracting and more structured as found in Kossowska et al. (2014) and Kruglanski and Webster (1991). This paper investigates the latter option specifically, making the environment around people more structured. As Van Hiel and Mervielde (2002) and Kossowska (2007) found in their studies, when a person with a high need for closure is in an orderly and structured environment, they will have more cognitive resources available, due to them not being utilized by distractions in their environment, which will lead to more extensive information processing. Due to that increased information processing, this paper theorizes that their bias against original ideas could become weaker.

Role clarity

An important variable relating to how structured and ambiguous an environment is, is role clarity. Role clarity is how clear it is to a person what their responsibilities are, what their level of authority is, what their tasks are, what their performance criteria are, and how they fit into the goals and structure of a company as stated by Kahn et al. (1964) in their study on role ambiguity. Specifically, it is defined as: “The predictability of the outcome or responses to one's behaviour and the existence or clarity of behavioural requirements, often in terms of inputs from the environment, which would serve to guide behaviour and provide knowledge that the behaviour is appropriate.” as stated by Rizzo et al. (1970). If a person knows exactly what they must do in their job and how and why they have to do that, then that person has high role clarity in their job. If a person is not entirely sure what their tasks are, what they are allowed to do, and what they need to do to perform well, then they have low role clarity and

high role ambiguity in their job. Role clarity and role ambiguity are seen as exact opposites as defined by De Jong and Janssen (2005).

A meta-analysis on role clarity by Jackson and Schüler (1985) shows that with lower role clarity people experience more stress due to uncertainty about their job demands.

Their analysis shows that a person with a lower level of role clarity in their job experiences more uncertainty in their job and also experiences more stress at their work. A less structured (thus more ambiguous) environment should lead to more stress and uncertainty for those with a higher need for closure, since a high NFC is related to being more uncomfortable with ambiguous situations. Indeed, a positive correlation between the need for closure and role ambiguity (therefore a negative correlation with role clarity) was found in a study by Elovainio and Kivimäki (2001). Since uncertainty leads to more stress for individuals with a higher need for closure, people with a lower need for closure should be less affected by lower role clarity. Due to uncertainty not causing as much stress for people with a lower need for closure when compared to those with a higher need for closure.

A relevant effect of this relationship would be that if a person with high need for closure has high role clarity, they will not use their cognitive resources on dealing with an ambiguous environment, leaving them with more cognitive resources to focus on things such as idea evaluation.

Little research has been done on the relationship between role clarity and creativity, but mixed results have been found. Results by De Jong and Janssen (2005) showed no relation between role ambiguity and innovative behaviour. While recent studies by Ud Din and Ahmad (2023) and Usman and Xiao (2017) both do find a negative relation between role ambiguity and creative behaviour (therefore a positive relation with role clarity). Though all these studies cover creative behaviour instead of idea evaluation. Nevertheless, these results indicate a relationship could be present between role clarity and creative idea evaluation as

this paper theorizes. Possibly due to a higher role clarity being related to more extensive information processing, found in Kossowska et al. (2014).

Present research

As studies by Kossowska et al. (2014) and Kruglanski and Webster (1991) on the need for closure show, a lower amount of cognitive resources available increases the use of heuristics and mental shortcuts in thinking. Inversely, that also means that if a person has more cognitive resources available, they will use fewer heuristics and will not feel the need to make a decision as quickly to reduce uncertainty. Potentially resulting in a weaker bias against selecting more original ideas, because they are experiencing less stress and have more cognitive resources available to work out more original ideas.

Therefore, a relationship is hypothesized that a person with a higher need for closure tends to have a bias against selecting more original ideas, and that this relationship is moderated by their role clarity, with a higher role clarity making this relationship less strong. This presents the following research question:

What is the effect of need for closure on the preference for usefulness over novelty when evaluating ideas, using role clarity as a moderator?

Based upon that, the following hypotheses will be tested:

H1: The need for closure is positively correlated to a preference for the usefulness of an idea over the novelty of an idea.

H2: This relationship is weaker for individuals with a higher role clarity.

Method Section

This study is part of a thesis project consisting of six research papers for which the same dataset was used (Fiedler, 2024; Meerema, 2024; Spijkerman, 2024; Spratt; 2024; van Weers, 2024). Data were collected among 33 organizations in the Netherlands and Germany. Data gathering was done in the form of an online cross-sectional survey. This survey

instrument consisted of questions designed to discern the roles that need for closure and role clarity play in the evaluation of creative ideas. The survey was translated into Dutch, German and English; participants could choose the language they preferred.

Participants

Our sample consisted of people from Germany or the Netherlands working in organizations, contacted through our personal networks. The data were collected in 33 organizations. Response rates could not be calculated, because it was unknown how many individual people received the link (as those were sent to our contact persons within the organizations). In total, 170 surveys were submitted. Based on attention checks, data from 55 people were removed, leaving us with a total of 115 complete surveys. Further analysis of outliers and data quality led to the removal of an additional 2 people from the dataset. The final dataset included n = 113 participants, between the ages of 18 and 61+. Including 61 females (54%), 52 males (46%), and 0 others (e.g., nonbinary; 0%).

Procedure

We recruited participants using a convenience sampling method by contacting people in our network. Participants were told the questionnaire would take approximately 15 minutes to complete, consisting of questions about their experiences concerning idea development procedures at work. The respondents first received information about the nature and global purpose of the study, which they read and were asked to agree with before completing the questionnaire. Then, participants were asked to fill in their demographic information. Following, the participants were asked to fill in the Positive Trait Affect scale, the Entrepreneurial Curiosity Scale, the Need for Closure scale, the Cognitive Flexibility Inventory, the Paradoxical Climate scale, the Role Ambiguity scale, the Efficiency Work Climate scale, our self-made scale measuring Idea evaluation, the Job Satisfaction scale, and lastly a final attention check at the end of the questionnaire.

Measures

Demographics

Participants were asked about basic demographics: age, sex (male, female, nonbinary/third gender, I prefer to self-describe, I prefer not to say).

Idea evaluation

A 6-item scale was constructed based on the literature on the evaluation of creative ideas (Amabile, 1983; Litchfield et al., 2015; Mueller et al., 2012). The scale consisted of 6 items, with two items for each part of creative evaluation: originality, feasibility and value. There are two questions for each section. Participants responded by indicating to what extent they agreed with each of the items (1 =strongly disagree, 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 on 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, the Cronbach's alpha for feasibility and value combined was only .48.

Need for Closure

Need for cognitive closure was measured with the 15-item Need for Closure Scale developed by Roets & van Hiel (2010). Participants responded by indicating on a 6-point scale to what extent they agreed with each of the items (*1 =strongly disagree, 5 = strongly agree).* An example item is “I don’t like situations that are uncertain.” The reliability of the scale was good, with $\alpha = .73$.

Role clarity

Role clarity was measured with the 6-items of the Role Ambiguity Scale developed by House and Rizzo (1972). Participants responded by indicating on a 5-point scale to what extent they agreed with each of the items (1 = *strongly disagree*, 5 = *strongly agree*). An example item is "I feel certain about how much authority I have been given to do my job". The reliability of the scale was good, with $\alpha = 0.831$.

Exclusion criteria

Exclusion criteria were established to ensure data integrity and reliability. Outliers were identified based on response time filters and deviation from the mean by more than 3 standard deviations per scale. Participants exhibiting response times that deviated significantly from the mean were singled out for further examination. In addition, straight lining criteria were applied to detect participants who consistently provided the same response patterns across all items. Furthermore, attention check questions were included to assess participants' attentiveness and comprehension of the study instructions. Responses failing attention checks were excluded. Missing items referred to questionnaire items left unanswered were excluded. The use of these criteria aimed to ensure data quality while maximizing the inclusion of valid responses.

Results

Table 1 shows the descriptive statistics and correlations. The variable Need for Closure gives a mean of 2.86 ($SD = 0.47$). This mean is significantly lower than the middle score of three, according to a one sample T-test ($p=0.003$), showing that our sample consists of a relatively larger number of people with a lower need for closure compared to those with a higher need for closure. The dependent variable which is the preference for novelty over usefulness when evaluating ideas, as shown by a ratio, has a mean of 0.74 ($SD = 0.23$). A one sample T-test shows that this mean is significantly lower than the middle score of one

(p<0.001), showing that the preference for usefulness over novelty is also present in this sample.

Regression assumptions

The assumption of normality was not met for the role clarity variable, as shown by a Shapiro-Wilk test (p = .004), both other variables did meet this assumption. The role clarity variable was left skewed, to correct for this the variable was first reflected by adding one plus the maximum value of five minus the variable score. Subsequently the square root of the reflected variable was calculated to make the new, corrected variable. The assumption of homogeneity was violated for the dependent variable Ratio_NU, as shown by Levene's test of homogeneity of variances (p =.02). An analysis revealed a VIF score of 1.003, meaning there was no significant multicollinearity present. The assumption of independence of observations is met. Given the assumption for homogeneity was not met, a Davidson-MacKinnon heteroscedasticity correction test was used when testing the hypotheses.

Hypothesis one:

A linear regression analysis was used to test the hypothesis that a person with a high need for closure (measured with a score from 1 to 5) will have a stronger preference for the usefulness of an idea over the novelty of an idea when evaluating them (measured using a ratio by dividing mean novelty score by mean usefulness score). A small negative correlation of -0.02 was found, which was not significant $t(113) = -0.48$, $p > .05$) ($\Delta R^2 = .01$, $F\ (1,111) = 0.23$, $p > .05$)

Hypothesis two:

The second hypothesis is that a higher role clarity would weaken the relationship between the need for closure and the preference for novelty over usefulness when evaluating ideas. Table 3 shows a weak interaction effect -0.12 which was not significant ($p > .05$) ($\Delta R^2 = 0.01$, $F\ (1,109) = 1.37$, $p > .05$). Meaning that there is no support for the hypothesis that role

clarity is a moderator in the relationship between the need for closure and the preference for novelty over usefulness.

Discussion section thesis

This study tested if there was a correlation between the need for closure and the preference for novelty over usefulness when evaluating ideas. It also investigates if role clarity is a moderator within this relationship.

As shown in the results section, this sample also shows a preference for usefulness over novelty, this means that the bias against originality as found in Mueller et al. (2011) is supported by this study, and that it is a relevant problem to the sample used in this study. The need for closure was not significantly correlated with a preference for novelty over usefulness, indicating that there is no relationship between the variables. Furthermore, the expected moderating role of Role Clarity was not supported, suggesting that having a structured and clear work environment may not be sufficient to mitigate the bias against novel ideas among those with a high Need for Closure.

This means that individuals with a high need for closure potentially do not have a stronger preference for the usefulness of an idea over the novelty of it when evaluating, and that a persons need for closure can probably not be used as a predictor for the strength of their preference for usefulness over novelty. However, the reliability of these results could be questioned due to several limitations in this study, as will be discussed in the limitations section. The findings of this study do not go directly against existing literature, as there are no studies directly investigating the relationship between the need for closure and idea evaluation in individuals. However, it does seem to contradict the finding in Chirumbolo et al. (2004) in which it was found that groups with a higher need for closure would exhibit fewer creative acts. The current study investigates idea evaluation instead of idea creation, investigates individuals instead of groups, and it investigates the need for closure as a trait and not as a

state. These differences in study design could be the difference between the results of both studies. The results also contradict what is theorized in Baer (2012), in which it is said that more novel ideas contain many uncertain elements and that therefore individuals who are more apprehensive towards uncertainty might be more likely to be biased against more novel ideas. This theory, along with the study by Mueller et al. (2011) in which it is found that those who are experiencing more uncertainty have a stronger bias against original ideas, would make it reasonable to assume that the need for closure is positively related to the bias against originality, because those with a high need for closure tend to be more uncomfortable with uncertainty (Webster & Kruglanski, 1994; Kruglanski & Webster, 1996). The results of this study might mean this theorized relationship by Baer (2012) could be questioned, or that there are other potential factors which dictate the relationship between uncertainty and the bias against originality. Another possibility is that study limitations are the reason for the difference between the results and the theoretical background. Interestingly, the correlation between the need for closure and role clarity as reported by Elovainio and Kivimäki (2001) was not found in this study, study limitations such as sample size and online data gathering could be the reason for the difference between the results.

Results show that role clarity is likely not a moderating factor between the relationship of the need for closure and the bias against originality. This suggests that having high role clarity might not weaken the relationship between the need for closure and the preference for usefulness over novelty when evaluating ideas. This finding does not go directly against literature as there is no study directly investigating creative idea evaluation and role clarity. However, this finding does coincide with the results found by De Jong and Janssen (2005), in which no relation between role clarity and innovative behaviour was found. While it contradicts the findings by Ud Din and Ahmad (2023) and Usman and Xiao (2017) which both do find a positive relation between role clarity and creativity. Though all these studies are

on creative behaviour instead of idea evaluation, possibly explaining the difference between the results. Along with this, no evidence was found to support the theory from this paper that extra cognitive resources available and more extensive information processing will lead to a weaker preference for usefulness over novelty, as based upon the findings by Van Hiel and Mervielde (2002) and Kossowska (2007) that a higher role clarity frees up more cognitive resources and leads to more extensive information processing for those with a high need for closure.

Overall, these findings challenge some existing theories about the Need for Closure and its impact on creative idea evaluation. While the theoretical background suggests a clear link between the Need for Closure and the preference for usefulness over novelty, due to the discomfort with uncertainty (Kruglanski & Webster, 1996), this study's results indicate that this relationship might be more complex and influenced by additional factors not accounted for in the current study.

Limitations

One limitation is the small sample size of this study. The survey was answered by 170 people, however based on attention checks and outliers the total number of responses used was $n = 113$. This low number of respondents means that only a strong effect size can achieve significance, which was not found. Along with this, data gathering was conducted online, meaning there was little control over the environment and engagement of the respondents. Both these limitations decrease the reliability of the data.

A third limitation is found in the distribution of the need for closure scores in the sample. The mean in our sample is statistically lower than the middle score of three, showing that our sample contains relatively few respondents with a high need for closure. This makes the statistical tests less likely to show reliable results, since the number of people with a high

need for closure is too small to be certain it is an accurate representation of the population with a high need for closure.

Finally, the operationalization of the dependent variable may have been inadequate. The dependent variable was a ratio made by dividing the novelty score by the usefulness score. It was measured using two questions per variable: novelty, feasibility, and value (feasibility and value were combined to make the variable Usefulness). These questions used a five-point Likert scale to assess how important respondents thought each aspect of an idea is to them. The issue with this is that respondents could fill in the maximum amount on each question, so they did not have to mark one as more important than the other. The consequence of this is a potential ceiling effect, where the mean of the variables was too high to adequately assess the variation within the population. Indeed, there seems to be some evidence for that as the mean for Usefulness = 4.14*(SD* = 0.46) out of a range from 1 to 5. This high mean could distort the ratio of novelty divided by usefulness, giving it less variance, which in turn makes it harder to find correlations and effects in an analysis. Furthermore, the variable Usefulness has low internal consistency. This is possibly due to this variable being a combination of the variables feasibility and value. According to the theoretical background these values should be correlated, the fact they are not in this study means the operationalization of these variables might not be adequate.

Future recommendations

Based upon the limitations of this study, a future study could address the operationalization of the dependent variable is by changing the answering method.
This could be done by giving a larger range of answering options, so a more detailed answer can be given, alternatively the questioning used in this survey could be changed. Since the questions may have been the cause for the high scores on the usefulness items. This is

unknown since the questions were self-made. Due to this, it would be beneficial for future studies to critically evaluate the operationalization of the usefulness items.

Another recommendation is that a future study could test the same model in an experimental setting. Where participants need for closure could be manipulated using time pressure, after which they are asked to evaluate premade ideas varying in novelty and usefulness. This would have several advantages. Firstly, it would eliminate the problem of little control over the surrounding environment and the engagement of respondents, since that could be controlled for within the experiment. Secondly, in an experiment one can measure the need for closure actively felt instead of measuring it as a trait. This experiment also eliminates the problem of the operationalization of the dependant variable, since participants will give their real evaluation on ideas. This experiment mirrors real life situations more closely and would therefore likely give results which also mirror real life more closely. A negative of this experiment is that role clarity cannot be manipulated as accurately since role clarity is about individual's role in the workplace, which is difficult to simulate in a non-work environment where the participants have fewer responsibilities. Hence, it may be better to leave role clarity out of this experiment.

Conclusion

The results of this study found no support for the need for closure being related to the preference for usefulness over novelty when evaluating ideas. Furthermore, no support was found for the idea that role clarity has a moderating role in this relationship. These findings show that little is known about the process of creative idea implementation, because the effect suggested by the theoretical background was not found. However, the results from this study

suffer from several limitations in the research setup, possibly explaining the gap between the findings and the theoretical background.

The results of this thesis show the complexity of the personal and contextual factors that promote or hinder the implementation of creative ideas, this study contributes to our understanding of this field of research. Overall, the aim of this paper is to find factors which promote innovation, and reading about this will hopefully make the readers of this paper more aware and appreciative of innovative ideas.

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Appendix

Table 1. Descriptive Statistics and Correlation Table

Variables	M	SD	1	2	3	4	5	6	7
1. Need for Closure	2.86	0.47	**.73**	-.05	-.05	-.00	.14	-.04	.07
2. Role clarity	3.76	0.66		**.83**	.16	.25*	.08	.24*	.20*
3. RatioN/U	0.74	0.23			**n.a.**	.92*	-.24*	-.30*	-.34*
4. Novelty	3.03	0.85				**.49**	.06	-.00	.04
5. Feasibility	4.02	0.60					**.25**	.22*	.80*
6. Value	4.27	0.57						**.32**	.77*
7. Usefulness	4.14	0.46							**.48**

Note. $N = 113$.

* = $p<.05$

Alpha coefficients are shown on the diagonal

RatioN/U = Novelty score divided by usefulness score.

Table 2. Regression coefficients + model summary for hypothesis 1

		Unstandardized Coefficients		Standardized Coefficients					
Model		B	*SE*	Beta	t	p	*Adj. R^2*	*Model F*	p
1	(Constant)	*0.80*	*0.13*		*6.08*	*.001*	*.01*	*0.23*	*.629*
	NFC	*-0.02*	*.05*	*-.05*	*-0.48*	*.629*			

Table 3. Regression coefficients + model summary for Hypothesis 2

	B	SE	t	p	*Adj. R^2*	*Model F*	p
					.01	*1.37*	*.2557*
Constant	*0.52*	*1.19*	*0.44*	*.6609*			
Need for Closure	*0.15*	*0.38*	*0.40*	*.6895*			
Role clarity	*0.19*	*0.81*	*0.23*	*.8181*			
*NFC*Role clarity*	*-0.12*	*0.26*	*-0.45*	*.6534*			