

Effect of cheating on creativity



**ASSIGN
BUSTER**

- Elaina Lorence

Abstract

In this particular study, we examined if cheating leads to creativity. We predict that those who are given the opportunity to solve a difficult task more likely cheat than those who are given an easier task. Also, we predict that participants who are aware of the test answers will be more creative compared to those who are unaware the test answers. Overall, we predict that participants with the difficult word problems who are told of the answer key will be the most creative than any other group. Participants were asked to conduct a survey online that had a word problem task (an easier or difficult word problem) and a RAT test. Both word problem tasks had answer keys, but only half of participants were aware of it to see if participants, depending on the likely or unlikeliness of cheating, will be more creative during the RAT task. Their creativity during the RAT task was recorded. Whether the task is easy or difficult, creativity was found steady among the participants. The same results were found for the participants' creativity during unlikely versus likely to cheat on the word problem tasks. There was no interaction effect, although it was quite interesting to find our supported hypothesis in the statistics.

Introduction

In our society, performing a dishonest act often leads to strong consequences. We are taught that if our actions break the rules, you are performing a dishonest act, therefore you should be punished. Many people conduct studies, interested in what the cause of dishonest behavior is, or

perhaps specifically, how and why people try to “ bend the rules” without breaking any kind of ethical rules that are placed. Considering how we are taught in life through schooling and in the workforce, rule breaking often carries a negative connotation when involving ethics. However, it can be also seen in a positive connotation in an often researched area: Creativity. People often follow the saying that, to be creative, one has to “ think outside of the box” by considering a more divergent way of problem solving (Gino & Wiltermuth, 2014). Studies have presented evidence that creativity may lead to dishonesty, such as in researchers Gino & Wiltermuth’s study, those who cheated on tasks were more creative than people who didn’t cheat, even when including differences in their process (Gino & Wiltermuth, 2014). Both Gino and Wiltermuth found that participants in their study that acted dishonestly had measured greater creativity in subsequent tasks (Gino & Wiltermuth, 2014). Gino also conducted a study similar to the most recently mentioned with researcher Ariely. Similar to the previous study conducted by Gino and Wiltermuth, Gino and Ariely conducted five studies seeking correlations between creativity and dishonesty. In one of their studies, they measured creativity by motivating participants to think “ outside of the box to find loopholes...” in difficult tasks (Gino & Ariely, 2012). Their results found correlations between creativity and dishonesty(Gino & Ariely, 2012). But the results doesn’t heavily examine why can creativity be used dishonestly?

What is often questioned is how can creativity be measured? Consider what is often thought of when discussing creativity, Art and Music. Both industries are always pushing boundaries, always changing the rules of what is

considered creative genius and masterpieces. This kind of creativity is also used in daily life and in the workforce. Sometimes it requires creative thinkers to see if they can solve a problem and come up with a proper (within ethical boundaries) solution. Gibson and Mumford conducted a study on how creative criticism can affect creative problem solving (Gibson & Mumford, 2013). They asked undergraduates to solve a marketing problem by creating advertisement campaigns (Gibson & Mumford, 2013). They measured this by evaluating each undergraduate's solutions on their campaigns (Gibson & Mumford, 2013). They found that offering limited, but deeper criticisms on evaluating the advertising campaigns on quality, original and elegance created more creative problem solving solutions (Gibson & Mumford, 2013). Therefore, creativity itself often blur the lines when it comes to ethical boundaries, which can be very useful for situations that might be considered breaking ethical rules.

What is also discussed often with creativity is intelligence, and that both are often connected together. Researchers conducted such a study on creativity and everyday creative behavior (Beatty & Nusbaum, 2014). They wanted to find if there were any kinds of a relationship between insight problems in creativity and everyday creative behavior. They also wanted to see if fluid intelligence and personality traits also had an effect on creativity (Beatty & Nusbaum, 2014). They did is by asking participants to complete insight problems and self-reports on measures of personality and creative accomplishment (Beatty & Nusbaum, 2014). Their results gave no significant evidence on correlations between insight problem solving and creative behavior (Beatty & Nusbaum, 2014). They did however; find effects on fluid

intelligence on both behavior and achievement (Beaty & Nusbaum, 2014). So according to the results of this study, creativity can be seen through participants' intelligence. Therefore, intelligence can be seen through creativity. One may consider people who often find loopholes break ethical boundaries as a form of creative problem solving, which requires intelligence to solve.

The previous studies have presented evidence that creativity may lead to dishonesty. Also that creativity can be used in problem solving, learning, and that it requires intelligence. In this particular study, what is being examined is if cheating (dishonesty) leads to creativity. Specifically, this study was particularly interested in measuring whether if participants were more creative when given the opportunity to cheat in problem solving tasks. We predicted a main effect of test difficulty in that, regardless of the likely or unlikely of cheating, participants who were given the opportunity to solve a difficult word problem task will be more creative than those who are given an easier word problem task. We also predicted a main effect of likely or unlikely of cheating in that, regardless of test difficulty, participants who are unaware of the test answers will be more creative compared to those who are aware the test answers. Lastly, we predicted an interaction between the likely or unlikely of cheating and test difficulty, such that participants who are given a difficult task who were unlikely to cheat will score higher on the creativity test regardless of participants who were likely to cheat; however, those who are given an easier task who were likely to cheat will score higher on the creativity test than those who were unlikely to

cheat. . Overall, we predict that participants with the word problem who are not told of the answer key will be the most creative than any other group.

Method

Participants

We had 45 participants, 24 males and 21 females in this study. All participants were Undergraduates at a De Paul university, family, and friends that are at least 18 years of age. Participants were recruited by Facebook, email, and De Paul Survey opportunities online.

Materials

The tests were conducted on an online survey using DePaul Qualtrics. There will be three exams between-subject groups: Two different word problem tasks with answer keys and one RAT test. One word problem task has three short and simple questions and answers; the second has three longer, complex questions and answers. The word problems will be testing if test difficulty plays a role in cheating and or creativity. If participants are told or not told of the answer key on their test, this helps us manipulate the likelihood or unlikelihood of participants cheating during the test. The RAT test will be our way of measuring the creativity levels within the subject groups (Unlikely+ Easy, Unlikely+ Difficult, Likely+ Difficult, and Likely+ Easy).

Procedures

Participants were asked to complete an online survey using DePaul Qualtrics Online Survey. All participants during the study were asked to click a link which required participants to complete three word problems in less than five minutes. Participants will be randomly selected into two groups. One group of participants will be given a difficult word problem task and the other group will have an easier word problem task. Within those individual groups, half of the participants will be told there is an answer key in the back of the test, but asked to answer the questions on their own. The other half of the participants will also have an answer key, but will not be informed that it is in the back of their tests. Once they finish the first test, the participants will be given the RAT test to complete. Participants were asked to look at the three words and find a fourth word that is related to all three (e. g. call pay line, the answer would be " phone"; phone call, payphone, and phone line). Their creativity score would then be recorded.

Results

We conducted a 2(cheating: likely vs. unlikely) x 2 (test difficulty: easy vs hard) between-subjects ANOVA to whether if participants when given the opportunity to cheat, depending on the test difficulty, are more creative. We first predicted that those who are given the opportunity to solve a difficult word problem task will be more creative than those who are given an easier word problem task. This prediction was not supported. We found that there was no significance in creativity between participants who were given the easier word problem task ($M = 4.092$, $SE = 0.560$) than participants who were given the difficult word problem task ($M = 4.193$, $SE = 0.546$), $F(1, 41) = 0.17$, $p > .05$ (or $p = .897$)

We also predicted that participants who are unaware of the test answers will be more creative compared to those who are aware the test answers. This prediction was not supported. There was no significance in creativity between participants who were aware of the word problem test answers ($M = 4.175$, $SE = 0.560$) than participants who were unaware of the test answers ($M = 4.110$, $SE = 0.546$), $F(1, 41) = 0.007$, $p > .05$ (or $p = .934$).

We also predicted that those who are given a difficult task who are more unlikely to cheat will score higher on the creativity test regardless of participants who are likely to cheat; however, those who are given an easier task who are more likely to cheat will score higher on the creativity test than those who are unlikely to cheat.

Although we found there was no interaction, our findings support our predictions. Participants who were given a difficult task that were unaware of the test answers ($M = 4.636$, $SE = 0.788$), scored higher in the creativity test than participants who were given a difficult task that were aware of the test answers ($M = 3.750$, $SE = 0.755$). Participants that were given an easier task who were aware of the test answers ($M = 4.600$, $SE = 0.827$) scored higher in the creativity test than participants who were given an easier task that unaware of the test answers ($M = 3.583$, $SE = 0.755$), $F(1, 41) = 1.482$, $p > .05$ (or $p = 0.230$).

Discussion

For our first main effect, the hypothesis was those who are given the opportunity to solve a difficult word problem task will be more creative than those who are given an easier word problem task. For our second main

effect, the hypotheses predicted that participants who are unaware of the test answers will be more creative compared to those who are aware the test answers. For the interaction effect the hypotheses was that those who are given a difficult task who are more unlikely to cheat will score higher on the creativity test regardless of participants who are likely to cheat; however, those who are given an easier task who are more likely to cheat will score higher on the creativity test than those who are unlikely to cheat. Whether the task is easy or difficult, creativity was found steady among the participants. Same goes for the participants' creativity during unlikely versus likely to cheat on the word problem tasks. But it is quite interesting that the findings correlate with the original question; Depending on test difficulty as well as the unlikely versus likelihood of cheating, is there greater creativity found in cheating? However For both main effects, our predations were not supported. There was no interaction effect as well, although it was quite interesting to find our supported hypothesis in the statistics. Whether if we found participants to cheat in likely or unlikely situations, it cannot be determined that our procedures correlate with finding if cheating leads to creativity.

Originally, the plan was to have participants being observed to watch if participants decided to cheat during the word problem task or not. Also, originally the participants were to be timed in around five minutes to complete the word problem task, to perhaps persuade participants to take advantage of the answer key. Modifying these flaws could improve this study.

Because of limitations to having access to participants, seeking out more participants is highly suggested to find greater results. Also, because of timing, participants had conducted this study online. Doing it in person compared to online could show differences in the study, but it is not known to have positive or negative effects. Again, originally, the plan was to have participants being observed, just to find justification of people actually cheating during this test or not. This to, could have an increasing effect on the results if this study were to be conducted again.

References

Gino, F., & Wiltermuth, S. S. (2014). Evil genius? How dishonesty can lead to greater creativity. *Psychological science*, 0956797614520714.

Gino, F., & Ariely, D. (2012). The dark side of creativity: original thinkers can be more dishonest. *Journal of personality and social psychology*, 102(3), 445.

Gibson, C., & Mumford, M. D. (2013). Evaluation, criticism, and creativity: Criticism content and effects on creative problem solving. *Psychology Of Aesthetics, Creativity, And The Arts*, 7(4), 314-331. doi: 10.1037/a0032616

Beaty, R. E., Nusbaum, E. C., & Silvia, P. J. (2014). Does insight problem solving predict real-world creativity?. *Psychology Of Aesthetics, Creativity, And The Arts*, 8(3), 287-292.