Money Talks: The Impact of Psychopathic Tendencies on Incentivized Memory-Based Decisions
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Introduction

- Approximately, 1.2% of the male population and 0.3% to 0.7% of the female population in the United States suffers from clinically significant levels of psychopathic traits. Many members of the general population have exhibited, to some degree, difficulty with the four defining traits of psychopathy—affective responsiveness (AR), cognitive responsiveness (CR), interpersonal manipulation (IM), and egocentricity (EG). The ultimate decision to report information from a witnessed event depends on the level of familiarity and the scenario, which can dictate whether a person only relies on strong, memory evidence or is willing to rely on relatively weaker memory evidence.
- The present study investigates to what degree psychopathic traits impact recognition memory-based decisions.

Main Hypothesis: Based on the current understanding of psychopathic traits and their effects on decision-making, I predict that participants who have an overall higher psychopathic tendencies score will perform better on the task as a result of their unwillingness to shift to use memory in comparison to their use of weaker memory evidence.

Methods

Psychopathic Tendencies Measure
- Participants (n = 107; 85 females; age range = 18-30 years, M = 19.5 years, SD = 1.96) completed the Psychopathic Personality Traits Scale (PPT), which is a self-report measure for the four main traits of psychopathy.

Lineup Development
- Twelve face images were presented one at a time in a randomized order and participants were asked to state if the image was of a man or a woman (to ensure the participant paid attention to the task).

Encoding Phase
- Twelve face images were presented one at a time in a randomized order and participants were asked to state if the image was of a man or a woman (to ensure the participant paid attention to the task).
- Each face image was followed by a static image in order to increase discriminability between each face image.

Testing Condition
- All six-person simultaneous lineups were target-present, but participants had the option to state they did not recognize anyone in the lineup.
- These six lineups were part of a larger study as the control condition and were randomly presented among 100 lineup trials.
- Three trials were under the liberal condition and three were under the conservative. Criterion manipulations were applied as follows:
  - Liberal: Correct identifications will add $0.10 to your total, responding that you do not recognize anyone in a collection when there is a familiar face present will result in a reduction of $0.20 to your total earnings, and an incorrect identification will result in no gain or penalty to your earnings.
  - Conservative: Correct identifications will add $0.10 to your total, responding that you do not recognize anyone in a collection when there is a familiar face present will result in no gain or penalty to your earnings, and an incorrect identification will result in a reduction of $0.20 to your total earnings.

Results

Hypothesis 1 Results
- Each trait was median split to be categorized as “high” and “low”, resulting in High EG & High CR (n = 4) and Other (n = 103) groups.
- Those with high egocentricity and cognitive responsiveness were found to place their criterion thresholds more conservatively compared with other participants (p = 0.041).
- No significant differences were found for Criterion Shift (p = 0.099) and d Prime (p = 0.104).

Hypothesis 2 Results
- Each trait was median split to be categorized as “high” and “low”, resulting in Low CR (n = 87) and Other (n = 20) groups.
- No significant differences were found for Criterion Shift (p = 0.691), Criterion Placement (p = 0.551), and d Prime (p = 0.818).

Conclusion

- This study found a significant difference in Criterion Placement (p = 0.041) when comparing individuals with high scores of egocentricity and cognitive responsiveness (impulsivity) when compared with other participants. These individuals might be more likely to place conservatively as a strategy for reducing money loss when provided with monetary incentivization.
- Additionally, the severity of psychopathic tendencies did not affect the individual likelihood of Criterion Shifting behaviors, likely due to criterion shifting tendencies being a stable, individualistic cognitive trait. This suggests that other cognitive factors must be considered when investigating Criterion Shifting behaviors.

Future Directions
- Future studies should consider the likelihood of individuals with clinically significant levels of psychopathy compared to the general population in order to investigate if psychopathy does have any association with and individual’s willingness to Criterion Shift.
- Furthermore, future studies should examine the decision-making strategies of individuals with psychopathy, as this might offer an explanation as to why these individuals place more conservatively compared to other individuals and this research could help to provide a better understanding of these individuals’ shifting behaviors.

References


Additional references for specific topics may be found in the supplementary material.