

Memory and Probability Replication

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The statistical analysis in this paper takes a backseat to the authors' attempts at developing and explaining the form and function of their models. The majority of the figures in this paper present information about the experiments set up either with relational set drawings, or tables reiterating information in a clearer format. The direction of the authors' emphasis means that while they did not present many statistical analyses or findings the work they did perform are robust and appropriate, but arguably too shallow.

In the paper "Memory and Probability", it appears to have primarily emphasized model building like figures four and six, which we mainly took a look at over more of an extensive statistical analysis. While some statistical work has been conducted, the depth of analysis is relatively limited, and the primary focus seems to be on developing and presenting models which utilize existing theory, conjecture, and other research to attempt to rationalize the behavior of decision makers.

The data analysis within the text has several noteworthy features that display the data to the audience. The data we looked over and analyzed seemed to be robust and reliable, adding credibility to the main argument that people use past memories to make predictions about the probability of things that don't necessarily go hand in hand. The paper reports essential statistical values such as confidence intervals (CIs), p-values, and means, which are fundamental for assessing the significance of the relationships explored in the study. These values provide a clear picture of the strength and direction of the associations within the data. However, the data

analysis could potentially be enhanced by incorporating more advanced statistical techniques, such as regression analysis. While the paper does provide statistical significance, regression analysis could delve deeper into understanding the relationships between variables, potentially uncovering more nuanced patterns and insights. The visual representations of data within the paper are primarily in the form of equations, relationship charts, and tables such as the box and whisker plots that we replicated. These figures are effective in conveying information, especially for model building, but additional graphical representations, such as plots and graphs, could have made the findings more accessible and easier to interpret. Visualizations can be a powerful tool for illustrating trends and patterns within the data and can help the audience picture the data clearer.

In conclusion, the paper "Memory and Probability" has its strengths, particularly in robust data analysis and the presentation of essential statistical values. Being able to replicate this data gave great insight on what worked well on this project. We were able to deep dive on figures four and six and this focus on model building and the robustness of the data definitely add credibility to the paper's main argument. However, enhancing the paper's depth through some advanced statistical techniques, such as regression analysis, or maybe incorporating more varied visual representations could further improve the credibility of the authors' proposed models. These recommendations for further study have the capability to enhance the paper's overall quality and effectiveness.

Appendix

Github Repo: <https://github.com/bishopcurtisj/ECN5050-Replication-Project>

References

Bordalo, P., Conlon, J. J., Gennaioli, N., Kwon, S. Y., & Shleifer, A. (2022). Memory and probability. *The Quarterly Journal of Economics*, 138(1), 265-311.

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