THE UNIVERSITY OF QUEENSLAND
AUSTRALIA
School of Psychology

Participant Debriefing Sheet

Generalisability of Models of Response Time

Thank you for participating in this study. The purpose of the study was to investigate how recruitment methods and time-point might affect the response time and accuracy of decision-making across different levels of difficulty and instruction. Additionally, we wanted to investigate the generalisability of models of response time in accounting for the speed accuracy trade-off.

Background: Speed-Accuracy Trade Off

When studying response time, two notions constitute what determines a good response ¯ the speed of the response, and the accuracy of the response. Typically, if a person responds quickly, they cannot process all of the information required to make a fully informed decision and thus sacrifice accuracy. On the other hand, if people focus on gathering information to make a more accurate decision, they sacrifice response time (Forster, Higgins & Bianco, 2003).

The Current Study

In the experiment you just completed, difficulty was manipulated by varying the percentage of the dots that were moving either left or right, *or*, the proportion of black and white pixels present in the square. Dependent variables for the study included recruitment method (Amazon Mechanical Turk, the UQ Paid Participant Pool, or the UQ Course Credit Pool), instruction (speed vs. accuracy emphasis), and time-point (start vs. end of academic semester). We aim to explore whether accuracy, response time, and parameters from mathematical modelling of the data may change depending on these variables, and how a speed accuracy trade-off may be expressed in each of the conditions.

Implications for Findings

Findings from this study will provide insight for interpreting results from speeded decision-making tasks, and may illuminate differences that result from different recruitment methods and time points in the academic semester. Findings from the study will contribute to developing a greater understanding of the speed-accuracy trade off, and will provide evidence to support the generalisability of mathematical models of response time.

Please do not disclose any information about the aims of this study to other individuals who may be participating in this experiment in the future.

If you have further questions, please do not hesitate to ask

Readings and References:

Eubanks L, Wright RA, Williams BJ. 2002. Reward Influence on the Heart: Cardiovascular Response as a Function of Incentive Value at Five Levels of Task Demand. Motivation and Emotion 26: 139-52

Donkin, C., Averell, L., Brown, S., & Heathcote, A. (2009). Getting more from accuracy and response time data: Methods for fitting the linear ballistic accumulator. *Behavior Research Methods*, *41*(4), 1095-1110. http://dx.doi.org/10.3758/brm.41.4.1095

Förster, J., Higgins, E., & Bianco, A. (2003). Speed/accuracy decisions in task performance: Built-in trade-off or separate strategic concerns?. *Organizational Behavior And Human Decision Processes*, *90*(1), 148-164. http://dx.doi.org/10.1016/s0749-5978(02)00509-5

Tversky, A. & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal Of Risk And Uncertainty*, *5*(4), 297-323. http://dx.doi.org/10.1007/bf00122574

Please direct questions or queries to the following email address: t.ballard@uq.edu.au