

**College of Life Sciences & Medicine**

School of Psychology

William Guild Building

King’s College

Aberdeen AB24 3FX

Scotland

United Kingdom

Tel: +44 (0)1224 272227

Fax: +44 (0)1224 273426

http://www.abdn.ac.uk/psychology/

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Dear Editorial Board members,

When making decisions about which course of action take, there are many factors that we may need to consider in order to arrive an approximately optimal solution. However, it is often found that people will latch onto unimportant and even counter productive information that may bias them in such ways as to hinder their chances of success. In recent papers, we have investigated one such problem in which people struggle to solve in any meaningful way. Here, we attempted to push participants into a more optimal way of behaving by altering the problem in such a way as to cater to the natural biases people may possess.

In our task, people were instructed that they were to accurately throw a bean bag into one of two hoops, however, participants would not know which of the two was the true target. Firstly, they were to choose a place to stand, after which they were told which of the two hoops was their target for that trial. In previous experiment, participants have generally been suboptimal in that they were random in their choices with no meaningful change in behaviour with increasing task difficulty. In a series of experiments, we attempted to push people into making optimal decisions by altering the task design slightly. In Experiment 1, we manipulated the difficulty of the two different targets so that one was easier to achieve than the other by altering their size. The results of this experiment revealed that participants tended to select positions that would equalize their chances of success for each target even when this meant having a very little chance of succeeding in either eventuality. In Experiment 2, we removed the need for participants to make any choice by giving them the chance to attempt both targets. Similar to the results of Experiment 1, when participants were given the chance to throw at both targets, they opted for standing positions that were more central, again, much to their own disadvantage in terms of achieving their desired goal. Finally, in Experiment 3, we introduced a financial component to the task as well as the option for participants to opt for an unequal split of the reward associated with each target. The results of this study suggested that when participants opted for an unequal split in the value of each target, they demonstrated behaviours that were more in line with that of the optimal solution to the task. However, participants did not appear to favour this unequal split anymore than placing equal value on each target. The general trend of these three experiments suggest that people may struggle in tasks like these by being too hesitant to forgo rewards in one outcome for a greater chance of success at another.

We kindly request that you consider our enclosed manuscript entitled “Six of one, half dozen of the other: Suboptimal prioritizing for equal and unequal alternatives”.

We look forward to your decision and thank you in advance for your consideration.

Warren R. G. James, Amelia R. Hunt, & Alasdair D.F. Clarke