Failure To Produce A Sunk Cost Effect For Short-Term Behavioral Investments

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

Jeremy Nash, Kana Imuta & Mark Nielsen
The University of Queensland, School of Psychology, Australia

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Research Question

- Does the sunk cost effect exist for short-term behavioral investments?

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Background and Aims

Research over the previous 40 years have found a plethora of evidence for the sunk cost effect. The majority of this research has focussed on hypothetical investments (Arkes & Blumer, 1985; Arkes & Ayton, 1999). Few studies have focussed on behavioral investments in humans (e.g. Cunha Jr. & Caldieraro, 2009; Navarro & Fantino, 2009).

The aim of the present research was to observe whether a sunk cost effect occurs for physical effort and time spent on short-term behavioral tasks. The first 2 studies used behavioral tasks to try and address the main question of interest. The final 2 studies used hypothetical scenarios - to 1) observe whether any results found behaviorally, carried over into the hypothetical domain and 2) replicate a previously used sunk cost scenario.

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Methods

Study 1: A final sample of 120 adults completed 3 tasks that required them to physically move from one side of a room to another. For each task, participants were given the option of opting out for a sure gain of \$2.50, or to complete the task and gamble for \$5. The opportunity to opt out out was made either before any investment into the tasks or after 75% of the task was completed. The probability of winning the gamble was 50/50 or 1 in 6 (using dice). Thus, a 2x2 between-participants design was employed: Investment and No Investment; High Probability and Low Probability.

Study 2: A final sample of 59 adults completed 1 of 3 Lego architecture sets at a desk. The opportunity to opt out was given every 2 minutes until a 40 minute time-limit was up. Half of the participants also completed a small Lego car set as an additional behavioral investment before the Lego architecture set. Thus, a between-participants design was employed with sunk cost and No sunk cost conditions.

Study 3: Hypothetical vignettes of study 1 tasks were presented to 198 adults via Amazon's Mechanical Turk (MTurk) platform.

Study 4: The radar-blank plane scenario from Arkes and Blumer (1985) was presented to 218 Adults via MTurk.

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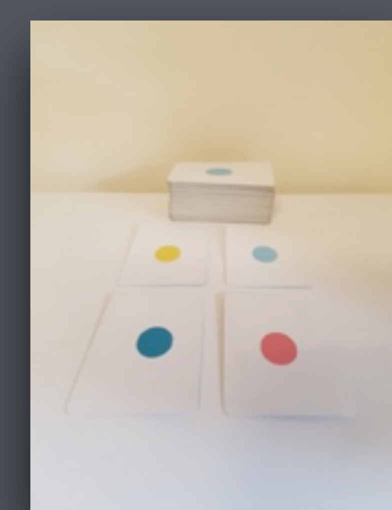
Study 1

All participants are presented with three tasks, one at a time.



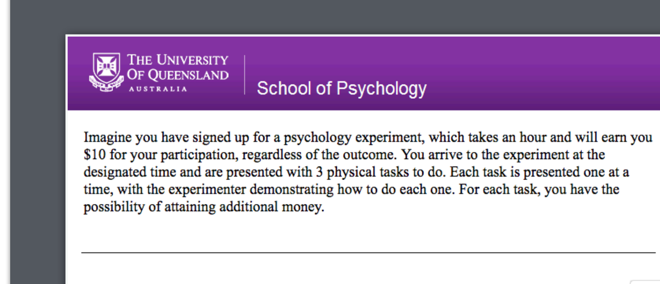
Study 2

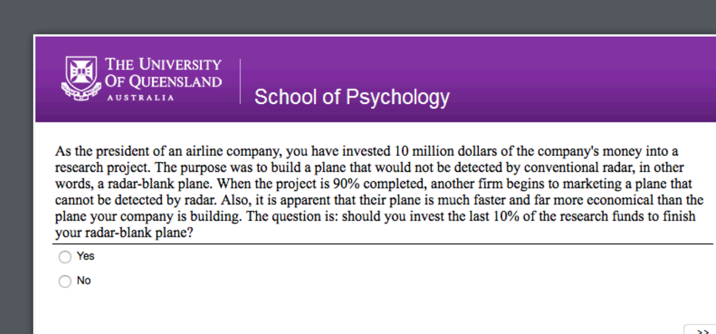
All participants choose **1** of the 3 Lego architecture sets.
Half of them also complete the race car set first.

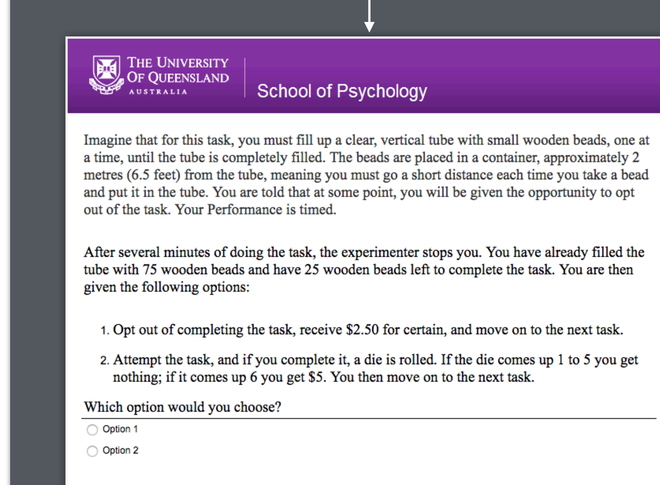
OR OR

Study 3 **Study 4**

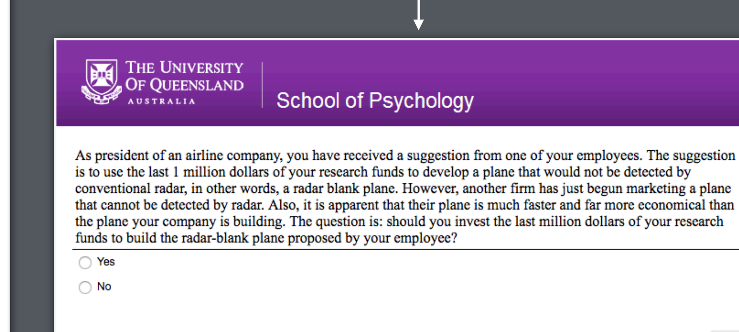
Participants (via MTurk) are presented with scenarios such as the below.







OR



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Results

Study 1

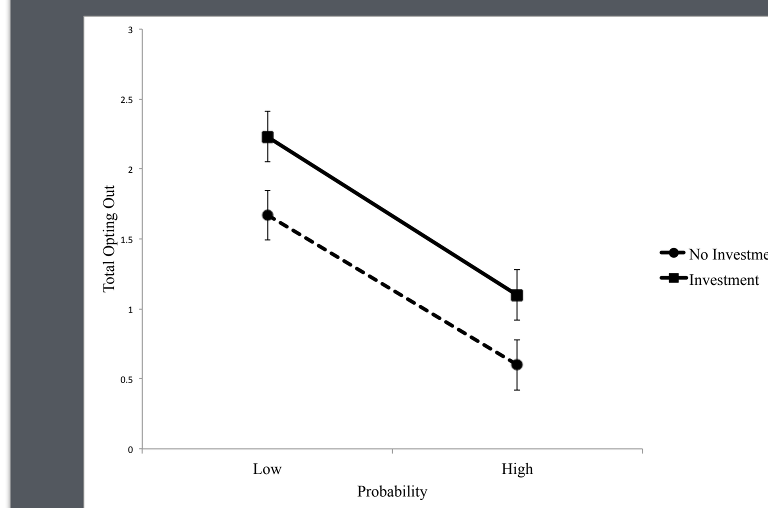

Figure 1. Mean total opting out between the investment and probability conditions. Investment into the tasks predicted greater opting out, $\beta = .23$ $p = .004$. 95% CI [0.18, 0.89]. Probability negatively predicted opt out behavior, $\beta = -.48$, $p < .001$. 95% CI [-1.46, -0.74].

Study 4

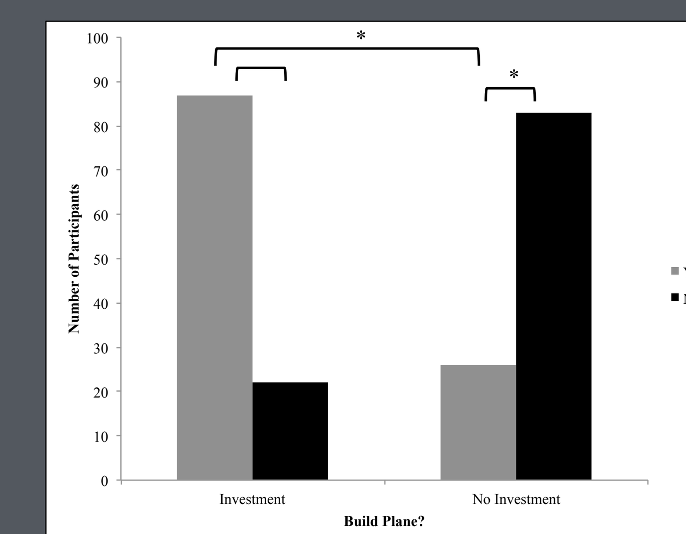

Figure 2. Participants' willingness to build the plane between the Investment and no Investment conditions. Participants were more likely to finish the plane in the Investment condition (80%) than in the No Investment condition (24%), χ^2 (1, N = 218) = 68.37, $p < .001$, $\Phi = .56$.

Study 1: Investment predicted more opting out. Probability predicted less opting out **(Figure 1)**
Study 2: No difference in opting out when sunk cost present
Study 3: No difference in opting out when study 1 tasks were presented hypothetically
Study 4: Replication of Arkes and Blumer (1985) with larger online sample **(Figure 2)**

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Conclusions

- The results from studies 1-3 failed to find a sunk cost effect. Study 4 replicated previous finding of Arkes and Blumer (1985).
- Physical effort, time, and some tasks may not be sufficient for the sunk cost effect to occur for short term behavioral investments.
- The laboratory may be problematic for consistently revealing a sunk cost effect.

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References

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Contact: jeremy.nash@uqconnect.edu.au