

# Statement of Design Change for: An Axiomatic Test for Regret and Salience Theory

Songyu He

September 5, 2023

This statement reflects the motivations and reasons for certain necessary modifications in our experimental design, primarily driven by factors outside our control and the distinct behavioral responses encountered between in-lab and online platforms. We believe these changes are not only necessary but also instrumental in ensuring the integrity and robustness of our findings.

Our original intent was to conduct the study at the physical UCSD EconLab, initiating data collection on July 12, 2023. However, we encountered a challenge from a significantly reduced participation rate on campus during the summer. We initially plan to acquire a sample size of 200 participants. Yet, between July 12th and August 9th, across 17 sessions—including 2 pilot sessions—we managed to recruit only 78 subjects. Notably, 25 of these subjects participated in the pilot sessions, leading to an average recruitment of 3 to 4 participants per session for the main study. In addition, we also had to cancel three sessions post-August 9th due to no sign-up.

In light of these challenges and to ensure timely data collection, we will transit our study to the online platform, Prolific. Our initial hope was to mirror the lab format on this platform. However, after conducting a pilot study with 17 subjects, we observed a concerning indication for difficulties from subjects' comprehensions or attentions. A mere 23.5% (4 out of 17) of subjects passed our attention check question. This starkly contrasts the 75.6% passing rate of the identical question observed from the 78 subjects in the physical lab. This significant attentional gap alarms that our original design might be excessively demanding for an online experiment, and calls for a design revision.

While the primary outcomes of our study remain consistent—to measure subjects' decisions between two lotteries under varying correlation structures—we make certain design modifications. The presentation is changed from price lists to a more accessible binary choice format. Additionally, we reduce our tasks numbers, reducing them from 28 to 16, and segregated into two groups. The first group comprises six tasks focused on regret theory and a single attentional check. Meanwhile, the second group evaluates salience theory.

A comprehensive breakdown of this revised design is documented in the pre-analysis plan published on September 5, 2023.