The Absence of a Sunk Cost Effect in a Long Shot Gamble and Scams

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Abstract

Why do people fall for scams? This paper presents an experiment about the effect of a sunk cost on unwise decision making. This experiment portrays a scam involved in a long shot gamble. The experiment uses two conditions; one condition hosts the sunk cost effect, and the other without the effect. These two conditions help reveal the fact if a sunk cost effect indeed presents itself in scams. The results of said experiment did not indicate a significant difference between the two conditions, suggesting that a sunk cost effect most likely does not play a big role in scams.

Keywords: Sunk cost effect, Scams, Gamble

1. Introduction

Email scams and phone scams rarely succeed, since most people ignore the scam due to its improbable legitimacy and won't even bother answering the phone or opening said email. However, a significant amount of people still fall for scams like these every year. This research seeks to understand why. The nature of a Scams creates a scenario that lures in one or more victims by tactics of deception, which in turn will render the victims vulnerable to the action of the scammer and what they may inflict on the victims (Langenderfer & Shimp, 2001). Phone and email scams rely heavily on people interacting with them, as failure to do so will render the scammer powerless to maneuver their victims. However, once a scam gains attention and gets interacted with, the main part of the scam commences. The scammer will contact the victim profusely, forcing the victim to invest much more in the scam than they had before. This process will repeat until the scammer successfully scams the victim, or until the potential victim realizes the nature of the scam.

Victims usually put themselves in a predicament by taking on unwise risks. Victims of scams will sometimes understand the risks that they partake in when selecting to participate, however, they remain unfazed by the negativity of the bad choice. The victim then follows through to the bitter end (Button, Nicholls, & Kerr, 2014)— such displays a classic monetary scam. In most scenarios, a scammer offers their victim a bonus amount of money if the victim states their willingness to invest monetary expenses into this deal; the greater bonus amount usually draws the victims in. However, the scammer also offers the victim other choices, even though most of the choices serve as distractions which help to highlight the scammer's preferred choice. Even though the victim shows awareness that they understand the unlikely chance of them actually gaining the designated amount, they still choose the higher return choice despite its low likelihood. The scammer makes the victims believe the probability of their choice, when in reality, the victims doomed themselves to the bad choice. This behavior of not noticing one's choices may be due to the sunk cost effect.

A sunk cost effect, a willingness of a being to invest more in something they have put a lot of effort in (Arkes & Blumer, 1985), exhibits when an investor continuously invests in a failing company. The investor keeps on doing such because they believe that by putting a significant amount of money into the company, they may reach a good outcome at the end. The investment in the sunk cost effect can be money, but it could just as well be time and effort (Cunha & Caldieraro, 2009). With the continued investment into a goal, the victim of a sunk cost effect could be spending time and money on failing matters, just like the investor example provided above. The sunk cost effect forces the victim to follow through with a decision or choice they made, even if the outcome of this specific choice remains far from ideal.

A sunk cost may affect people's risk taking behaviors as these behaviors encourage people to continue investing to justify their previous investment. This decision may, in turn, lead them to a bad outcome that would otherwise seem ridiculous and improbable. But with the sunk cost effect at play, victims may find themselves more prone

to exercise these choices they went through with, and with the added fact that people make bad choices when gambling (Grossman & Eckel, 2015), which effect may be amplified with the sunk cost (Kahneman & Tversky, 1979).

While some scams rely deeply on monetary cost for the sunk cost effect to take effect, others only require time and effort. A repeated call or messages may take time for the victim to read, therefore, using up the victim's time and creating a small but present sunk cost effect (Roth, Robbert, & Straus, 2015). Other sunk cost effects may be created with the use of mental labor, such as answering problems and other simple jobs using one's mind.

This experiment focuses on the sunk cost effect that requires effort rather than no monetary cost. Basically, the participants of said experiment will experience a sunk cost effect through the use of mental labor. I created an experiment with two conditions. One condition includes sunk cost, while the other does not. The experiment with the sunk cost requires participants to answer additional questions to see whether the effort taken to answer these questions will create a sunk cost effect.

The desired result of this experiment should support the claim that the slightest introduction of a potential sunk cost will make the participants of the experiment more willing to choose the choice linked to the sunk cost, which also happens to be the bad choice. This in turn proves that the sunk cost effect presets itself among unwise risks and scams that only require mental effort.

2. Method

I used Prolific to recruit participants across the world to take part in the experiment; there were 117 participants who participated in answering the surveys, but only 96 answers were usable. The experiment included two surveys: one with the sunk cost effect, the other one without. The one with the sunk cost effect had 61 participants participate, where 48 answers were usable. The survey without the sunk cost effect had 56 participants participate, with also 48 usable answers, making the surveys balanced. Both surveys amounted to 96 usable answers. To determine the usability of an answer, a participant needed to return to Prolific after answering the survey and not take too little time; participants may be expected to complete both surveys in at least two minutes. Failure to do so will render the answers unusable, as the participant may not be paying attention to the survey since they may be skipping through questions. The surveys both asked participants whether they would want to participate in choosing a gamble-like choice with a high reward but low likelihood of getting a reward; this choice will be labeled as the bad choice in the following paragraphs, or a stable choice with a small reward but a guaranteed chance of getting the reward.

The presence of the sunk cost effect separates the two conditions. For the condition with the sunk cost, participants had to ask for more information about the gamble, whereas for the survey without the sunk cost, participants were straight up given the information of the gamble. These questions were purposely made vague but required mental effort to read through, which became essential to create a sunk cost effect. All these questions asked for the participants to learn more about the gamble choice. These additional questions presented in the survey with the sunk cost effect were created to nudge the participant to learn more about a choice in the survey: the bad choice.

The manipulation added more questions to answer, whereas everything else in the two surveys were exactly the same. The control condition simply presented all the information immediately, without the participant needing to ask for it.

The gamble involved sacrificing their guaranteed payment of winning one dollar to get a five percent possibility of winning a bonus amount of 50 dollars, meaning that they had a 95% chance to not to win anything if they chose the gamble. Participants of both surveys were told exactly what the probabilities and possible payments were. However, the survey with the sunk cost initially hid the information regarding the unwise choice, and became purposely vague when introducing the bad choice by informing the participant that they could win a large bonus amount, but that they have to learn more about the choice to actually decide. Eventually, all participants of the experiment got all the information, and then had to choose either the one dollar bonus or the five percent chance of the fifty dollar bonus. The only difference between the two conditions forced the participants of the condition with the sunk cost to invest more effort into the choice they chose. Keep in mind that the participants that chose to gamble did not receive any bonus money if they didn't make it into the five percent of winning. The graph below better explains how the experiment worked; the sequence unfolds from bottom to top:
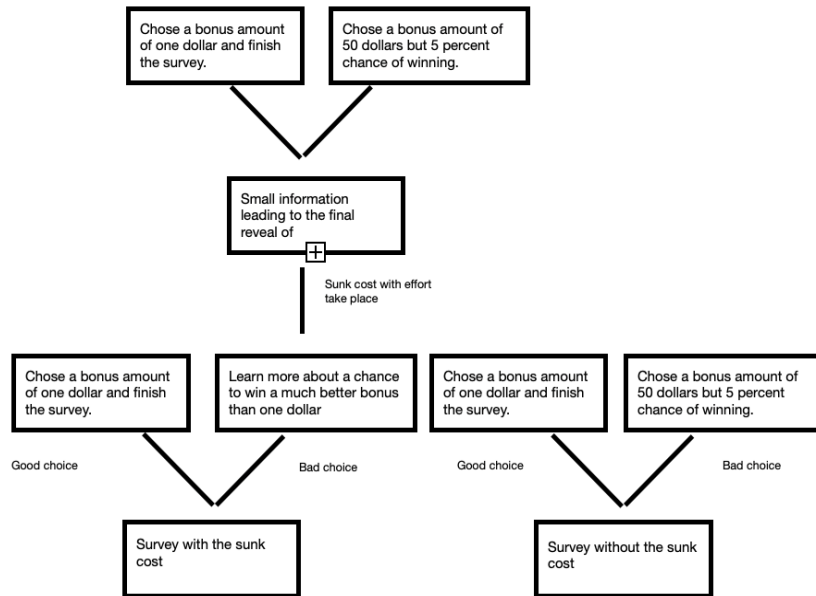
Figure 1. Illustrative procedure of the experiment starting from down to up
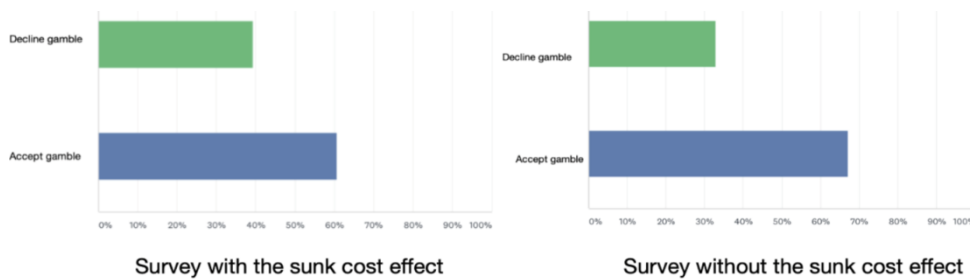
3. Result

Figure 2. Results with and without sunk cost effect

Figure 3. Z test

The bar graph's results show the sunk cost survey. For those who chose the gamble choice, 32.79% of them chose to switch and end up with one dollar, but still 67.21% of them wished to gamble. On the other hand, in the survey without the sunk cost, for those who chose the gamble choice, 39.29% of them chose to end up with one dollar, but still 60.71% of them wished to gamble.

However, according to the Z test, the results of this experiment could be an accident or just a chance, as the P value of the Z test has 51%, which indicates a 51% chance of the experiment accidentally having this result. This P value of the Z test unfortunately shows the coincidental nature of the results of this experiment, meaning that no definite conclusion can be drawn.

4. Conclusion

Due to the high P value of the Z test, the inconclusive results cannot prove that the sunk cost effect has any impact on people's ability to make unwise choices or why they fall for monetary scams.

With the high p value and the small change in percentage of choosing the unwise choice over the wise choice, the sunk cost effect most likely has small connections to why people fall for scams, or none at all. This means that the reason why people fall for these financial scams may not be the sunk cost after all. There would most

likely be more reasonable explanations as to why people fall for scams, but it seems that according to this experiment, the sunk cost effect may not be one of them.

Sunk cost may still play a great role in scams as far as deception goes. However, this experiment just did not show the relationship between scams and sunk cost. Possible reasons for the failure include: the great value of the bonus amount of money that prompted most participants to choose the option without thinking, leading to the extremely high percentage even for the experiment without the sunk cost; the relatively high percentage of the chance of success for the unwise choice, as this chance of success may seem still a pretty good chance for participants to win; and most importantly, the lack of participants to prove a eligible result. More participants will always produce a more correct result.

The relatively high percentage of success for the unwise choice might have also played a role here, as this chance of success may be relatively good for participants to win the 50 dollars. Participants may believe that 5% may still be a very high percentage for winning. A possible improvement to this should be to lower the possibility of actually winning the lottery.

Due to the absence of a controlled variable in the test, a sunk cost effect might not be present in what I assumed as the factor that triggers the sunk cost effect; the effort for answering for questions just to be greeted with the same choices may not be sufficient enough to create a sunk cost effect for the participant; a larger effort may be put to place to trigger the effect. Control groups of confirming whether the sunk cost effect is happening should be placed to confirm the existence of the effect when eventually conducting the final experiment. Again, a preliminary testing round could have helped me figuring out how the experiment could function properly.

Conducting the experiment in person may also enhance the results, since participants may feel more responsible and give more thought to their choices when presented physically with the experiment. Most importantly, more participants and more trials may produce a more reliable result.

However, if the experiment is conducted with all the necessary changes mentioned above, it may give more insight to why people fall for scam in general and the role of the sunk cost effect in these scams.

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