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Temporal Non-monetary Accumulation in Sunk Cost Frames

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Abstract

This research reports the findings from an experiment on the interactive effect of temporal accumulation of non-monetary assets, sunk costs, and violations of the consumer-brand relationship on consumer attitude and choice. Participants were randomly assigned to one of four fictitious scenarios where sunk cost magnitude, consumer-brand relationship violation, and non-monetary rewards redemption alternatives were experimentally manipulated. Consumer choice, consumer loyalty, and broad-based measures of consumer attitudes were utilized as outcome variables. There was evidence that participants in high sunk cost conditions viewed the brand in less favorable terms, but they were less likely to less likely to leave the brand even though their perceptions of the brand might have changed. This research adds to a growing literature on temporal and non-monetary factors influencing consumer decision making in the context of sunk costs. Future directions, as well as strengths and limitations of the research methodology, are discussed.

Key words: Sunk Costs, Consumer-Brand Relationship, Consumer Choice

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INTRODUCTION

Consumer decision makers demonstrate the sunk cost effect when they continue to expend resources in a marketing situation even though future utility would be increased by terminating the plan, reducing involvement, or even selecting an inferior alternative (Thaler, 1980). Often, sunk costs are viewed in monetary terms. However, in general, sunk costs are viewed as opportunity expenditures that have already been incurred and therefore cannot be recovered. As such, these costs cannot be reactivated and in turn they should not have any impact when implementing decisions about future marketing-related behaviors. From a purely rational perspective one would posit that this is because they do not impact the costs and benefits pertaining to the new decision. Nonetheless, consumers often exhibit illogical marketing-related decision processes.

The legacy sunk cost literature is multidisciplinary in nature, including but not limited to: finance (Garland, 1990; Staw, 1976), personality and social (Arkes & Blumer, 1985; Garland & Newport, 1991), animals (Magalhaes & White, 2014), competition (Teger, 1980), and human resources (Bazeman, Beeken, & Schoorman, 1982). Research continues in these domains as well as in emerging areas such as healthcare, online shopping, and professional sports. Overall, there continues to be support for the notion that if a monetary investment has already been made by individuals then they are more likely to attempt finish the project regardless of potential negative outcomes. This effect is largely referred to as "throwing good money after bad" (Arkes & Blumer, 1985) and is derived from prospect theory (Kahneman & Tversky 1979). Modern approaches also highlight temporal aspects as valued assets in sunk cost scenarios. Given the fecundity of the sunk cost literature, a brief review of applicable research to the topic at hand will properly frame the impetus for the research conducted in this investigation.

There is general agreement among consumer researchers that sunk cost effects do occur; however, the underlying mechanisms for these cognitive distortions continue to warrant investigation. In their hallmark research study, Arkes and Blumer (1985) proposed that the psychological mechanism for the sunk cost effect is the desire not to appear wasteful. Arkes and Blumer (1985) were able to demonstrate this by highlighting Kahneman and Tversky's (1979) use of prospect theory in their research. Prospect theory proposes that behavioral certainty magnifies both positive and negative values. The result of this is, as it applies to consumer behavior, is that consumers overvalue marketing-related behavioral gains

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and undervalue marketing-related behavioral losses. Arkes and Blumer (1985) found that participants' reluctance not to complete assigned tasks in their experimental paradigm could be explained as their desire to avoid the outcome of a guaranteed loss. This is consistent with what Kahneman and Tversky (1979) found in a variety of hypothetical gambling and insurance decision making scenarios. That is, individuals often overweight outcomes that are viewed as certainties in comparison to those that are considered probable.

In general, prospect theory accounts for one's strong aversion to certain loss but it does not explain the underlying psychological reasoning which accompanies the individual's decision making. Arkes and Blumer (1985) hypothesize that terminating investment in a project would in turn be an admission that prior money (or time) was wasted. Since this admission would be an undesirable outcome they found that it can only be avoided by further investment in order to justify the sensibility of the prior spending (or utilization of temporal resources). Moon (2001) conducted a study to further examine sunk costs in project completion scenarios. More specifically, the goal of the research was to understand why decision makers escalate their commitment to a previously chosen course of action. Participants were exposed to a stimulus where completion of a task is viewed as socially desirable along with purposefully manipulated confounding variable. This scenario allowed Moon (2001) to make an important distinction between two types of decisions: 1) progress and 2) adoption. Progress decisions are defined as having a temporal element, including a specific beginning and end date whereas adoption decisions involve the choice of whether or not to use or undertake something. For example, a research paradigm exemplifying an adoption decision is when a person must decide whether they will go on one of two travel experiences; the first has a greater expense but the second has the potential to be more enjoyable. Moon (2001) reported that there is a need for a focus on progress-related decision dilemmas in order to establish the relationship between completion and sunk costs, and enhance understanding of researchers' conceptualization of the sunk cost effect.

Past progress decision studies (Garland, 1990; Garland & Newport, 1991) failed to account for completion as a variable in escalation of commitment to a project and therefore did not appropriately manipulate the notion of prior investment. As such, this research was vulnerable to multiple interpretations and conclusions. Ultimately, Moon (2001) found significant results for both sunk cost and completion effects within a single study and demonstrated that there was a complementary relationship between sunk costs and completion in situations when both were of high importance. The positioning of the situational variables in terms of magnitude, severity, and importance served as the key drivers impacting the decision frame. Moon (2001) also found that the sunk cost effect was paralleling a marginal utility curve; this called into question McCain's (1986) assumption that sunk costs are only important in early stages of a project and less so later in the sequencing. Moon (2001) reported that this perhaps is accurate when there a series of decisions being made based on vivid, negative information. However, when reflecting on the terms of a single decision regarding a progress completion dilemma it was hypothesized that sunk costs have their greatest effect as the level of completion increases versus only the early stages as an outcome of the categorization. Additional research is needed to better understand the intricacies of these elements of the sunk cost effect.

Bornstein and Chapman (1995) attempted to examine why sunk cost behavior would actually increase overall utility. They used a paradigm that consisted of three potentially balanced reasons for committing a sunk cost fallacy. They are: 1) learning a lesson, 2) punishment for making a bad decision, and 3) the desire to appear to be a reliable decision maker. Through a series of manipulations in their experimental research, Bornstein and Chapman reported results that were consistent with legacy research in sunk cost effects. More specifically, they found that individuals remained consistent with their original decision plan when a substantial investment had been made. This is in contrast to a higher rate of termination when only a reduced amount had been invested. The explanations for the major findings were as follows: the desire to teach the decision maker to be more cautious in prospective behavior, the importance of lesson learning when the original decision was made carelessly and substantial resources had been invested, and simply the notion that an adult teacher had the opportunity to teach a lesson to a child (Bornstein & Chapman, 1995).

The purpose of this research is to provide a conceptual replication of recent research in sunk cost effects on consumer choice (Steinman & Jacobs, 2015). Steinman and Jacobs found evidence that high sunk cost manipulations resulted in attitudinal and behavioral change across various consumer-brand relationship and product alternative dimensions. However, in the current research, monetary frames will not be used; rather, consumer rewards accumulation is the primary topic of interest. It has been found that consumer rewards can take a significant amount of time to accrue. Although they do not have a defined monetary value they often have monetary associations. For example, in the transportation industry, individuals spend money to purchase tickets with specific carriers, especially airlines, and in the process of using these transportation services they accumulate rewards points that can be redeemed at a later date for free travel. The same premise holds true in the hotel industry and rental car arena, too. Therefore, the sunk cost effect has the potential to be expressed in what might be construed as a "once removed" monetary form. It is an intriguing variable for investigation. Even more interesting is to examine this variable in the context brand transgressions, or violations of consumer-brand relationship. A deeper understanding of these factors will lead to more advanced concepts and theories for direct application in consumer behavior and marketing realms.

METHODOLOGY

In this research, students enrolled in introductory social science and business courses at a university in the United States of America were randomly assigned to one of four conditions: 1) low sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (LVN); 2) high sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (HVN); 3) low sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (LVA); and 4) high sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (HVA). Sunk cost magnitude (low/high), violation of consumer-brand relationship (brand transgression/no brand transgression), and frequent flier mileage redemption alternatives for consumer (no frequent flier mileage redemption alternatives/extensive frequent flier mileage redemption alternatives) were experimentally manipulated. As such, a single decision scenario, adapted to the appropriate condition, was used for all participants. Differences were based on the aforementioned variables and participants assignment to the four conditions. It reflected a reliable and valid paradigm first noted by Garland (1990) in his research on sunk costs and escalation of commitment. More specifically, all groups were asked to read a fictitious scenario involving a fictional airline. The pilot-tested scenario was uniform for all participants except for the aspects of the aforementioned manipulated variables. This eliminated the potential for confounds. A manipulation check revealed that participants viewed the manipulated materials to have pragmatic realism and reliability and validity were established. The fictitious scenario was provided pertinent information about the airline's recent news events (this provided a framework for the brand as being a well-known carrier), a brief history of the airline (this provided a framework for the brand as being reputable), a description of the consumer's investment in the airline as it pertained to the number of frequent flier miles they had accumulated (this provided a framework for the airline's rewards program), and information about the potential options for the keeping/losing those frequent miles for the consumer (this provided a framework for typical dilemmas as it pertains to airline rewards programs redemption).

After random assignment to one of the four scenarios, participants were then asked to complete a series of consumer attitude, brand relationship, and behavioral intention measures. All participants completed the measures in the same order. The same fictional airline carrier was used in all conditions; the only difference among these four conditions was the description of sunk cost magnitude, violation of consumer-brand relationship, and frequent flier mileage redemption alternatives for the consumer. Therefore, interactive effect of these variables on subsequent consumer attitudes and behaviors could be examined. At the conclusion of the session, the participants were thanked and completely debriefed.

RESULTS

A series of factorial analyses of variance (ANOVA) was performed to examine differences among the following four conditions: 1) low sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (LVN); 2) high sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (HVN); 3) low sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (LVA); and 4) high sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (HVA).

For the composite measure assessing prospective choice, there were differences when comparing the conditions for participants. Of note is the finding that participants assigned to the high sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (HVA) were less likely to leave the brand than those assigned to the low sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (LVA). In addition, a pattern of difference was found for the comparison between the low sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (LVN) and the high sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (HVN) conditions.

For the composite measure assessing consumer loyalty to the airline, there were differences when comparing the conditions for participants. Of note is the finding that participants assigned to the high sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (HVA) were less likely to leave the brand than those assigned to the low sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (LVA) condition. In addition, a pattern of difference was found for the comparison between the low sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (LVN) and the high sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (HVN) conditions.

For the composite measure assessing broad-based consumer attitudes toward the airline, there were differences when comparing the conditions for participants. Of note is the finding that participants assigned to the high sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (HVA) were significantly less likely to report favorable attitudes towards the brand than those assigned to the low sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (LVA) condition. In addition, the same pattern, as noted in the aforementioned prospective choice and loyalty variables, was found for the comparison between the low sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (LVN) and the high sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (HVN) conditions.

Overall, the findings were consistent across the outcome measures used to directly compare the effect across the randomly assigned conditions of: 1) low sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (LVN); 2) high sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (HVN); 3) low sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (LVA); and 4) high sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (HVA). This provided support that amount of temporal and non-monetary investment in the frequent flier mileage reward program interacted with the airline's purported breach of consumer trust as well as similarly valued choice alternatives made available to them.

DISCUSSION

A primary finding from this research was that participants in the high sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (HVA) condition were less likely to leave the brand as measured by the composite prospective choice outcome variable in

comparison to those in the low sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (LVA) condition. The frequent flier mileage redemption alternative manipulation was utilized to highlight the possibility of a sunk cost effect. If participants were optimizers, or purely rational in their decision making, then a violation by the brand or a sunk cost will be rendered obsolete in the decision process. Consequently, participants will be more likely to leave the brand in pursuit of a better opportunity. However, the results of this research demonstrate interferences from variables such as sunk costs and consumer-brand relationship violations. Overall, there were interactive effect when examining the combination of a sunk cost, rewards redemption alternative, and presence of brand transgression that negatively impacted the consumer-brand relationship.

A secondary finding was that participants in the high sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (HVA) condition were less likely to remain loyal to the brand as measured by the composite loyalty outcome variable in comparison compared to those assigned to the low sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (LVA) condition. This provides support that a violation by the brand is indeed detrimental to the consumer-brand relationship. This further supports previous research on the topic (Aaker, Fournier, & Brassel, 2004; Steinman, 2012). A similar pattern was observed between the low sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (LVN) and the high sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (HVN) conditions. Participants in the high sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (HVN) condition were less likely to express trust towards the brand compared to those assigned to the low sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (LVN) condition. This also provides support for the damaging effects of a brand violation on the consumer-brand relationship.

The third major finding was that participants in the high sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (HVA) condition reported less favorable attitudes toward brand as measured by the composite broad-based consumer measure in comparison compared to those assigned to the low sunk cost, violation of consumer-brand relationship, frequent flier mileage redemption alternatives for consumer (LVA) condition. This provides additional support for the notion that a violation by the brand is damaging to the consumer-brand relationship, even as it applies to decision frames utilizing rewards that are once-removed from having monetary value. Once again, a similar pattern was observed between the low sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (LVN)and the high sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (HVN) conditions. Participants in the high sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (HVN) condition were less likely to express favorable attitudes towards the brand compared to those assigned to the low sunk cost, violation of consumer-brand relationship, no frequent flier mileage redemption alternatives for consumer (LVN) condition.

Overall, these results provide support for the sunk cost effect as it pertains to temporal accumulation and non-monetary assets in the consumer decision making frame. Participants in high sunk cost conditions viewed the brand in less favorable terms, but they were less likely to less likely to leave the brand as their perceptions of the brand might have changed. This an interesting dilemma because even though the dynamics of the consumer-brand relationship were alternated in a negative manner they remained fastened to the brand. This occurred although frequent flier mileage redemption alternatives were available. At a minimum, they could have decided redemption of these frequent flyer miles, ones that do not hold monetary value in a traditional way, was no longer of important to them. However, it can be concluded that the time invested to accumulate these frequent flyer miles is a vital reason for their reluctance to leave their brand, even after a violation of the consumer-brand relationship. In summary, the continuation of their original consumer behavior, after making a significant non-monetary and temporal investment into the airline brand by pursuing frequent flier mileage rewards, became the focal

point even when mentally accounting for other factors that were examined in this experimental paradigm.

The primary limitation of the current study is that it did not include an actual behavioral outcome variable. Unfortunately, this is endemic to many consumer decision making research studies. Hypothetical situations were presented using survey-based research tools. However, the researcher attempted to increase pragmatic realism by using accurate and representative fictional scenarios, ones that consumers might face in their daily lives. Redemption of airline miles is one such situation. However, the fact that participants were not sacrificing their own frequent flier mileage rewards could have influenced their decision making. As it is often mentioned in this research area, if feasible, it is recommended that future research directly address this issue by including actual behavioral measures based on simulation exercises or direct observation. It is also recommended that future experimental research in this area attempt to replicate and extend the findings of this research by using similar sunk cost rewards scenarios. This will enhance the generalizability of the results. There is application to real-world scenarios for airlines, hotel chains, car rental services, and any other industries where consumers spend considerable time accumulating rewards for later redemption. This will provide additional insight into temporal and non-monetary sunk costs effect, and ultimately will enhance the literature on this important topic.

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