Post-Purchase Consumer Regret: Conceptualization and Development of the Ppcr Scale

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We conceptualize and operationalize a new definition of post-purchase consumer regret. Consumers can regret both the outcome and the process of their purchase. While previous researchers have identified the existence of these two components, there has been a lack of exploration of how outcome regret and process regret are experienced in a consumer context. In terms of outcome regret, we posit two dimensions: regret due to foregone alternatives and regret due to a change in significance; we believe these influence consumers. In terms of process regret, we expect regret due to both under- and over-consideration during decision-making. We propose and conceptualize these multiple dimensions of post-purchase consumer regret, and report three studies that, taken together, validate a scale for measuring this construct (PPCR). We conclude by identifying possible new research opportunities in this area, outlining why more consumer behavior research can, and should, be devoted to the topic of consumer regret.

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ABSTRACT

We conceptualize and operationalize a new definition of post-purchase consumer regret. Consumers can regret both the outcome and the process of their purchase. While previous researchers have identified the existence of these two components, there has been a lack of exploration of how outcome regret and process regret are experienced in a consumer context. In terms of outcome regret, we posit two dimensions: regret due to foregone alternatives and regret due to change in significance; we believe these influence consumers. In terms of process regret, we expect regret due to both under- and over-consideration during decision-making. We propose and conceptualize these multiple dimensions of post-purchase consumer regret, and report three studies that, taken together, validate a scale for measuring this construct (PPCR). We conclude by identifying possible new research opportunities in this area, outlining why more consumer behavior research can, and should, be devoted to the topic of consumer regret.

INTRODUCTION

When consumers experience regret after a certain purchase, are they regretting what they bought (the outcome), how they bought it (the process), or both? The purpose of our paper is to propose and validate a multidimensional framework for each of these two components of regret. While previous researchers have identified the existence of these two components (e.g., Zeelenberg and Pieters 2006), there has been a lack of exploration of the components of outcome regret and process regret, and how each of these components are experienced in a consumption context. Therefore, we propose a new theoretical definition of post-purchase consumer regret. First, we describe regret in greater detail and also differentiate it from a potentially related construct (disappointment). Second, we conceptually redefine the current definitions of outcome regret and process regret. Third, we present the results of three studies that create a PPCR scale. Fourth, we conclude by identifying implications and questions to stimulate additional research.

CONSUMER REGRET

Regret is an aversive cognitive emotion that people are motivated to avoid, suppress, deny, and regulate should they experience it (Zeelenberg and Pieters 2006). Traditionally, regret has been known to be a painful sensation that arises as a result of comparing ‘what is’ with ‘what might have been’ (Sugden 1985). In other words, regret transpires when an obtained outcome compares unfavourably with an outcome that could have been better had the individual chosen differently (Bell 1982; Tsios and Mittal 2000). This is known as outcome regret (Zeelenberg and Pieters 2006). That is, post-purchase outcome regret is a comparison of individual’s assessment of the outcomes between what has been bought and what could have been bought.

But recently, scholars have also hypothesized that, independent of outcomes, the quality of the decision process can also be regretted (Connolly and Zeelenberg 2002; Zeelenberg and Pieters 2006). Process regret is evoked when an individual compares their inferior decision process to a better alternative decision process. When individuals regret due to process, instead of comparing the outcomes, they compare the decision processes (e.g., I should have checked more stores before buying). These two components of regret can occur independently of one another, which suggest that it is possible for someone to regret the process, even if the purchase experience resulted in a good outcome. Using Decision Justification Theory (DJT), Connolly and Zeelenberg (2002) argue that individuals regret due to the evaluation of outcomes, and also because of a decision made in an unjustifiable way. DJT postulates that the total amount of regret experienced is the sum of regret experienced as a result of an outcome that is inferior to another outcome that has been rejected, plus the feeling of self-blame for the poor decision process. Below, we go into more depth by closely examining what regret is, and what regret clearly is not.

What is Regret?

Responsibility. Regret arises from individuals expending cognitive efforts to consider the chosen option against the rejected options (Inman, Dyer, and Jia 1997). Individuals must think in order to feel regret. For individuals to experience regret, they have to cognitively process and cross-compare one option (chosen) to another option (foregone). If the result of the comparison is perceived to be unfavorable (i.e. the foregone option is perceived to be better than the present option), then individuals are prone to feeling regret over their actions.

Self-blame is a major component of regret. When individuals perceive that their decision was unreasonable or inexplicable, they tend to feel responsible for making the poor decision (van Dijk, van der Pligt, and Zeelenberg 1999). Sugden (1985) contends that the intensity of regret is often influenced by the level of individual responsibility taken, as well as self-blame. One consistent finding is that regret tends to be greater when individuals had more control over their decisions than when individuals have had little control over their decisions (Gilovich and Medvec 1994).

Counterfactual Thinking. In addition to feeling responsible, in order to experience regret, individuals must also be able to construct alternative scenarios other than the current state (Zeelenberg and Pieters 2006). Counterfactual thinking (CFT) is the process of comparing reality with alternative possibilities by constructing hypothetical scenarios to assess the attractiveness of alternative possibilities (Kahneman and Miller 1986). In essence, CFT is not an evaluation of the outcome, but rather the thought-process of how an outcome could have been prevented or altered to yield a more positive or a negative outcome.

There are two forms, or directions, of counterfactual thinking: upward CFT and downward CFT (Kahneman and Miller 1986). When individuals think about how circumstances could have been worse, it is referred to as downward CFT. Conversely, upward CFT is when individuals think about how circumstances could have been better. Because people engage in greater CFT after a negative outcome than after a positive outcome (Kahneman and Miller 1986), it is likely that people engage in upward CFT more often than downward CFT. And subsequently, when individuals generate upward CFT, it is likely that they will experience regret (Kahneman and Miller 1986).

In the context of consumer behavior, individuals tend to engage in upward CFT after a negative purchase outcome, and CFT helps them analyze what went wrong, to assess why they potentially made a poor choice, and to discover what better opportunities they may have missed. When a negative outcome occurs, people use CFT which can subsequently intensify the feeling of regret (Kahneman and Miller 1986). Indeed, the greater the CFT that
occurs, the greater the potential for regret to be experienced by the individual (Landman 1993). Therefore, CFT is not only a necessary condition of regret, but also has the potential to influence the magnitude of regret experienced by the individual.

**What Regret is Not**

**Disappointment.** Disappointment is an unpleasant feeling induced by the discrepancy between the desired expected outcome versus the actual outcome (Bell 1985). Regret is sometimes used inappropriately as a synonym for other negative emotions, including disappointment. This is because, like regret, disappointment is also a function of post-purchase valuation (Inman et al. 1997). Both are negative-based emotions that are induced by outcomes and risky decision-making. While the two may appear similar, they can be clearly distinguished from one another in three main ways: phenomenology, appraisal patterns and attributions, as well as the varying behavioral consequences of regret and disappointment.

First, building on the idea that specific emotions have distinctive goals, action tendencies, thoughts, and feelings associated with each emotion, Zeelenberg et al. (1998b) compared the phenomenological differences between regret and disappointment (for a review, see Zeelenberg et al. 1998b). Overall, those who experienced regret tended to rethink about past events, while those who experienced disappointment tended to dismiss their negative experience.

Second, in terms of appraisal and attribution, disappointment is appraised as something that caused by events beyond the individual’s control, while regret is appraised as something that caused by oneself (van Dijk and Zeelenberg 2002). Zeelenberg and Pieters (2004) posited that one of the major differences between regret and disappointment lies in control. Regret typically arises as a result of having made the wrong decision and is associated with self-blame. On the other hand, disappointment arises as a result of unfulfilled expectations and is associated with blaming others or circumstances beyond individual’s control (Zeelenberg et al. 1998a).

Finally, research in emotion theory has shown that discrete emotions have different idiosyncratic behaviors, and behavioral tendencies, associated with them. For example, Zeelenberg and Pieters (1999) conducted multiple studies to assess the differences in consequences between regret and disappointment after a failed service encounter. They found that regret was more associated with switching behavior than disappointment, while disappointment was more associated with word-of-mouth than regret.

**POST-PURCHASE CONSUMER REGRET**

As we have argued, Decision Justification Theory suggests individuals can regret due to a) evaluation of the outcomes and b) evaluation of the process (Connolly and Zeelenberg 2002). We believe these two dimensions are themselves multidimensional, and that the total regret experienced by a consumer is a sum of four components. Within outcome regret, we propose that there are two components: regret due to foregone alternatives and regret due to a change in significance. Within process regret, we also propose two components: regret due to under-consideration and regret due to over-consideration (Fig. 1).

**OUTCOME REGRET**

**Regret due to Foregone Alternatives.** When individuals regret due to foregone alternatives, they regret that they have chosen an alternative in favour of another alternative. This is perhaps the most classic understanding of post-purchase regret. When the chosen alternative is believed to be inferior to the foregone alternatives that could have been purchased, people are open to experiencing “regret due to foregone alternatives”. A key note concerning this dimension is that individuals can compare their chosen alternative to the known foregone alternative and/or unknown foregone alternative.

People evaluate outcomes by comparing what they have received to what they could have received (Sugden 1985). They feel regret if the foregone outcome is, or is perceived to be, better than the current outcome. Regret is related to choice and the very nature of choice implies that there were other possibilities that could have been chosen over the selected alternative (Zeelenberg and Pieters 2006). These possibilities can be explicitly known to the buyer or unknown to the buyer in which case the person would have to hypothetically construct these possibilities. Traditionally, researchers assumed that outcomes of the rejected alternative must be known to the buyer in order for regret to occur (Bell 1982). Known foregone alternatives are choices that were available to the buyer at the time of the purchase. (e.g., buying A, when one knew about options B and C).

However, studies have suggested that individuals can experience regret even in the absence of known foregone alternatives.
Ritov and Baron (1995) posit that foregone alternatives can be imagined or hypothetically imagined. Regret is not restricted to circumstances in which the outcomes of the rejected alternatives are always known to the buyer (Tsirgo and Mittal 2000).

Tsirgo and Mittal (2000) developed a model of post-purchase regret by outlining the antecedents and consequences of consumer regret. They demonstrated that regret can still be experienced even when the rejected alternatives are not known to the consumer. These authors argued that when the rejected alternatives are unknown to the buyer, the individual will trigger their upward CFT to construct hypothetical scenarios. Individuals have the tendency to think of outcome scenarios that are often better than the current scenario (Kahneman and Miller 1986). If a person deploys CFT to imagine a better product than the one that they have already chosen, then this person is likely to regret having chosen the current alternative. Therefore, unknown foregone alternatives are choices that were not available to the buyer at the time of the purchase but were hypothetically imagined following the purchase. In this case, individuals wonder whether or not there could have been better options than the one they purchased. (e.g., buying the only option noticed at the time, later wondering whether other options existed).

In short, regret due to foregone alternatives is triggered by choice. This phenomenon exists because individuals may make wrong choices and experience regret afterwards, even if the decision at the time seemed to be the right one.

Regret due to a Change in Significance. Researchers have used means-end theory to explain the goal-directed nature of a particular purchase (Zeithaml 1988). In the context of consumer behaviour, the theory suggests consumers tend to judge products based on the ability of the product to fulfill a desired consequence. The level in which the product has fulfilled its desired consequence will act as a cue to determine if the product was a worthwhile purchase.

Regret due to a change in significance is caused by the individual’s perception of diminished product utility from the time of the purchase to a certain point in time after the purchase. When an individual buys a product, there is a certain expected use for it. However, if something happens to make the product less appropriate for that use, or the entire usage situation disappears, then the individual is open to feeling regret due to change in significance. If a product was bought for a specific purpose, but the product was unable to fulfill that purpose, then the individual’s perception of the product’s utility has changed from time 1 (the time of purchase) to time 2 (time after purchase). That is, in T1, the product carried a purpose, but in T2, the product’s purpose has been diminished. Basically, the focus here is whether or not the product has fulfilled the needs of the consumers, when the need has changed.

One of the main distinctions between regret due to change in significance and regret due to foregone alternatives is that the former does not require the comparison of chosen versus the rejected alternatives. In this dimension, the chosen alternative is being compared to itself, but at a different time dimension (T1 vs. T2). Essentially, the product is being compared to what it was at the time of the purchase (T1) to a time when the buyer’s perception of utility value of the product has diminished (T2). (e.g., buying a bottle of wine to take to a party that was cancelled).

This dimension has been never explored in previous regret-related literatures. While some may argue that this is a case of disappointment, the distinction needs to be made between the events that have occurred and the purchase that has been made. The buyer may have been disappointed at the series of events that have occurred, but regrets the actual purchase that was made. This dimension highlights that foregone purchase alternatives are not required for individuals to feel regret after a purchase. Regret due to change in significance is the diminishing change in the individual’s perception of product utility value from T1 (the time it was purchased) to T2 (a point in time after the purchase). The greater the utility difference, the greater the regret.

**PROCESS REGRET**

The two dimensions mentioned above strictly focus on the outcomes of a purchase. However, researchers have pointed out that, independent of outcomes, the quality of the decision process itself can also engender regret (Connolly and Zeelenberg 2002; Zeelenberg and Pieters 2006). Therefore, it is important to discuss the results of the outcomes separately from the quality of the decision process, and delineate how each of the components separately influences post-purchase consumer regret.

**Regret Due to Under-Consideration.** When individuals feel regret due to under-consideration, regardless of the purchase outcome, they are sceptical of the heuristic processing that led them to the purchase. Individuals assess the quality of their decision process by examining both implementation/execution and the amount of information that they gathered (Janis and Mann 1977). Thus, there are two ways in which individuals can regret due to under-consideration. First, individuals can regret if they feel that they have failed to implement the decision process as they intended it, an intention-behavior inconsistency (Pieters and Zeelenberg 2005). Second, individuals can feel regret if they believe, in hindsight, that they lacked the desired quality and/or quantity of information needed to make a good decision.

People are inherently motivated to do what they set out to do. However, even when behavioral intentions are formed and goals are clearly determined, not all plans go according to plan. Intention-behavior inconsistency is the failure to implement one’s behavioral intention in the decision process (Pieters and Zeelenberg 2005). Regret occurs when individuals compare their factual decision process (inconsistent with their behavioral intention) to the counterfactual decision process (consistent with their behavioral intention). When individuals realize that the action that they have taken is not what they intended, they deploy upward CFT to imagine what it would have been like had they executed their desired behavioral intentions. Hence, regret is induced when there is a perceived discrepancy between the intended course of action (how they planned to make a decision) and the actual course of action taken (how they actually made their decision).

Intention-behavioral inconsistency can be due to internally or externally attributed causes. When cause is externally attributed, individuals are likely to be disappointed rather than regretful. When cause is internally attributed, individuals believe they put insufficient effort into the decision, or they deviated from their original intentions through irrational decisions. (e.g., buying the first car that one test drove). Individuals can also feel regret due to under-consideration if they believe, in hindsight, that they lacked the desired quality and/or quantity of information needed in their decision-making process. This differs from behavioral intention inconsistency because even if the decision-making process does go as intended, individuals can still feel regret if, in the post-purchase stage, they feel that they have not done enough to make the best decision. Decisions that were well-justified can sometimes appear to be unjustified at a later point in time (Crawford et al. 2002). This means there are likely situations where individuals feel that they could have done more to change the results, even though at the time of the purchase it seemed to be justified.

A critical distinction needs to be made between regret due to unknown foregone alternatives versus regret due to under-consideration. While the two may appear similar in nature, they are
indeed distinct from one another. Thinking about an unknown foregone alternative requires the individual to construct hypothetical products to be compared against the chosen product. Thinking about how one under-considered his/her purchase requires rethinking the buying process. While re-thinking the buying process may lead to the construction of hypothetical products, the two are different from one another because one focuses on comparing the chosen product to a hypothetical product (regret due to foregone alternatives) while the other focuses on comparing the actual decision process to an decision heuristic process (regret due to under-consideration).

In short, regret due to under-consideration is regretting the process of how one arrives at a decision. The consumer can feel regret because what they intended to do was not executed properly and/or the consumer can regret because they feel they should have done more (e.g. more thought, acquire more information, expend more effort, etc.) during decision-making.

Regret Due to Over-Consideration. When individuals regret due to over-consideration, regardless of the outcome, they are regretting that they have put too much time and effort into the buying process. Similar to regret due to under-consideration, this dimension also centers on heuristic processing. However, the critical distinction between the two is that regret due to under-consideration focuses on how one could have done more to alter the decision for a better outcome, whereas, regret due to over-consideration focuses on how one could have done less and still achieve the same result. Individuals often base their judgment of the quality of their decision process on the amount of information gathered (Janis and Mann 1977). When individuals over-consider their decision process, they are regretting that they have gathered unnecessary information which may or may not have factored into the final result.

In general, more thinking leads to better decisions (Pieters and Verplanken 1995; Pieters and Zeelenberg 2005). Thinking helps individuals search, and weigh the pros and cons of options, which has been known to increase the intention-behavior consistency (Pieters and Verplanken 1995). Thinking also helps individuals achieve a fuller range of objectives, gather more information, and make better arguments in their decision-making process (Pieters and Zeelenberg 2005). Individuals are generally motivated to put extra effort in order to avoid or minimize post-decision regret (Janis and Mann 1977). Therefore, because people behave in a way to reduce future regret, it is common for individuals to avoid or delay their final decision by putting more effort into gathering more information.

However, there comes a threshold where acquiring more information, and expending more effort, does not change or influence the final decision. This means any information that is acquired thereafter can be considered unnecessary and wasteful. Any effort perceived by the consumer as unnecessary effort potentially could be regretted, because the same decision could have been reached with less information and effort. Furthermore, excess information and effort are not the only things that can be regretted when individuals over-consider. Individuals can regret the emotional burden, the cognitive overload, and the stress that was experienced during the decision-making process. (e.g., spending a lot of time looking at alternatives, when the first option was the best choice).

In summary, similar to regret due to under-consideration, regret due to over-consideration is also regretting the process of how one arrives at a decision. Individuals regret having expended too much effort on the decision process, when they could have arrived at the same decision in a shorter amount of time, with less information, or with less effort.

POST-PURCHASE CONSUMER REGRET (PPCR)

SCALE DEVELOPMENT

We developed a scale which measures the four components of post-purchase consumer regret as we conceptually defined it above. Previous measures have not sufficed in measuring the multidimensional components of regret, or carried the necessary rigor and the proper validation technique required for developing scales, as proposed by Churchill (1979). Arguably, the closest existing scale that measures experienced regret is the regret experience measure (REM) developed by Creyer and Ross (1999).

The REM scale is an 8-item scale that measures level of regret experienced and self-recrimination. However, this measure of regret is uni-dimensional, and it focuses on measuring the level of regret experienced had one chosen differently, and the self-recrimination for selecting the wrong alternative. Other regret scales available were deemed psychometrically insufficient, or were not directly relevant to the consumer behavior context. In this section, we briefly present our scale development process and then discuss the results of our empirical work.

Study 1–Item Generation

A preliminary study involved a focus group of consumers to gain insights in their recent purchasing experience where they regretted a certain purchase. A content analysis of the discussion along with a literature review, brainstorming, and consulting with academics helped generate a total pool of 223 items designed to measure the four facets of post-purchase consumer regret. Following this step, ambiguous items were eliminated as well as those items which were worded with formal academic language, resulting in a revised pool of 174 items.

Study 2–Face Validity

Face validity of the items was assessed in two stages (Bearden, Netemeyer, and Teel 1989). In the first analysis, a marketing faculty was exposed to short descriptions of each of the dimensions and was asked whether or not the item should be retained or removed from the list. Items that received “not applicable” were subsequently removed from the list, leaving us with 153 remaining items. Next, these remaining items were submitted to 10 additional judges (a panel consisting of marketing academics across North America). This panel of judges was also given definitions of each dimension, and were asked to rate each item as “clearly representative”, “somewhat representative”, or “not representative”. For each of the dimensions, items that were deemed to be clearly representative by at least six of the judges were retained. We retained 45 items and the resulting items were arranged in an arbitrary order and interspersed in all subsequent questionnaires to avoid explicit categorization of the dimensions. Each item was formatted into a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Study 3–Item Refinement

Separate item analysis was performed for the remaining 45 items using the responses obtained from a convenience sample of 174 undergraduate students from several northeastern universities. The students were recruited via an opportunity to win a raffle for a movie gift certificate. The purpose of purification study was to verify the existence of the dimensions and to further reduce the number of items to a manageable number.

The correlation of each item with the total score for each of the four susceptibility dimensions was computed. Items that did not have item-to-total subscale correlations above .50 were deleted. In addition, items that did not have statistically higher correlations with the dimension to which they were hypothesized to belong, in
Principal components analysis with varimax rotation was also performed, resulting in a five factor solution. Based on the resulting relative eigenvalues, we retained the first four factors, consisting of items with loadings exceeding .70. These analyses resulted in a reduction of 9 items, leaving 36 items for reliability and confirmatory factor analysis.

The remaining items were examined via confirmatory factor analysis using AMOS version 7.0. First, a confirmatory factor analysis (i.e. a four-factor correlated structure) revealed items with low item reliabilities. In addition, we removed items that potentially cross-loaded onto other dimensions, and we further reduced the items for parsimony. After this refinement, a second confirmatory factor analysis was performed on the remaining 16 items (four items per factor). The four-factor correlated structure fits the data relatively well \((CMIN/DF=1.965, \text{NNFI}=.922, \text{CFI}=.96, \text{RMSEA}=.075)\), thereby indicating unidimensionality (Steenkamp and van Trijp 1991). Composite reliability, average variance extracted, and individual item loadings of the 16 retained items (four items per dimension) are listed in Table 1.

### DISCUSSION
We have used the foundation provided by Decision Justification Theory to introduce a new theoretical definition of post-purchase consumer regret. Consumers can regret both the outcome and the
process of their purchase (Zeelenberg and Pieters 2006). We proposed that subsumed within outcome regret, individuals can feel regret due to foregone alternatives and/or feel regret due to a change in significance. Subsumed within process regret, individuals can feel regret due to under-consideration and/or feel regret due to over-consideration.

With the PPCR scale we have established a concise measure that makes it easy to capture one’s level of post-purchase consumer regret. The three studies operationalized PPCR and validated the scale items. Our results are consistent with our conceptual definition, demonstrating a multidimensional factor structure, as well as adequate reliability.

It is important to note that individuals can experience all dimensions of post-purchase consumer regret, or might just experience one (or none) of the dimensions at a certain given time. Furthermore, individuals can experience a particular dimension of regret at a certain point in time and another dimension of regret a different point in time after purchase. Individuals can also feel different magnitudes of regret arising from each of the dimensions. Therefore, in order to better understand post-purchase consumer regret, it is important to consider each of the dimensions and the magnitude of regret experienced. It is the sum of regret experienced, through each of the four dimensions, that determines how much the individual regrets a purchase.

Future research in this area should focus on continued empirical work with the four dimensions of the PPCR and studying how each of the dimensions functions within a larger nomological network of antecedents and consequences. Additional studies would test convergent and discriminant validity of the dimensions, and also provide evidence of strong nomological and predictive validity. In particular, we encourage researchers to look at post-consumption behaviors such as repeat purchase intentions, change in attitudes toward brands, and complaint behavior. We believe that different dimensions of regret will have unique influences on these post-consumption behavior variables. Also, future research in this area should try to address the following questions. In what circumstances do individuals regret one dimension more than another dimension? Why do individuals feel regret in some ways and not in others? How does time play a role in the magnitude of regret experienced by the individual?

Understanding why consumers regret after a purchase is critical to marketers, as they are constantly looking for ways to minimize the negative experiences experienced by their customers. By having a greater awareness of the different forms of post-purchase regret, businesses can focus on helping individuals attain a better consumption experience. For instance, if marketers know that their customers are experiencing regret primarily due to foregone alternatives, then they can direct their attention to improving their own product and making it more appealing to the customer over other alternatives (e.g. better features, cheaper prices). If they know that their customers are experiencing regret due to a change in significance, then they can direct their attention to devising ways to add more significance to the product (e.g. market multiple uses of the product, add more value to the product, more liberal return policies). If marketers know that their customers are experiencing regret due to process (under-consideration and over-consideration), then they can direct their attention to assisting customers in their decision-making process through helpful customer service, and providing easy accessibility to information to guide them along the way. In sum, if marketers have a better understanding of what is causing consumer to regret over their purchase, then they can place greater emphasis in reducing that particular dimension of regret.

REFERENCES


