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# Two Essays on the Impact of Memory on Consumer Well-Being and Self-Definition

Kara Bentley  
*University of South Carolina*

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TWO ESSAYS ON THE IMPACT OF MEMORY ON CONSUMER WELL-BEING  
AND SELF-DEFINITION

by

Kara Bentley

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Texas Christian University, 2009

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Accepted by:

Priyali Rajagopal, Major Professor

Felipe Thomaz, Committee Member

Abhijit Guha, Committee Member

Thomas Kramer, Committee Member

Cheryl L. Addy, Vice Provost and Dean of the Graduate School

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## ABSTRACT

Consumer memory is an important variable for marketers to study because it is well documented that memories influence consumer attitudes, preferences, and behavioral intentions (Chattopadhyay and Alba 1988). In my dissertation, I focus on two specific types of consumer memories that are important for consumer well-being and self-definition – memories of shared (social) experiences and memories of special experiences. In my first essay, I contend that shared experiences are remembered better than individual experiences because of their positive impact on consumer well-being, while in my second essay, I investigate the manner in which memories of special experiences, which are inherently important for self-definition and well-being, are protected from contamination.

Essay 1 investigates the impact of social context on consumer memory. Specifically, I consider how shared (versus individual) experiences can lead to more accessible memories, i.e. I document a social bias in consumer memory. I suggest that shared memories are more accessible than memories of individual experiences because they fulfill belongingness needs, build self-esteem, and contribute to a positive self-definition to a greater extent than memories of individual experiences. I also provide evidence that the social bias is more pronounced for memories of positive, rather than negative, experiences such that consumers remember shared/positive memories better

than individual positive. Interestingly, I find the opposite pattern of results for memories of negative experience such that individual/negative memories are remembered better than shared/negative. I suggest that a correlation between shared experience and wellbeing exists such that social context amplifies both the benefits of a positive memory, but also the threat posed by a negative memory, to wellbeing, thereby motivating enhanced recall of shared positive but not shared negative experiences.

In Essay 2, I turn my focus to another aspect of consumer memory - strategic memory protection. Past research has found that memories of special experiences can be viewed as assets because of the utility that recollection provides and because of their importance for self-definition (Elster and Loewenstein 1992). Further, it has been shown that consumers will strategically protect memories that they view in this manner from contamination (Zauberman, Ratner, and Kim 2009). In my research, I examine memory protection more closely by documenting the type of contamination that special memories are protected from, the process underlying memory protection, and the implications that memory protection strategies have for marketers. I find that memories of special experiences are protected only from contamination by non-special, but not additional special, cues and propose that this type of protection occurs as a means of protecting their sense of self, since memories of special experiences are used for self-definition.

## TABLE OF CONTENTS

ABSTRACT.....	iii
LIST OF FIGURES.....	vi
ESSAY 1: JUST ME VERSUS WE: THE IMPACT OF SOCIAL CONTEXT ON MEMORY.....	1
ESSAY 2: SPECIAL MEMORIES REQUIRE SPECIAL PROTECTION .....	40
REFERENECES.....	84
APPENDIX A: STUDY STIMULI.....	91
APPENDIX B: MEASURES .....	101

## LIST OF FIGURES

Figure 1.1: Number of memories placed into each category .....	35
Figure 1.2: Percent of cued recall measures correctly recalled .....	36
Figure 1.3: Percent of recognition measures correctly recalled.....	36
Figure 1.4: Mood immediately after reading scenario .....	37
Figure 1.5: Corrected recognition immediately after reading scenario .....	37
Figure 1.6: Corrected recognition after 48-hour delay .....	38
Figure 1.7: Corrected recognition after 20-minute delay.....	39
Figure 2.1: Evaluations of the clothing item.....	79
Figure 2.2: Likelihood of replacing the clothing item .....	80
Figure 2.3: Willingness to pay to replace the clothing item .....	80
Figure 2.4: Specialness perceptions.....	81
Figure 2.5: Restaurant evaluations.....	81
Figure 2.6: Perceptions of personal specialness .....	82
Figure 2.7: Restaurant evaluations.....	82
Figure 2.8: Specialness perceptions at time 2.....	83
Figure 2.9: Restaurant evaluations at time 2.....	83

## ESSAY 1: JUST ME VERSUS WE: THE IMPACT OF SOCIAL CONTEXT ON MEMORY

### INTRODUCTION

Consumer memory is an important variable for marketers to study because of its documented effects on consumer attitudes, preferences and behavioral intentions (Chattopadhyay and Alba 1988), and much research in marketing has examined the antecedents, moderators and consequences of consumer memories. In the current paper, I focus on an aspect of experience that has received relatively little attention in the memory literature - social context. Specifically, I consider how the shared (versus individual) nature of experiences can both enhance as well as reduce memory for the experience. Thus, I find that shared positive experiences are remembered better than individual positive experiences, but shared negative experiences are remembered worse than individual negative experiences, suggesting that the social context and valence of an experience interact to impact memory for that experience.

Past research has documented a correlation between one's memories and wellbeing such that people are motivated to remember positive experiences better than negative experiences because such a positivity bias enhances wellbeing (Taylor and Brown 1988; Wagenaar 1986; Walker, Skowronski, and Thompson 2003; White 1982). I suggest that a correlation between shared experiences and wellbeing may also exist such that social context can amplify both the benefits of a positive memory, but also threat



posed by a negative memory, to wellbeing, thereby motivating enhanced recall of shared positive but not shared negative experiences. Thus, a shared positive memory allows the self to not only be defined in a positive manner, but also in a social manner, thereby positively influencing one's self view and amplifying the benefits of the memory to wellbeing. A shared negative memory, on the other hand, defines the self in a negative manner, and because other people were present during the negative experience, exacerbates this negative impact, thus further reducing the effect on well-being. Across five studies, I show that shared positive (negative) experiences are remembered faster (slower), earlier (later) and in greater (fewer) numbers than individual positive (negative) experiences (pretest and study 1), even when the experiences are experimentally controlled to be identical in detail and valence (study 2). Further, I show the process underlying this effect (study 3) and explore the impact of relationship quality on the social bias (study 4). Finally, I show that this social bias has important implications for memory of consumption experiences (studies 2-4).

My research contributes to the literatures on memory and social context in several ways. First, I document that social memories may be as, if not more so, accessible than individual memories, i.e. a social memory bias, thereby demonstrating that the social aspects of an experience can have a strong impact on memory accessibility. To the best of my knowledge, this is the first paper to document a systematic memory impact in autobiographical memory for socially shared experiences. Additionally, I document the moderating role of valence on the social bias such that shared positive experiences are remembered better than individual positive experiences, but I find the opposite pattern of results for negative experiences. Given the important role played by memories in

influencing consumer attitudes, preferences and choice, the presence of a social bias leads to important implications for marketers with respect to brand communications.

Second, research has only recently begun to explore how social context may impact consumer perceptions of consumption experiences (Bhargave and Montgomery 2013; Ratner and Hamilton 2015) and memory for these experiences (Dalton and Huang 2014; Puntoni and Tavassoli 2007); I add to this stream of research by adding the social bias as an outcome within the domain of social context and social connection. From a marketing standpoint, I provide greater insight into how people remember consumption experiences and advertisements, which can help to determine which aspects of an experience will be remembered and potentially used for forming attitudes towards products and services. Hence, my findings hold important practical implications for marketing communications.

Third, I show the process underlying this effect by documenting the relationship between memory and wellbeing via the amplification of the benefits versus threats of positive versus negative social experiences. In doing so, I extend prior literature on the amplification effect of social context on product evaluations (Boothby, Clark, and Bargh 2014) to the domain of consumer well-being.

I begin by summarizing some key findings from the research on memory and social context. I then present results from five studies supporting my predictions and conclude with a discussion of my findings and some areas for future research. I focus the first two studies on establishing the existence of an interactive effect between social context and valence on memory and subsequently focus the last three studies on documenting the consequences of the effect in consumption settings.

## LITERATURE REVIEW

### *Memory and self-enhancement*

A memory bias is a memory error that leads people to forget or remember certain pieces of information to a greater extent than others, and a robust finding in the memory literature is evidence of a positivity bias in autobiographical memory (Lishman 1974; Wagenaar 1986; White 1982). The positivity bias refers to the episodic memory advantage enjoyed by positive autobiographical information in terms of recall and accessibility. Thus, people appear to rehearse positive experiences more than negative experiences (D'Argembeau, Comblain, and Van der Linden 2003; Porter and Birt 2001; Schaefer and Philippot 2005), and recall pleasant experiences more so than unpleasant experiences (Matlin and Stang 1978). Specifically, the peripheral details of an experience appear to be recalled more when the experience is positive as compared to negative (Berntsen 2002; Talarico, Berntsen, and Rubin 2009), thus enhancing the vividness of positive memories (Talarico, LaBar, and Rubin 2004), and these effects hold whether memory retrieval is voluntary (Meltzer 1930) or involuntary (Berntsen 1996) and even when controlling for the emotional intensity of an event (Holmes 1970; Thompson et al. 1996; Tromp et al. 1995; Wagenaar 1986; Walker, Vogl, and Thompson 1997).

Positive autobiographical memories are thought to enjoy these memory advantages relative to negative memories for several reasons. First, memories of positive experiences lead to increased elaboration and rehearsal in order to help maintain positive self-esteem and beliefs in personal efficacy, and to promote an optimistic view of the future, which can lead to increased happiness (Taylor and Brown 1988). Second, positive memories are used to help define the self and to form social connections with others to a

greater extent than negative memories, again suggesting that positive memories are retrieved as a means of enhancing one's self-concept (Rasmussen and Berntsen 2009). Finally, research on the fading affect bias (Walker et al. 2003; Walker et al. 1997) suggests that the emotional intensity associated with negative experiences fades faster over time than the intensity associated with positive experiences, therefore providing positive experiences a memory advantage. A consideration of all of these findings suggests that there appears to be a motivational underpinning to the positivity bias such that remembering positive experiences as compared to negative experiences yields greater self-esteem and happiness.

### *Social Context and Memory*

I suggest that just as positive memories serve the function of protecting and maintaining a positive self-image, memories of social connection – shared experiences – may also perform the same function. Prior research has documented the importance of social relationships on happiness and wellbeing (Diener and Seligman 2002). I extend these findings and suggest that even memories of social connection ought to serve the same function and fulfill belonging needs, build self-esteem, and contribute to a positive self-definition. In this regard, I define a shared memory as an episode in which an individual feels a sense of social connection with at least one other individual. Thus, an individual could feel a sense of social connection by physically being with someone else, by talking on the phone or texting with someone, or even through the online presence of another person with whom they are not necessarily communicating with, but whom is engaging in the same online activity at the same time as them (i.e. knowing that there are

other customers browsing the same web page at the same time or playing an online game with another person).

Research has shown that the need for social connection is a fundamental human need (Baumeister and Leary 1995), and that mental and physical well-being depends on the fulfillment of belonging needs (DeLongis, Folkman, and Lazarus 1988; Lynch 1979). Social connection therefore leads to greater happiness (Baldassare, Rosenfield, and Rook 1984; Lee and Ishii-Kuntz 1987), subjective well-being (McAdams 1985), and physical health (Reis et al. 1985) while a lack of social connection, has been shown to be negatively correlated with happiness and result in anxiety and depression (Baumesiter and Tice 1990; Leary 1990). Interestingly, research also suggests that perceptions of positive social connections mediate the relationship between positive emotions and physical health (Kok et al. 2013). Recent work by Ratner and Hamilton (2015) finds that even anticipated inferences about one's social connection status can impact consumption, such that consumers will avoid engaging in hedonic activities when they are alone because they think that other people will make negative inferences about how socially connected they are.

The above research suggests that perceptions of social connection are an important influencer of consumer wellbeing and happiness, and thereby are also likely to impact autobiographical memory. However, the effects of social connection on memory will vary depending on the valence of the experience, since the positive effect of social context on consumer self-enhancement will hold only for positive, but not negative, experiences. That is, shared and positive experiences ought to have strong positive effects on wellbeing, while shared and negative experiences ought to have strong negative

effects on wellbeing, thereby leading to memory enhancement for the former, but attenuation for the latter.

In this regard, there is some support for the amplification of experiences due to social context with research finding that shared consumption experiences lead to more intense product evaluations (Boothby et al. 2014). The researchers found that participants evaluated a sample of pleasant tasting chocolate more positively, and bitter tasting chocolate more negatively, when sampling the chocolate with another person, as opposed to by themselves. These results suggest that social context can amplify an experience, and this amplification effect was attributed to the notion that people pay more attention to stimuli when they are in a group setting, as opposed to by themselves, as suggested by the social learning literature (Shteynberg 2010; Shteynberg and Apfelbaum 2013), thus leading to more intense evaluations.

I rely on these findings and suggest that sharing a positive experience with someone else, as opposed to being by oneself during a positive experience, can amplify the benefits of that memory to well-being because the memory of a shared/positive experience can lead one to remember and define the self not only in a positive manner, but also as a social being whose belonging needs are being fulfilled. Thus, I predict that shared/positive memories will be stronger and more accessible than individual/positive memories due to an increase in the positive impact of that memory on overall well-being.

Further, I propose the opposite pattern of results for memories of negative experiences such that the memory of sharing a negative experience with someone else could be even more detrimental for overall well-being than a memory of being alone during that experience. A memory of a shared/negative experience could define the self

in a negative light, but if there were other people present to witness the negative experience, it could also negatively impact those people's perceptions, thus threatening belonging needs and being even more detrimental to well-being. Thus, I predict that shared/negative memories will be weaker and less accessible than individual/negative memories due to the increased threat of those memories to overall well-being.

To summarize, I suggest that the social context of experiences will impact consumer happiness and wellbeing such that memories of shared positive (negative) experiences will be recalled more (less) and accessed faster (slower) as compared to memories of individual positive (negative) experiences.

In order to test my predictions, I conducted five studies with different measures of memory accessibility including response time (pretest), recall order and proportion of free recall (study 1) using real-life, autobiographical memories to establish the finding that social/shared memories enjoy greater accessibility than individual memories. I then show that the social bias holds even when controlling for the details of various consumption experiences including shopping (study 2), going to a concert (study 3), and eating at a restaurant (study 4) thereby establishing the robustness of the social bias.

## PRETEST

In order to test my intuition that shared positive (negative) experiences ought to be more (less) accessible in memory than individual positive (negative) experiences, I conducted a pretest online using a sample of 108 undergraduate students ( $M_{age} = 20.26$  years; 40 % male). The independent variables were social context (With Others vs. By Myself) and experience valence (Positive vs. Negative) and the key dependent measure

was response time (Fazio, Williams and Powell 2000) to agree or disagree with one of the following statements “Over my lifetime, I have had a lot of positive (negative) experiences in which I was with other people (by myself).” I also included response times to agree/disagree with five practice questions (e.g. “The weather outside is sunny”) to control for individual differences in reading and typing times.

After the response time task, participants were asked to recall and describe one memory that fit within the category presented during the response time task (e.g. shared, positive). After describing the memory, participants were asked how thinking about the memory made them feel (1- very negatively; 7 – very positively). If memories of shared/positive (negative) experiences are, in fact, seen as better (worse) for well-being, as opposed to memories of individual/positive (negative) experiences, then recalling them should amplify positive (negative) affect.

Participants then reported their age and gender and completed an involvement manipulation check (IMC - Goodman, Cryder and Cheema 2012), which comprised one question asking participants to count and report the number of colors listed in a set.

### *Results:*

*Response Time:* An ANCOVA with the five practice times as covariates and social context and valence as the independent variables revealed a significant interaction ( $F(1, 99) = 4.432; p < .05$ ) such that participants in the shared positive condition ( $M_{\text{sharedpos}} = 4.08$  seconds,  $SD = 1.35$  seconds) were faster than those in the individual positive condition ( $M_{\text{indpos}} = 5.85$  seconds,  $SD = 2.77$  seconds, ( $F(1,47) = 8.44, p < .01$ ). Participants in the shared negative condition ( $M_{\text{sharedneg}} = 6.50$  seconds,  $SD = 3.24$



seconds) were directionally slower than those in the individual negative condition ( $M_{\text{indneg}} = 5.99$  seconds,  $SD = 1.97$  seconds), but this difference was not significant ( $p > .20$ ). Neither age nor gender had any significant effects in this study or in any of my other studies, and are not discussed further. These results provide preliminary support for my contention that social context can lead to more (less) accessible positive (negative) memories.

*Affect:* An ANOVA with affect as the dependent variable and social context (shared vs. individual) and valence (positive vs. negative) as the independent variables, revealed a significant main effect of valence ( $F(1, 104) = 356.84, p < .001$ ) and significant interaction between social context and valence ( $F(1, 104) = 8.54, p < .01$ ). Planned contrasts revealed that in the negative conditions, affect was significantly more positive, in the individual condition ( $M_{\text{individual}} = 2.84, SD = 1.21$ ) as opposed to the shared condition ( $M_{\text{shared}} = 2.28, SD = 1.22; F(1, 104) = 122.92, p < .001$ ). However, in the positive conditions, affect was significantly more positive in the shared condition ( $M_{\text{shared}} = 6.59, SD = .57$ ) as opposed to the individual condition ( $M_{\text{individual}} = 6.00, SD = .96; F(1, 104) = 247.07, p < .001$ ). These results support my view that social context can amplify the positive (negative) impact of positive (negative) memories.

*Mediation Analysis:* To explore whether the interactive effect between social context and valence impacts memory accessibility via affect amplification, I ran a mediation analysis using the PROCESS SPSS macro (Model 7; Preacher and Hayes 2004). In the model, social context served as the independent variable, valence was the

moderator, affect was the mediator, and response time was the dependent variable. In order to control for individual differences in typing and reading speed, I transformed the response time variable by dividing the response time to the target statement by the average response times to the control statements. The effect of the mediator – affect - was significant ( $\beta = -.103$ ,  $t = -.198$ ,  $p = .03$ ). The bootstrap analysis showed support for moderated mediation (95% CI = -0.31 to -0.02), and was significant in the positive condition ( $\beta = -0.06$ , 95% CI = -.1689 to -.0100) but was not significant in the negative conditions ( $\beta = .058$ , 95% CI = -0.0015 to 0.1865). These results provide support for the notion that a shared/positive experience, as opposed to an individual/positive, can amplify positive affect and lead to more accessible memories. However, when an experience is negative and shared, it can amplify negative affect, leading to less accessible memories.

*Discussion:*

These results confirmed my intuition and provide initial evidence for a social bias in memory. Study 1 extends the findings of my pretest through the use a different memory measure – recall, which allows me to examine whether the social bias holds across both memory availability and accessibility. Previous research suggests that differences in accessibility may be reflective of differences in availability (Rajagopal, Raju, and Unnava 2006). That is, there may be a bigger pool of shared experiences as compared to individual experiences to recall (availability), or shared memories may be easier to recall despite not being present in larger numbers (accessibility). Study 1

attempted to distinguish these two alternate possibilities by measuring both the availability as well as the accessibility of recalled memories.

## STUDY 1

This study was conducted using a sample of 112 college students ( $M_{age} = 24.3$  years), recruited via MTurk, who were paid for their participation. Only college students were recruited for this study in order to try and control for the types of events that were being recalled.

### *Design and Procedure:*

Participants were asked to recall all of the memorable events they had experienced during their time as a college student. They were then shown all of the events they had listed and asked to categorize each memory as shared versus individual *and* as positive versus negative. The proportion of each type of memory (e.g. individual-negative vs. individual-positive vs. shared-positive vs. shared-negative) for the first thought listed was the measure of memory accessibility, since the first thought that came to the respondents mind should be the most accessible, while the proportion of all thoughts listed for each category was the measure of memory availability. Previous research suggests that such proportions are measures of availability and accessibility in memory (Rajagopal et al. 2006). Participants then reported demographic information and completed an involvement manipulation check (Goodman et al. 2012), which comprised of one question asking participants to count and report the number of colors listed in a set.

*Results:*

*Availability:* The participants listed a total of 520 thoughts. In line with expectations, a chi-square analysis on all thoughts listed ( $\chi^2 (1, N = 520) = 22.60; p < .001$ ; Figure 1.1) revealed that shared/ positive memories accounted for the majority at 55% ( $n = 286$ ). Individual/positive memories accounted for 30.4% ( $n = 158$ ), individual/negative for 9.4% ( $n = 49$ ) and shared/negative for 5.2% ( $n = 27$ ). As expected, the number of thoughts categorized as shared/positive was significantly larger than individual/positive ( $\chi^2 (1, N = 444) = 36.90; p < .001$ ). Additionally, the number of thoughts categorized as individual/negative was significantly larger than those categorized as shared/negative ( $\chi^2 (1, N = 76) = 6.37; p < .05$ ). In line with prior research on the positivity bias in autobiographical memory, the number of thoughts listed as individual/positive was significantly larger than individual/negative ( $\chi^2 (1, N = 207) = 57.40; p < .001$ ), and the number of thoughts listed as shared/positive was significantly larger than shared/negative ( $\chi^2 (1, N = 313) = 214.32; p < .001$ ).

*Accessibility:* A chi-square analysis on the first thought listed ( $\chi^2 (1, N = 112) = 3.64; p = .056$ ; Figure 1.1) revealed that shared/positive memories were also the majority of first thoughts listed at 55.4% ( $n = 62$ ). Individual/positive accounted for 33.9 % ( $n = 38$ ) of first thoughts listed, individual/negative for 7.1% ( $n = 8$ ), and shared/negative for 3.6% ( $n = 4$ ). The number of thoughts listed as shared/positive was significantly larger than individual/positive ( $\chi^2 (1, N = 100) = 5.76; p < .05$ ), but there was no significant difference between the number of first thoughts categorized as shared/negative and individual/negative ( $p = .25$ ). This lack of difference is likely on account of the small

number of respondents who listed any negative event as their first thought (a total of 12 respondents ~ 10% of the total respondents).

In support of a positivity bias, the number of thoughts listed as individual/positive was significantly larger than individual/negative ( $\chi^2 (1, N = 46) = 19.57; p < .001$ ), and the number of thoughts listed as shared/positive was significantly larger than shared/negative ( $\chi^2 (1, N = 66) = 50.97; p < .001$ ).

#### *Discussion:*

The results of this study support my notion of the interaction of a social and a positivity bias in autobiographical memory, and that both biases can cumulatively lead to a significant memory advantage for shared and positive experiences as compared to shared/negative, individual/positive and individual/negative experiences.

A limitation of these studies is that I only assess the social bias for real memories. It is possible that there are significant differences in the content of the memories recalled by respondents in terms of their significance and impact, which may have influenced the results. For example, it could be argued that shared memories are more consequential (graduations) than individual memories (doing well on an exam), and hence recalled more easily. Past research has found that intense emotional experiences are more likely in interdependent contexts than in independent contexts (Jaremka, Gabriel, and Carvallo 2011), and that both positive and negative experiences are more intense when they are in a shared context relative to an individual context (Boothby et al. 2014). This could lead to the argument that shared experiences are remembered better because they are often more emotionally intense. Further, since real memories were used in the studies thus far, I

cannot yet rule out the potential influence of socially desirable responding as a possible alternative explanation. Since I rely on participants' self-reported memories, it is possible that although they were recalling both individual and shared experiences when thinking about their lives, they only reported the shared experiences in the study because they felt as though these memories would paint a more positive picture of themselves. In order to rule out these alternate explanations, I conducted the remainder of my studies with experimentally controlled experiences.

Finally, the remaining studies focus specifically on consumption experiences and document that the social bias holds for such experiences.

## STUDY 2

In this study, both the social context of the experience (Shared vs. Individual) and the valence of the experience (Positive vs. Negative) served as manipulated factors. The study was conducted in two parts. 140 undergraduate students completed both parts of the study ( $M_{age} = 21.3$  years; 35% male). The link for the first part of the study was posted online for 24 hours, and, after a 24-hour delay, the link for the second part of the study was posted online for 24 hours. Students could access the links at any time during the 24 hours that they were posted.

### *Design and Procedure:*

Participants were told to imagine that they had gone shopping at the mall either by themselves (individual condition) or with a group of friends (shared condition) to purchase a new pair of jeans and a pair of tennis shoes. The valence of the experience

was manipulated by including details in the experience that either made for a positive shopping experience (e.g. were able to find jeans on sale, unexpected discount on tennis shoes) or a negative shopping experience (e.g. were not able to find any jeans or tennis shoes). The brands that appeared in the scenarios were identical between all conditions (Appendix A), but in the individual condition, participants were told they were shopping for two different brands of jeans for themselves (Lucky and True Religion), while in the shared condition, participants were told they were shopping for one brand of jeans (Lucky) while their friend was shopping for a different brand (True Religion).

Respondents then filled out manipulation check questions to ensure that the social context and the valence manipulations were successful. Three social context manipulation check questions were included, the first of which asked participants if they were alone or with others in the scenario and forced them to choose between the two options while the other two questions were scaled measures (1 = completely individual, 7 = completely shared; 1 = not at all socially connected, 7 = extremely socially connected). The valence manipulation check consisted of two scaled measures (1 = very negative, 7 = very positive; 1 = very bad, 7 = very good;  $\alpha = .96$ ). Finally, participants filled out demographic measures and the same involvement questions as were used in previous studies ( $\alpha = .93$ ). In part two of the study, participants filled out the same memory measures for the scenario as they had filled out in part 1.

#### *Dependent Measures:*

Participants answered seven recall questions about the shopping scenario. The first set of questions were cued recall measures and consisted of a question about the

scenario followed by a blank space for participants to generate and provide their answer (e.g. “Where did you eat lunch?”). The next set of questions were recognition measures and consisted of a question about the scenario and five multiple-choice options to choose from (e.g. “Which brand of shoes were you shopping for today?” followed by five options). Each answer was coded as one (+1) if the participant correctly answered the question, negative 1 (-1) if the participants incorrectly answered the question, and zero (0) if the participant indicated that they did not know the answer. I then calculated the proportion of questions answered correctly for the cued recall measures and recognition measures and used these measures of corrected recall as the main dependent measures of memory.

#### *Results:*

11 participants (8%) failed the manipulation check questions (e.g. read the scenario for the shared (individual) condition and then indicated that they were in the individual (shared) condition thus leading them to answer the questions for the individual (shared) condition rather than the shared (individual) condition), and were therefore dropped from analysis, leaving a final sample of one-hundred and twenty-nine. An analysis across experimental conditions revealed no significant difference in respondent dropout rate across conditions ( $p > .1$ ).

*Manipulation Checks:* The manipulation checks confirmed that those in the shared condition felt as though their experience was significantly more shared ( $M_{\text{shared}} = 4.94$ ,  $SD = 1.19$ ) compared to those in the individual condition ( $M_{\text{individual}} = 2.47$ ,  $SD =$



1.31;  $F(1,127) = 126.08, p < .001$ ), and that they felt significantly more socially connected ( $M_{\text{shared}} = 4.74, SD = 0.99$ ) compared to those in the individual condition ( $M_{\text{individual}} = 3.31, SD = 1.4; F(1,127) = 44.74, p < .001$ ). Additionally, those in the shared condition were more likely to select the “with others” option as opposed to the “alone” option ( $\chi^2(1, 1) = 106.12; p < .001$ ). The manipulation checks also confirmed that those in the positive condition felt as though their shopping experience was significantly more positive ( $M_{\text{positive}} = 6.02, SD = 1.02$ ) compared to those in the negative condition ( $M_{\text{negative}} = 2.44, SD = 1.29; F(1,127) = 307.6, p < .001$ ).

*Cued Recall:* An ANOVA with cued-recall as the dependent variable and social context (shared vs. individual), valence (positive vs. negative), and their interaction as the independent variables, revealed a significant interaction between social context and valence ( $F(1,125) = 12.51, p = .001$ ; Figure 1.2), with no main effects of social context or valence ( $p$ 's  $> .1$ ). Planned contrasts revealed that in the positive conditions, cued-recall was marginally higher in the shared shopping experience ( $M_{\text{shared}} = .68, SD = .47$ ) compared to the individual experience condition ( $M_{\text{individual}} = .45, SD = .38; F(1,125) = 3.28, p = .07$ ). Further, in the negative conditions, cued-recall was significantly higher in the individual shopping experience ( $M_{\text{individual}} = .74, SD = .32$ ) compared to the shared experience condition ( $M_{\text{shared}} = .33, SD = .70; F(1,125) = 9.99, p < .01$ ).

*Recognition:* An ANOVA with recognition as the dependent variable and social context (shared vs. individual), valence (positive vs. negative), and their interaction as the independent variables, revealed a marginally significant main effect of social context ( $F$

(1,125) = 3.77,  $p < .10$ ) and significant interaction between social context and valence ( $F(1,125) = 7.84, p < .01$ ; Figure 1.3), but no main effect of valence ( $p > .1$ ). Planned contrasts revealed that in the negative conditions, recognition was significantly higher in the individual shopping experience ( $M_{\text{individual}} = .83, SD = .30$ ) compared to the shared experience condition ( $M_{\text{shared}} = .44, SD = .63$ ;  $F(1,125) = 10.74, p < .01$ ). In the positive conditions, the pattern of results was consistent with the results for cued-recall such that recognition was higher in the shared shopping experience ( $M_{\text{shared}} = .76, SD = .40$ ) compared to the individual experience condition ( $M_{\text{individual}} = .68, SD = .41$ ), but this contrast was not significant ( $p > .10$ ).

#### *Discussion:*

Study 2 extends the effects found in the pretest and study 1 by replicating the findings within an experimentally controlled consumption experience (shopping) context. Thus, memory for the shopping experience was significantly more accurate when the experience was a shared experience than when it was an individual experience. Interestingly, the effects hold even when respondents are asked to simply imagine the experience rather than actually experience the events.

Thus far, I have documented the interactive effect of social context and valence on memory using both real memories and memory experimentally controlled experiences, but I have not yet been able to explore the process underlying these effects.

In study 3, I address this issue by measuring participants' mood immediately after reading the imagined scenario. According to appraisal theories, emotions arise in response to one's appraisal that a particular event is beneficial or threatening to future

well-being (Frijda 1986; Lazarus 1991). Therefore, if memories of shared, as opposed to individual, positive experiences, are viewed as more beneficial for well-being, seeing as they allow the self to be defined in both a positive and social manner, I should find that participants are in an even more positive mood after imagining a shared/positive experience rather than an individual/positive experience. Further, I should find that this difference in mood mediates the interactive effect of social context and valence on memory. In regards to negative memories, if indeed memories of shared, as opposed to individual, negative experiences are seen as more threatening to well-being, since this type of memory not only leads the self to be defined in a negative manner but also threatens belonging needs, I should find that participants are in an even more negative mood after imagining a shared, negative experience as compared to an individual, negative experience. Essentially, what I aim to show is that social context amplifies how beneficial or threatening a particular memory is for overall well-being and this amplification effect further impacts memory.

Additionally, it is still unclear whether this effect occurs at the encoding or retrieval stage, so in the next study I collected measure of memory both immediately after reading the scenario and after a 48-hour delay in order to understand at what stage this process takes place.

### STUDY 3

In this study, the social context of the experience (Shared vs. Individual) and the valence of the experience (Positive vs. Negative) served as manipulated factors, while mood and memory for the scenario served as the main dependent measures. The study

was conducted in two parts. Participants were recruited via Mturk and paid separately for their participation in each part of the study. 158 participants ( $M_{\text{age}} = 36$  years; 53% male) completed both parts of the study. The link for the second part of the study was sent to participants after a 48-hour delay and participants were given 48 hours to complete the follow-up survey.

#### *Design and Procedure:*

In part 1 of this study, participants were asked to imagine that they had gone to a classical music concert either by themselves (individual condition) or with some friends (shared condition). The valence of the experience was manipulated by including details of the experience that made for either a positive concert experience (e.g. comfortable seating, pleasant ambiance, the tickets were for good seats so that you could see the concert very well) or a negative concert experience (e.g. uncomfortable seating, unpleasant ambiance, the tickets were for bad seats so that you could not see the concert very well). After reading through the scenario, participants listened to a music clip that was pretested to be pleasant (positive conditions) or unpleasant (negative conditions) that was supposedly one of the pieces played during the concert. The music clips were pretested to ensure that they differed in terms of valence, but did not differ on dimensions such as imagery provoking, interesting, arousing, powerful, or familiarity (all  $p$ 's > .10), thus ensuring that the results could not be explained by any of these variables.

Actual music clips were included in this study to increase the realism of the scenario and to intensify the valence manipulation. The brands that appeared in the scenarios were identical between all conditions (Appendix A).

After listening to the music clip, participants reported their mood (1 – very bad mood/very sad, 7 = very good mood, very happy;  $\alpha = .74$ ), how much they liked the music clip (1 – not at all, 7 = very good mood, very much;  $\alpha = .96$ ), and then filled out manipulation check measures for both valence ( $\alpha = .98$ ) and social context similar to those which were used in previous studies. Participants then answered four measures of memory recognition, which consisted of a question about the scenario followed by five options for them to choose from (e.g. “In the concert scenario, what brand of candy did you purchase?” followed by 5 options). Each answer was coded as one (+1) if the participant correctly answered the question and negative one (-1) if the participants incorrectly answered the question. The number of recognition questions correctly answered was then summed giving me a measure of recall, with -4 being the lowest possible score if the participant did not correctly remember any details and 4 being the highest if the participants correctly remembered all of the details of the scenario.

In part two of the study, participants filled out the same memory recognition measures for the scenario as they had filled out in part 1.

#### *Results:*

2 participants (1.7%) reported having technical issues during the first part of the study (e.g. were unable to hear the music clip) and were therefore dropped from analysis. This left a final sample of one-hundred and fifty-six.

*Manipulation Checks:* The manipulation checks confirmed that those in the shared condition felt as though their experience was significantly more shared ( $M_{\text{shared}} =$

5.38, SD = 1.47) compared to those in the individual condition ( $M_{\text{individual}} = 2.72$ , SD = 1.73;  $F(1, 154) = 106.56$ ,  $p < .001$ ), and that they felt significantly more socially connected ( $M_{\text{shared}} = 4.91$ , SD = 1.35) compared to those in the individual condition ( $M_{\text{individual}} = 3.21$ , SD = 1.64;  $F(1, 154) = 50.10$ ,  $p < .001$ ). Additionally, those in the shared condition were more likely to select the “with others” option as opposed to the “alone” option ( $\chi^2(n = 156) = 105.03$ ;  $p < .001$ ). The manipulation checks also confirmed that those in the positive condition felt as though their concert experience was significantly more positive ( $M_{\text{positive}} = 6.22$ , SD = 1.07) compared to those in the negative condition ( $M_{\text{negative}} = 2.65$ , SD = 1.65;  $F(1, 154) = 253.26$ ,  $p < .001$ ).

*Part 1 – Mood:* An ANOVA with mood at time 1 as the dependent variable and social context (shared vs. individual), valence (positive vs. negative), and their interaction as the independent variables, revealed a significant main effect of valence ( $F(1, 152) = 49.58$ ,  $p < .001$ ) and significant interaction between social context and valence ( $F(1, 152) = 8.71$ ,  $p < .01$ ; Figure 1.4). Planned contrasts revealed that in the negative conditions, mood was significantly less negative (more positive) in the individual condition ( $M_{\text{individual}} = 4.38$ , SD = 1.31) as opposed to the shared condition ( $M_{\text{shared}} = 3.85$ , SD = 1.20;  $F(1, 152) = 3.92$ ,  $p = .05$ ). In the positive conditions, mood was significantly more positive in the shared condition ( $M_{\text{shared}} = 5.75$ , SD = 1.01) as opposed to the individual condition ( $M_{\text{individual}} = 5.15$ , SD = 1.19;  $F(1, 152) = 4.80$ ,  $p < .05$ ).

*Part 1 – Recognition:* An ANOVA with recognition at time 1 as the dependent variable and social context (shared vs. individual), valence (positive vs. negative), and

their interaction as the independent variables, revealed a significant main effect of valence ( $F(1, 152) = 4.02, p < .05$ ) and significant interaction between social context and valence ( $F(1, 152) = 6.47, p = .01$ ; Figure 1.5). Planned contrasts revealed that in the positive conditions, recognition was significantly higher in the shared condition ( $M_{\text{shared}} = 3.25, SD = 1.55$ ) as opposed to the individual condition ( $M_{\text{individual}} = 2.33, SD = 2.55$ ;  $F(1, 152) = 5.28, p < .05$ ). In the negative conditions, recognition was directionally higher in the individual condition ( $M_{\text{individual}} = 3.60, SD = .93$ ) as compared to the shared condition ( $M_{\text{shared}} = 3.10, SD = 1.63$ ), but this difference did not reach significance ( $F(1, 152) = 1.66, p = .20$ ).

*Part 1 – Mediation Analysis:* To explore whether the interactive effect between social context and valence impacts memory via mood, I ran a mediation analysis using the PROCESS SPSS macro (Model 7; Preacher and Hayes 2004). In the model, social context served as the independent variable, valence as the moderator, mood as the mediator, and recognition as the dependent variable. The effect of the mediator, mood, was significant ( $\beta = -.19, t = -1.85, p = .065$ ). The bootstrap analysis did show support for moderated mediation (95% CI = -0.49 to -0.05), and was significant in both the negative condition ( $\beta = 0.10, 95\% \text{ CI} = 0.0069 \text{ to } 0.2673$ ) and the positive conditions ( $\beta = -0.1138, 95\% \text{ CI} = -0.3112 \text{ to } -0.0173$ ). These results provided support for the notion that when an experience is positive and shared, as opposed to individual, it improves mood and leads to stronger memories. However, when an experience is negative and shared, it negatively impacts mood, leading to weaker memories.

*Part 2 – Recognition:* An ANOVA with recognition at time 2 as the dependent variable and social context (shared vs. individual), valence (positive vs. negative), and their interaction as the independent variables, revealed a significant interaction between social context and valence ( $F(1,152) = 6.57, p = .01$ ; Figure 1.6). Planned contrasts revealed that in the positive conditions, recognition was significantly higher in the shared condition ( $M_{\text{shared}} = 3.25, SD = 1.61$ ) as opposed to the individual condition ( $M_{\text{individual}} = 2.39, SD = 2.28; F(1, 152) = 4.15, p < .05$ ). In the negative conditions, recognition was directionally higher in the individual condition ( $M_{\text{individual}} = 3.45, SD = 1.28$ ) as compared to the shared condition ( $M_{\text{shared}} = 2.80, SD = 2.06$ ), but this difference did not reach significance ( $F(1, 152) = 2.50, p = .12$ )

*Follow-Up Analysis:* Prior literature has found that evaluations are more intense in a shared context (Boothby et al. 2014), so it is possible that the differences that I found in terms of mood or memory recognition were due to a stronger liking or disliking of the stimuli or music in the shared condition. In order to rule out this possibility, I ran an ANOVA with music evaluation as the dependent measure (1 – did not at all enjoy/like music, 7 = very much enjoyed/liked music;  $\alpha = .97$ ) at time 1 as the dependent variable and social context (shared vs. individual), valence (positive vs. negative), and their interaction as the independent variables. The results showed a main effect of valence ( $F(1, 152) = 54.60, p < .001$ ) but no main effect of social context ( $p > .20$ ) and no significant interaction between social context and valence ( $p > .20$ ). Therefore, it does not seem as though differences in the evaluations of the music can account for the differences I found mood or memory.



*Discussion:*

The results from this study provide support for the process underlying these memory effects such that social context and valence do indeed interact to impact memory and this relationship is mediated by mood. Further, I do find differences in mood and memory both immediately after participants read the scenario and after a 48-hour delay, indicating the effect occurs at the encoding stage but has a long-term impact on memory. Finally, the memory advantage for shared experiences held with a delay of 48 hours after the experience, as compared to a shorter delay in study 2, attesting to the robustness of this effect.

Thus far, I have only looked at social context as a dichotomous variable, i.e. participants were told to either imagine being with others or being alone. It is still unclear as to whether all events where others are present will enhance memory for an experience or if this effect only holds when an individual is with close others. For example, is it possible that one can be alone during a consumption experience but in the presence of other customers, such as when one goes to a coffee shop by themselves but there are other customers present, and feel a sense of social connection that will impact memory? Prior research has found that having the same experience as another person, even when it is a very simple experience such as waiting in a dentist's office, can foster a sense of social connection (Tajfel et al. 1971). Additionally, it has been shown that perceptions of a similar thinking style or having the same preferences as another person can lead to a sense of social connection (Billig and Tajfel 1973). Thus, it is possible that choosing to visit the same coffee shop as other customers may foster a sense of social connection that enhances memory. In study 4, I test this hypothesis by examining the manner in which

different levels of social context interact with valence to impact memory for a consumption experience.

#### STUDY 4

In study 4, I utilized a coffee shop scenario in which participants were told that they were by themselves (e.g. individual), by themselves but that there were several other customers in the store (e.g. unknown others), or they were with friends (e.g. known others). The valence of the experience was also manipulated (positive vs. negative). This study was conducted in two parts, part one was the first study in a sequence of 5 studies and part two was the last. There was approximately a 20-minute delay in between part 1 and 2. 196 undergraduate students completed both parts of the study ( $M_{age} = 20.65$  years; 57.5% male).

##### *Design and Procedure:*

Participants were asked to imagine that they had gone to a local coffee shop that recently opened either by themselves (individual condition), by themselves but that there were several other customers in the coffee shop (unknown others condition), or with a group of friends (friends condition). The valence of the experience was manipulated by including details in the experience that either made for a positive experience (e.g. the coffee is the perfect temperature and has the perfect amount of cream and sugar, the store has a nice ambiance) or a negative experience (e.g. the coffee is much too hot and does not have the right amount of cream or sugar, the store does not have nice ambiance). The brands that appeared in the scenarios were identical across all conditions (Appendix A).

Respondents then filled out manipulation check questions to ensure that the social context and valence manipulations were successful. I included two social context manipulation check questions (1 = completely individual, 7 = completely shared; 1 = not at all socially connected, 7 = extremely socially connected). The valence manipulation check consisted of two scaled measures (1 = very negative, 7 = very positive; 1 = very bad, 7 = very good;  $\alpha = .92$ ). Finally, participants filled out demographic measures and the same involvement questions as were used in previous studies ( $\alpha = .90$ ). In part two of the study, participants completed the main dependent measures.

#### *Dependent Measures:*

I assessed memory for the scenario through four recognition measures (e.g. “What musician or band was playing the background?” followed by five options). Each answer was coded as one (+1) if the participant correctly answered the question and negative one (-1) if the participants incorrectly answered the question, and then a sum for all four questions was calculated. Therefore, the range of the dependent measure went from -4, if the participant answered none of the questions correctly, to +4, if the participants answered all of the questions correctly.

#### *Results:*

15 participants (7.6%) failed the IMC (e.g. reported the wrong number of colors), and were therefore dropped from analysis, leaving a final sample of one-hundred and eighty-one. An analysis across experimental conditions revealed no significant difference in respondent dropout rate across conditions ( $p > .1$ ).

*Manipulation Checks:* The manipulation checks confirmed a significant effect of social context condition on the degree to which participants felt as though their experience was individual versus shared ( $F(2,178) = 15.81, p < .001$ ). Participants in the friends condition felt as though their experience was more shared ( $M_{\text{friends}} = 4.09, SD = 1.50$ ) compared to those in the individual condition ( $M_{\text{individual}} = 2.74, SD = 1.44; t(1,178) = 5.27, p < .001$ ), and those in the unknown others condition ( $M_{\text{unknownothers}} = 2.97, SD = 1.24; t(1,178) = 4.39, p < .001$ ). There was not a significant difference between the individual and unknown others condition ( $p > .25$ ).

Additionally, participants in the friends condition felt significantly more socially connected ( $M_{\text{friends}} = 4.16, SD = 1.34$ ) compared to those in the individual condition ( $M_{\text{individual}} = 3.49, SD = 1.42; t(1,178) = 2.60, p < .05$ ), and those in the unknown others condition ( $M_{\text{unknownothers}} = 3.47, SD = 1.47; t(1,178) = 2.67, p < .01$ ). There was not a significant difference between the individual and unknown others condition ( $p > .25$ ). There was not a significant effect of social context on valence ( $p > .25$ ).

The manipulation checks also confirmed that those in the positive condition felt as though their shopping experience was significantly more positive ( $M_{\text{positive}} = 6.13, SD = 0.85$ ) compared to those in the negative condition ( $M_{\text{negative}} = 3.10, SD = 1.17; F(1,179) = 399.72, p < .001$ ). Additionally, there was a significant effect of valence on perceptions of social connection such that participants in the positive condition ( $M_{\text{positive}} = 4.04, SD = 1.40$ ) felt more socially connected than those in the negative condition ( $M_{\text{negative}} = 3.36, SD = 1.41; F(1,179) = 10.87, p < .01$ ).

*Recognition Memory:* An ANOVA with recognition as the dependent variable and social context (individual vs. unknown others vs. friends), valence (negative vs. positive), and their interaction as the independent variables revealed a significant interaction between social context and valence ( $F(2,175) = 4.15, p < .05$ ; Figure 1.7).

Planned contrasts revealed that in the positive conditions, recognition was significantly higher in the friend's condition ( $M_{\text{friends}} = 3.19, SD = 1.15$ ) as compared to the individual condition ( $M_{\text{individual}} = 2.19, SD = 2.33; F(1, 175) = 4.28, p < .05$ ). Additionally, recognition was higher in the unknown others condition ( $M_{\text{unknownothers}} = 3.23, SD = 0.99$ ) as compared to the individual condition ( $F(1, 175) = 4.98, p < .05$ ). There was no difference in recognition between the shared and the unknown others conditions ( $p > .25$ ).

In the negative conditions, planned contrasts revealed that recognition was marginally higher in the individual condition ( $M_{\text{individual}} = 3.00, SD = 1.55$ ) as compared to the friends condition ( $M_{\text{friends}} = 2.13, SD = 2.47; F(1,175) = 3.49, p = .06$ ). There was no difference in recognition between the individual and the unknown others conditions ( $p > .25$ ), nor was there a difference between the unknown others and friends conditions ( $p = .21$ ).

#### *Discussion:*

The results from this study provide evidence that even when an individual is with other people whom they do not know, as is very typical in many consumption settings, they can still experience social connection, which can enhance memory for the experience. Additionally, it seems as though social context is not a simply dichotomous

variable, but as the strength of the social relationship increases, so does memory for the experience. This finding fits well with my theorizing seeing as strong social relationships, as compared to weak relationships, should provide a greater sense of social connection and fulfill belonging needs to a greater extent. Therefore, the memory of an experience with close others should be more beneficial to well-being than a memory involving unknown others, but a memory with unknown others may still be more beneficial than a memory of being alone during a positive event.

Further, the memory of a negative event that was experienced with a close other should be the most threatening to well-being, thus leading this type of memory to be weaker than one involving unknown others, but a negative memory with unknown others is still more threatening than a memory of being alone during a negative experience.

## GENERAL DISCUSSION

Past research on memory has documented the susceptibility of episodic human memory to several biases including a positivity bias (Kennedy, Mather and Carstensen 2004; Walker et al. 2003). I extend this stream of research and document the presence of a social bias in memory such that memories of episodes that are shared with other people are recalled to a greater extent, and recalled faster and earlier than memories of episodes that are experienced alone. I suggest that this effect occurs because of the advantages conferred by social memories, namely increased feelings of belongingness, higher self-esteem and thereby greater happiness. Thus, just as social relationships have been shown to increase subjective wellbeing (Diener and Seligman 2002), health (House, Landis, and

Umberson 1988) and happiness (Baldassare et al. 1984), I find that just memories of social relationships may have similar effects.

Across five studies I document that this social bias exists, explore the process underlying the effect, and examine boundary conditions. Thus, shared experiences are remembered faster (pretest), earlier, and in greater numbers (study 1) than individual experiences, even when the details of the experiences are controlled (studies 2, 3, 4). Further, I show that this social bias is stronger for positive memories, as opposed to negative memories, and, interestingly, find the opposite pattern of results for negative memories. Additionally, I show that this effect has significant implications for memory of consumption experiences (studies 2, 3, and 4). Lastly, I am able demonstrate that this effect is robust across spontaneously recalled memories as well as experimentally controlled memories.

This research contributes to the literature on memory biases in several ways. First, the addition of a new bias to the memory literature is an important contribution. While some past research has suggested that older adults may value social experiences more than individual experiences (Field 1981, 1997; Mather 2006), my research documents that this differential valuation may hold true for both older and younger consumers, and may translate into robust differences in how shared versus individual experiences are recalled. To the best of my knowledge, this paper is the first to empirically document such a social bias. Further, I show that the social bias occurs for both distant and recent events as well as natural and experimental events, thereby adding to my confidence that it is a robust bias.

Additionally, I find that shared experiences tend to be more positive rather than negative in tone. I contend that this finding suggest that at least part of the positivity bias that has been previously documented may be attributed to the social nature of such positive experiences. Thus, my research also adds to the work on the positivity bias in adding greater insight into the processes underlying this bias.

#### *Limitations and opportunities for future research*

While I document these effects using both participants memories from their own lives and using experimentally controlled stimuli, I was not able to give participants an actual experience to be remembered. Although I feel confident that my effects would hold in such a scenario, future research replicating my results with a new real-life experience would be important.

Additionally, although I show the moderating effects of valence on the social bias, I do not know whether all positive and negative emotions would interact with social context in the same manner. Thus, the impact of social context may differ based on the specific emotion being experienced during an event, i.e. whether a positive event produces happiness versus relaxation or whether a negative event produces sadness versus embarrassment. For example, a memory for an embarrassing experience that is shared with others may be more threatening to well-being than that of a sad experience that is shared. It would be very interesting for future research to investigate the interactive impact of social context and different types of emotions on memory.

Another interesting idea that warrants greater research is the realm of false memories. While past research has shown that false consumption memories may be as



strong as genuine consumption memories (Rajagopal and Montgomery 2011), there has been little research on the biases that affect such false memories. While I did not provide respondents with an actual consumption experience to examine whether false product experiences would be affected by the social bias, future research in this area would be interesting.

## ESSAY 1 FIGURES

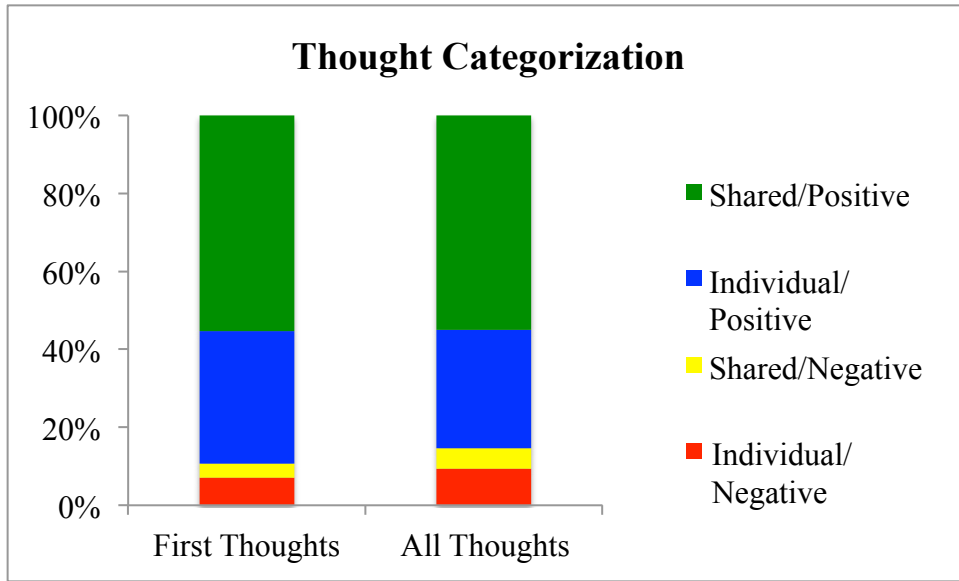


Figure 1.1: Number of memories placed into each category.

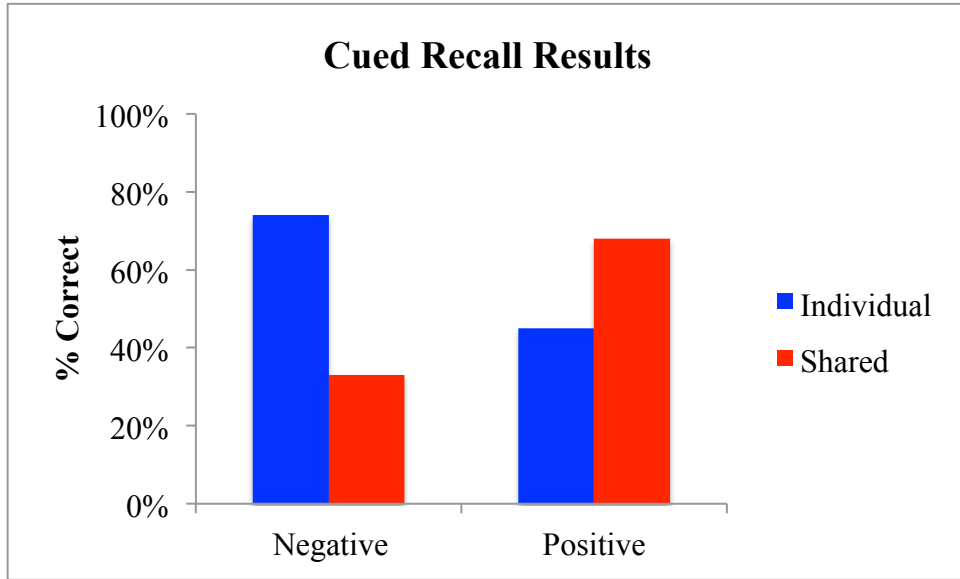


Figure 1.2: Percent of cued recall measures correctly recalled.

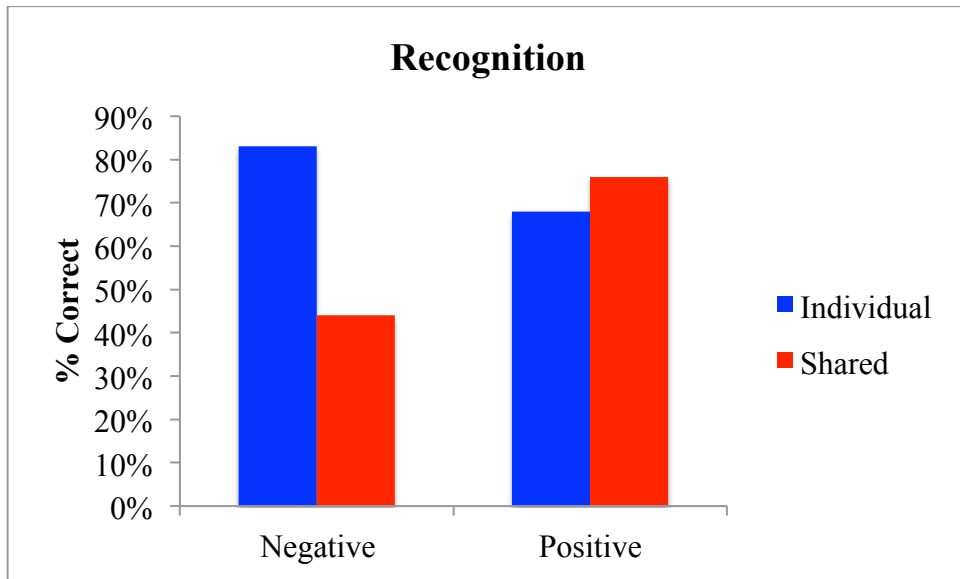


Figure 1.3: Percent of recognition measures correctly recalled.

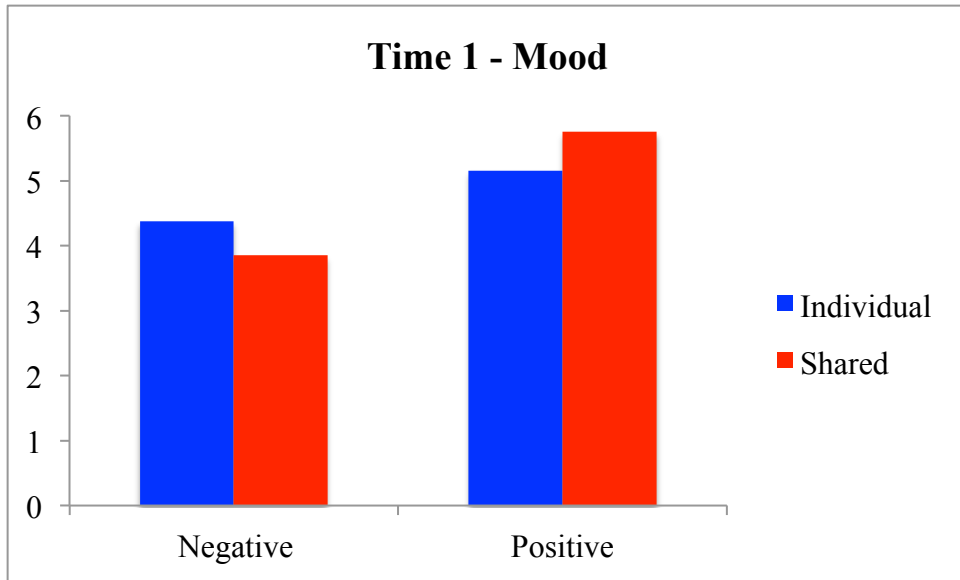


Figure 1.4: Mood immediately after reading scenario.

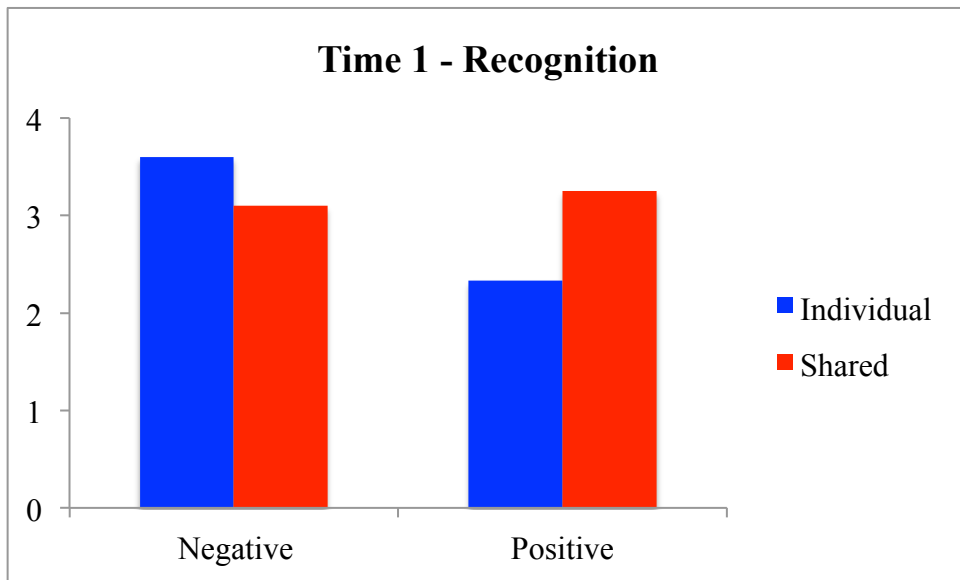


Figure 1.5: Corrected recognition immediately after reading scenario.

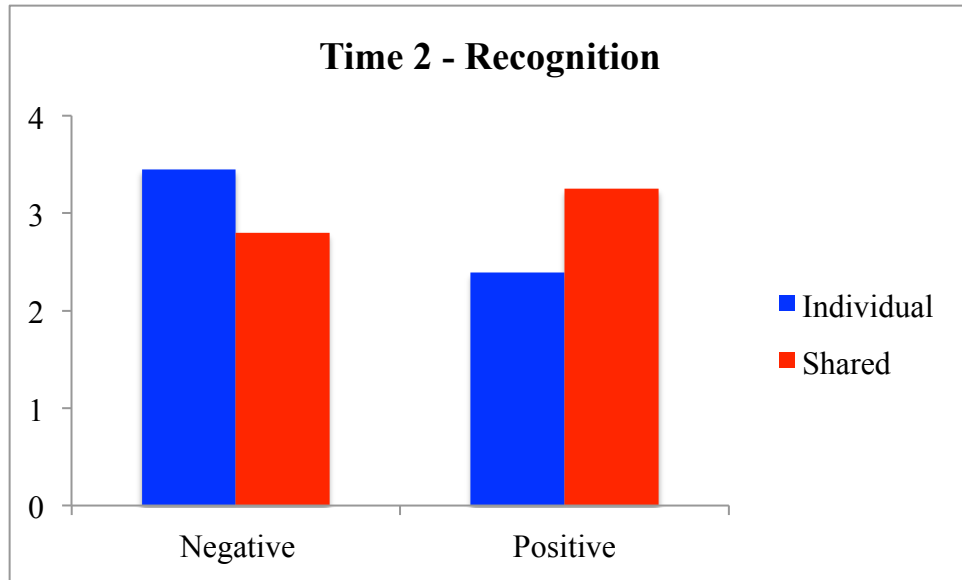


Figure 1.6: Corrected recognition after 48-hour delay.

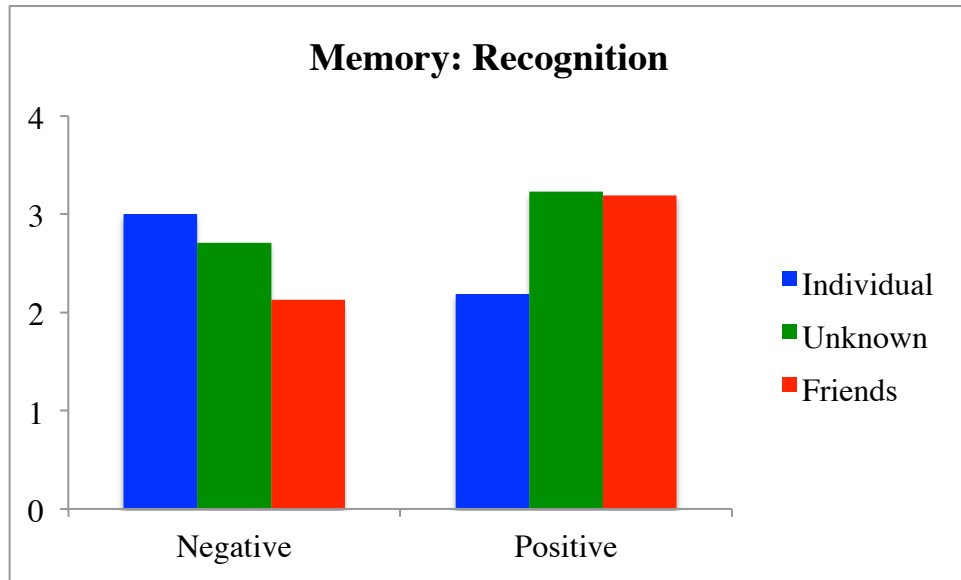


Figure 1.7: Corrected recognition after 20-minute delay.

## ESSAY 2: SPECIAL MEMORIES REQUIRE SPECIAL PROTECTION

### INTRODUCTION

Past research has found that memories can be viewed as assets because of the post-experience utility that recollection and reliving can provide, and that consumers will strategically protect memories that they view in this manner (Elster and Loewenstein 1992; Zauberan, Ratner, and Kim 2009). Thus, Zauberan and colleagues (2009) found that consumers avoid situations that they feel may contaminate memories of special experiences. Specifically, participants in their studies were less willing to repeat a special experience (e.g. staying at a resort) when aspects of the new experience were to be different (going to the resort with a work group) than they were during the original experience (going to the resort for a personal vacation). Based on these findings, Zauberan et al. (2009) inferred that consumers would be reluctant to repeat any special experiences due to the fear of potential memory contamination of these experiences. However, consumers often do repeat such special experiences in real life. For example, couples renew wedding vows at the same location as their original weddings, birthdays are celebrated at the same location/venue every year and romantic partners revisit their “special” restaurant or vacation destination regularly - all actions seemingly contrary to the notion of memory protection.

The current research therefore aims to expand our understanding of strategic memory protection by suggesting that consumers do not avoid every situation that may contaminate their special memories, but will only avoid situations that risk rendering

special memories non-special. Specifically, I argue that consumers will avoid repeating a special experience under non-special, but not special, circumstances in order to avoid contamination by non-special cues. For example, if a consumer has a special birthday dinner at a new restaurant, s/he will avoid returning to that same restaurant for an ordinary dinner, but may be willing to return for another special dinner, even if aspects of the new experience (e.g. such as who the person is with) will be different from the original experience. In other words, the type of contamination cue moderates memory protection such that non-special, but not special cues trigger memory protection and thereby avoidance of memory contamination.

Further, I explore the process underlying memory contamination and protection. I suggest that contaminating a special memory with a non-special cue not only devalues the memory, by making it remembered as less special, but also, because there is strong link between special memories and the self-concept, devalues the self, by making the individual feel as though they are less special, and is therefore perceived as a self-concept threat.

I also expand current theorizing on how memories can be contaminated. Previous research on memory protection has focused largely on contamination that occurs due to the repetition of an experience (e.g. having to revisit a resort), but I argue that there are other ways in which memories can be contaminated with non-special cues (Zauberman et al. 2009). It has been found that information presented in advertisements can distort a consumer's memory of an experience through the addition of new cues to the memory (Bower, Thompson-Schill, and Tulving 1994; Cowley 2007; Loftus 1982; Zauberman et al. 2009). Therefore, it is possible that viewing an ad for a brand that is strongly



associated with a special memory could contaminate that memory (e.g. viewing an ad for the resort which was the venue for a special vacation).

Across 7 studies, I provide support for the notion that the type of contamination cue moderates memory protection strategies, show the process underlying these effects, and show how these effects impact consumer brand evaluations and behavioral intentions. In studies 1A and 1B, I find that consumers avoid returning to places where they have had special experiences only when non-special, but not special, contamination cues are present. Studies 2A and 2B find that this effect not only holds for locations, but also for products that are associated with special memories, such that consumers avoid re-wearing clothing items that have special associations. Additionally, in study 2B I show that there is a strong correlation between perceptions of specialness of an experience and evaluations of the brands associated with that memory. Thus, when consumers are forced to contaminate special memories with non-special cues, their evaluations of the products associated with the memory become less favorable. Study 3 utilizes a within-subjects design to provide additional evidence that contamination of special memories with non-special cues does, in fact, decrease perceptions of specialness and brand evaluations, rather than the addition of new special cues increasing perceptions of specialness and brand evaluations. Further, in study 4, I show that consumers perceive the contamination of special memories with non-special cues as a self-concept threat, and this perceived threat mediates the effects found in my initial studies. Lastly, in study 5, I find that advertisements can be perceived as a non-special cue, and that viewing an advertisement for a restaurant after having a special experience there can reduce the perceived specialness of the experience, and lower evaluations of the restaurant.

My findings contribute to the memory protection literature in several ways. First, it expands the scope of our current understanding by introducing a new moderator – type of contamination cue - and documenting that consumers do not avoid all contamination of their special memories, but only contamination by non-special cues. It also extends the range of contamination cues to include routine marketing communications such as advertising. This is an especially intriguing finding since it suggests that memory contamination and protection may be far more pervasive than originally envisioned and also because it points to a specialness-contamination tradeoff for marketers. That it, counter intuitively, positioning a product or service as being special may render the brand to be perceived as more favorable, but also elicits the risk of any subsequent marketing communication being perceived as a memory contaminant, thereby lowering brand favorability.

Third, identification of the specific process underlying memory contamination and protection – self-concept threat – enhances our understanding of how these twin outcomes result, and may be altered. The finding that memory contamination of special experiences can function akin to a self-concept threat furthers our understanding of self-concept threats as well.

Fourth, the current research expands theorizing on strategic memory protection beyond a focus on locations that are associated with special memories to products that are associated with special memories. I find that consumers not only avoid revisiting locations that are associated with special memories but also avoid using products that have special associations under circumstances that could add non-special cues.

I begin by reviewing key findings from the research on special experiences and memory. I then present results from 7 studies supporting my predictions and conclude with a discussion of my findings and some areas for future research. I focus my first three studies on documenting the basic effect that consumers avoid adding non-special, but not additional special, cues to special memories and the remainder of my studies are focused on demonstrating the implications that these findings have for consumer brand evaluations and behavioral intentions.

## LITERATURE REVIEW

### *Memory interference and contamination*

Past research has found that consumer's memories are not exact replications of their experiences but, rather, are prone to distortions due to natural memory decay and contamination by information encountered after the experience (Bower et al. 1994; Cowley 2007; Lustig, Konkel, and Jacoby 2004; Postman and Underwood 1973). Research on the associative network model of memory and interference theory has found that a primary reason that memory distortion and contamination occur is due to the learning of additional, related information about a target (Crowder 1976; McGeoch 1932; Melton and Irwin 1940; Postman and Underwood 1973; Wickelgren 1981). When additional information is learned, a new association, or cue, is linked to the initial target, which makes it harder to access the initial information. I will refer to the addition of a new cue to a memory as memory contamination, as the new cue has the potential to distort the original memory.

Repeating an experience under different circumstances is one way in which memories can be contaminated, as any elements that are different from the initial experience can contaminate the memory of the initial experience with new cues (Zauberman et al. 2009). Marketing communications, such as ads, can also be a source of memory contamination as they can change the way in which consumers remember and interpret their experiences (Braun 1999; Cowley 2007; Hoch and Deighton 1989). For example, Cowley (2007) found that an affective reaction to an ad that is seen after a consumption experience can interfere with consumers' ability to accurately recall their affective reactions during the initial experience. Thus, if a consumer dines at a restaurant and subsequently sees a funny ad for that restaurant, the positive affect experienced while viewing the ad can result in a strong association between positive affect and the restaurant. Subsequently, when the consumer tries to recall his/her affective reaction while dining at the restaurant, s/he may misattribute the positive affect that s/he felt while viewing the ad to what they experienced while actually dining at the restaurant. Another study found that ads can alter consumer memories of how good or bad a product experience was, such that even if an experience is relatively unpleasant, viewing a positive ad for the brand can lead consumers to rate the experience more favorably than others who were not exposed to the ad (Braun 1999). Both these studies provide evidence that information encountered in ads can contaminate memories of a consumption experience by adding additional cues to the memory.

### *Strategic memory protection of special memories*

Since consumers are aware that their memories will decay over time, and that post-experience information can contaminate their memories, they often strategically protect memories for certain types of experiences – i.e. primarily memories of special experiences (Zauberman et al. 2009). While there is not a precise definition of the term “special” in previous research, some of the dimensions that are typically associated with special memories are “*uncommon*” and “*infrequent*” experiences that are “*important for well-being and happiness*” (Bhattacharjee and Mogilner 2014; Zauberman et al. 2009) as contrasted with ordinary, non-special events, that are more commonplace and occur more frequently. Importantly, for the current research, special and ordinary experiences also differ in the extent to which they are self-defining and important to an individual’s identity (Bhattacharjee and Mogilner 2014; Belk 1988; Goode, Hart, and Thomson 2015). This is the key dimension of “special” that I focus on in the current research.

In order to protect memories of special experiences, past research has found that consumers will avoid situations that they believe will contaminate their memories with any new cues (Zauberman et al. 2009). Essentially, it was found that consumers are unwilling to repeat special experiences when the circumstances of the new experience will be different from the initial experience. For example, participants were asked to recall either an evening out that was particularly special or an evening out that was ordinary. They were then asked to rate their willingness to go back to the same place with a different person (people). The results showed that participants were less likely to return with a different person to a place at which they had experienced a special evening out

compared to a place at which they had experienced an ordinary night out. (Study 1; Zauberan et al. 2009)

#### *Moderating role of cue type & Mediating role of self-concept threat*

I argue that the above findings are moderated by whether the follow-up experience is special or non-special in nature, such that consumers do not completely avoid repeating a special experience, but only under circumstances that will contaminate their special memories with non-special cues. Thus, I propose that consumers are willing to repeat special experience as long as it is under special, but not non-special, circumstances, even when aspects of the new experience will be different than the original experience. Further, I suggest that this moderated effect arises because the contamination of special memories by non-special cues is perceived as a self-concept threat, but contamination by new special cues is not.

Individuals perceive a self-concept threat when favorable views of the self are challenged such that one feels more negatively about, and less confident in, their self-conception (Baumeister, Smart, and Boden 1996; Campbell and Sedikides 1999). Essentially, any information that is unfavorable to the self-view can be perceived as a self-concept threat, and most individuals aim to prevent or minimize these threats (Ethier and Deaux 1994; James 1890). Consumer's threat prevention and minimization strategies have been shown to have important implications for consumption decisions and behaviors (Trudel, Argo, and Meng 2016). For example, it has been found that throwing an identity-linked product in the trash, as opposed to recycling it, can lower an individual's confidence in their sense of self-concept and is perceived as a threat (Trudel

et al. 2016). The authors found that perceptions of a threat arose because throwing away an identity-linked product was likened to throwing a piece of oneself in the trash and was a sign of worthlessness. Therefore, consumers are more likely to recycle identity-linked products rather than throwing them away in the trash.

I propose that contaminating a special memory with a non-special cue may also be perceived as a self-concept threat by consumers. Past research has found that memories of special experiences are more important for self-definition and identity than are memories of non-special experiences (Belk 1988; Goode et al. 2015; Zauberger et al. 2009). Thus, special memories help people to define the self and are strongly linked to the self-concept. Additionally, individuals strive to maintain a positive self-concept and tend to adopt an overly optimistic self-view such that they often regard the self as superior to the average person, so any information that challenges this view should be interpreted as negative information (Alicke 1985; Steele 1988).

I suggest that contaminating a special memory with a non-special cue can devalue the memory, by making it remembered as less special, but also that, because of the strong link between special memories and the self-concept, it may be perceived as devaluing the self, by making the individual feel as though they are less special. The contamination of a special memory by a non-special cue should be seen as a self-concept threat, but contamination by an additional special cue should not, as this type of cue does not diminish the special status of the memory. Based on this theorizing, I predict that following a special experience, non-special cues that could contaminate memory for the experience will be seen as a self-concept threat, but additional special cues will not be

seen as a self-concept threat. Therefore, consumers will avoid contamination by non-special, but not special, cues.

Additionally, since consumers strive for positive self-definition, it makes sense that consumers will have more favorable evaluations of brands that are associated with special memories, as opposed to non-special memories, since these memories are more relevant for self-definition (Baumeister 1998; Brown and Dutton 1995; Sedikides and Strube 1997). It follows that if a memory is perceived to lose its special status due to contamination by non-special cues, and is therefore less defining; evaluations of the brands associated with the memory may become less favorable as well.

## STUDY 1A

In study 1A, I tested my initial hypothesis that people will avoid repeating a special experience under non-special circumstances to a greater degree than under special circumstances. More specifically, I predict that people will be more willing to return to a restaurant at which they have had a special experience when the follow-up experience is also a special occasion than when the follow-up experience is a non-special occasion.

### *Design and Procedure:*

This study was conducted using an online (MTurk) sample of 28 respondents (50% male,  $M_{age} = 32$  years) who were paid \$0.61 for their participation. Participants were first asked to describe a “particularly special dinner at a restaurant that you have had.” After providing their description, participants rated how likely they would be to go



back to the same restaurant for another special occasion in the future and for an ordinary, non-special occasion (1 = Very Unlikely; 7 = Very Likely). Additionally, participants were asked how likely they would be to go back to this restaurant if they were with a different person/group of people than they were originally with if it was to celebrate a special occasion in the future and for an ordinary, non-special occasion (1 = Very Unlikely; 7 = Very Likely). Finally, participants filled out demographic measures.

### *Results:*

The data were analyzed using a repeated measures design with the degree of specialness for the follow-up experience as a within-subject variable and likelihood of going back as the dependent measure. Analysis revealed that participants were significantly more likely to return to the restaurant when the follow-up experience was special ( $M_{\text{special}} = 6.00$ ) than when the follow-up experience was non-special ( $M_{\text{nonspecial}} = 4.82$ ;  $F(1, 27) = 12.49, p < .01$ ). Further, even when going back to the restaurant with a different person/people, participants were still significantly more likely to return to the restaurant when the follow-up experience was special ( $M_{\text{special}} = 5.29$ ) than when the follow-up experience was non-special ( $M_{\text{nonspecial}} = 4.54$ ;  $F(1, 27) = 6.72, p < .05$ ).

Additionally, participants indicated that they were more likely to go back to the restaurant for a future special occasion ( $M_{\text{special}} = 6.00$ ), than they were to go back for a future special occasion when with a different person/people special ( $M_{\text{specialdifferentperson}} = 5.29$ ;  $F(1, 27) = 24.5, p < .01$ ). There was no significant difference between the willingness to go back for a future non-special occasion, and willingness to go back for a future non-special occasion with different people ( $p = .13$ ). Therefore, it seems as though

when a stronger threat of contamination is perceived, stronger protection mechanisms are activated.

*Discussion:*

The finding that participants were more willing to return to a location at which they have special memories of when the follow-up experience would also be special as opposed to non-special provide initial support for my contention that consumers do not avoid all contamination of special memories, but only contamination that may threaten the special status of these memories.

A limitation of study 1a is that there is likely to have been considerable variance in the perceived specialness of the experiences recalled across participants. Therefore, study 1B utilized a scenario to control for this variance. Additionally, I also included a non-special initial experience condition in this study to test whether memory protection only occurs for special events or if it can occur for non-special events too. In other words, would any mismatch between the specialness of an initial experience and follow-up experience trigger perceptions of contamination and subsequent protection, or is this effect found only for special experiences? Based on my theorizing about self-concept threat being the process underlying memory protection, I anticipated memory protection only under the special initial experience conditions, and not for the initial non-special experience conditions.

## STUDY 1B

### *Design and Procedure:*

141 undergraduate students (46% male,  $M_{age} = 20.5$ ) at a major east coast university participated in this study in exchange for course credit. This study was a 2 (initial experience: special vs. non-special) x 2 (follow-up experience: special versus non-special) mixed design with the initial experience as the between-subjects and the follow-up experience as the within-subjects factor.

Participants were asked to imagine that they had recently gone out to dinner at a new restaurant. All participants were told that the food was delicious, the server was attentive, and the prices were fair. In the special initial experience condition, participants were told that they were celebrating their 21<sup>st</sup> birthday, they had a meaningful conversation with their friends, and overall the evening was very special. In the non-special initial experience condition, participants were told that they did not go out to eat for any particular reason, it was just an ordinary night and they were hungry. Additionally, they were told that they had a regular conversation with their friends and overall the evening was very ordinary (full scenario in Appendix A).

After reading the scenario, participants rated how likely they would be to go back to the restaurant for another special occasion in the future and for an ordinary, non-special occasion (1 = Very Unlikely; 7 = Very Likely). Additionally, participants were asked how likely they would be to suggest the restaurant as a place to go for a special dinner with their family in the future, and as a place to go for a non-special dinner with their family (1 = Very Unlikely; 7 = Very Likely). The initial scenario stated that the

initial experience was with friends, so asking participants how likely they would be to go with their family should be perceived as going back with a different group of people than they were initially with, i.e. a greater contamination threat.

Finally, participants filled out a manipulation check measure (4-items;  $\alpha = .88$  – Appendix B) and demographic measures (age, gender). There were no differences based on age or gender in this study or any of my other studies and I do not refer to these measures further.

### *Results:*

*Manipulation Check:* Participants in the special initial experience condition rated their experience as significantly more special ( $M_{\text{special}} = 5.70$ ) compared to those in the non-special initial experience condition ( $M_{\text{nonspecial}} = 4.62$ ;  $F(1, 139) = 95.37, p < .001$ ), indicating a successful manipulation of this factor.

*Go Back to the Restaurant:* An analysis of variance with the specialness of the initial experience as the between-subjects variable (special vs. non-special), the specialness of the follow-up experience as the within-subject variable (special vs. non-special), and likelihood of going back as the dependent measure revealed a significant interaction ( $F(1, 139) = 56.84, p < .001$ ). Planned contrasts revealed that following an initial special experience, participants were significantly more likely to return to the restaurant when the follow-up experience was special ( $M_{\text{special}} = 6.52$ ) than when the follow-up experience was non-special ( $M_{\text{nonspecial}} = 5.68$ ;  $F(1, 70) = 66.60, p < .001$ ). Contrary to my expectations however, following an initial non-special experience,

participants were significantly more likely to return to the restaurant when the follow-up experience was non-special ( $M_{\text{non-special}} = 5.96$ ) compared to when the follow-up experience was special ( $M_{\text{special}} = 5.63$ ;  $F(1, 69) = 7.97, p < .01$ ).

*Go Back to the Restaurant With Family:* Analysis using a repeated measures ANOVA in which the specialness of the initial experience served as the between-subjects variable (special vs. non-special), the specialness of the follow-up experience as the within-subject variable (special vs. non-special), and likelihood of going back was the dependent measure revealed a significant interaction between the specialness of the initial and follow-up experience ( $F(1, 139) = 60.16, p < .001$ ). Additional analysis revealed that following an initial special experience, participants were significantly more likely to return to the restaurant, even when it was with their family (e.g. a different group of people than they were originally with, when the follow-up experience was special ( $M_{\text{special}} = 6.31$ ) than when the follow-up experience was non-special ( $M_{\text{non-special}} = 5.73$ ;  $F(1, 70) = 33.60, p < .001$ ). Further, following an initial non-special experience, participants were significantly more likely to return to the restaurant when the follow-up experience was non-special ( $M_{\text{non-special}} = 5.36$ ) compared to when the follow-up experience was special ( $M_{\text{special}} = 4.56$ ;  $F(1, 69) = 29.38, p < .001$ ).

#### *Discussion:*

The results of study 1b provide additional evidence for my proposed effects by showing that even when controlling for the degree of special, participants were more willing to go back to a restaurant at which they had a special experience when the follow-

up experience will also be special, as opposed to non-special. Additionally, the results confirm that the effect holds when aspects of the follow up experience will be different than they were in the original experience, as participants were more likely to return to the restaurant for another special occasion, as opposed to a non-special occasion, even when with a different group of people from the original experience.

Contrary to my expectations, I do find differences in willingness to go back to the restaurant following an initially non-special experience based on whether the follow-up experience will be special versus non-special. Following a non-special experience, participants were more likely to go back when the follow-up experience would also be non-special, as opposed to special. It is possible that that there are two parallel processes happening such that following special experiences, identity concerns are activated, but following a non-special experience, concerns are more so in regards to a mismatch between the experiences. Effectively, when a product or location is viewed as non-special, it is possible that it immediately gets devalued and is viewed less favorably. Therefore, going back in the future for a special occasion does not make sense, as it may be viewed as not being good enough for a special occasion. I provide support for this possibility in study 2B where a special product elicits more favorable brand evaluations than a non-special product, thereby suggesting that it may not be “good enough” to be used for a subsequent special occasion.

In studies 2A-2B, I turn the focus of my studies to products, as opposed to locations, to examine whether these effects are robust across different aspects of the experience or only hold for locational factors.

## STUDY 2A

In this study, I wanted to test whether my results would hold for not only locations associated with a special experience, but also for products that are associated with special memories. It is possible that consumers not only avoid returning to specific special locations under non-special circumstances, but also that they avoid using products that are associated with special experiences under non-special circumstances in order to maintain the special associations of their memories. In study 2A, I examine whether consumers will avoid re-wearing clothing items that have special associations under non-special circumstance.

### *Design and Procedure:*

This study was conducted using an online (MTurk) sample of 83 respondents (56% male,  $M_{age} = 34.27$ ) who were paid \$0.19 for their participation. This study was a 2 (initial experience: special vs. non-special) x 2 (follow-up experience: special versus non-special) mixed design study with the initial (follow up) experience as the between (within) subjects factor.

Participants were asked to imagine that they had recently gone out to dinner either for their birthday (special condition) or for an ordinary night out (non-special condition). All participants were told that their overall dining experience was good. Additionally, all participants were told that they were wearing a new dress or a new tie (depending on gender), and given a description of the item. In the special initial experience condition, participants were told that they were celebrating their birthday and that overall the

evening was very special. In the non-special initial experience condition, participants were told that they did not go out to eat for any particular reason, it was just an ordinary night and they were hungry and overall the evening was very ordinary (full scenarios in Appendix A). After reading the dining scenario, they were shown a picture of the clothing item.

Participants then rated how likely they would be to wear the item for a future special occasion and then for a future non-special occasion (1 = Very Unlikely; 7 = Very Likely). Finally, participants filled out manipulation check measures (4-items;  $\alpha = .94$ ) followed by and demographic measures.

#### *Results:*

*Manipulation Check:* Participants in the special initial experience condition rated their experience as significantly more special ( $M_{\text{special}} = 5.56$ ) compared to those in the non-special initial experience condition ( $M_{\text{non-special}} = 2.40$ ;  $F(1, 76) = 151.57, p < .001$ )

*Wear for Special vs. Non-Special Future Occasion:* The data were analyzed using a repeated measures ANOVA with the specialness of the initial experience as the between-subjects variable (special vs. non-special), the specialness of the follow-up experience as the within-subject variable (special vs. non-special), and likelihood of re-wearing the item was the dependent measure. The results revealed a significant interaction between the specialness of the initial and follow-up experience ( $F(1, 80) = 10.24, p < .01$ ). Additional analysis revealed that following an initial special experience, participants were marginally more likely to re-wear the item when the follow-up



experience was special ( $M_{\text{special}} = 4.48$ ) than when the follow-up experience was non-special ( $M_{\text{non-special}} = 3.98$ ;  $F(1, 41) = 3.15, p = .08$ ). Further, following an initial non-special experience, participants were significantly more likely to re-wear the item when the follow-up experience was non-special ( $M_{\text{non-special}} = 4.40$ ) compared to when the follow-up experience was special ( $M_{\text{special}} = 3.75$ ;  $F(1, 39) = 8.78, p < .01$ ).

#### *Discussion:*

This study provides evidence that the effects found in studies 1A-1B hold not only for locational factors, but are also robust across different aspects of an experience. Essentially, this study shows that any aspect of a special experience, including the products that are used, can be contaminated with new cues, so consumers will avoid associating non-special cues, but not additional special cues, to these products.

## STUDY 2B

In study 2A, I found that consumers avoid using products that are associated with special experiences under non-special circumstances. In study 2B, I wanted to examine what happens when consumers are forced to contaminate their special memories with non-special cues. In this study, participants are asked to imagine wearing a clothing item to either a special or non-special dinner and shown a picture of the item, and are then told to imagine a second special or non-special scenario in which they re-wear the item. Rather than assessing willingness to re-wear a clothing item that has special associations

under special versus non-special circumstances, I look at what happens to product evaluations when they do re-wear the item.

Additionally, I examine the impact of special memories on consumer evaluations of products and brands that are associated with those memories, and whether evaluations of products that are associated with special memories are affected by the addition of non-special cues. I hypothesize that consumers will have a more positive evaluation of brands that are associated with a special memory as opposed to brands that are associated with a non-special memory, and that if a non-special cue is added to the brand, it will have a negative impact on product evaluations.

#### *Design and Procedure:*

This study was conducted using a sample of 115 undergraduate students (52.5% male,  $M_{age} = 20.4$ ) from a major east coast university who completed the study in exchange for course credit. A 2 (initial experience: special versus non-special) x 2 (follow-up experience: special versus non-special) between subjects design was utilized.

Participants were asked to imagine that they had recently gone out to dinner either for their birthday (initial experience special condition) or for an ordinary night out (initial experience non-special condition). All participants were told that their overall dining experience was good. In the special initial experience condition, participants were told that they were celebrating their birthday and that overall the evening was very special. In the non-special initial experience condition, participants were told that they did not go out to eat for any particular reason, it was just an ordinary night and they were hungry and overall the evening was very ordinary. Additionally, participants were told that they were

wearing a new dress or a new button-up shirt, depending on gender. The clothing item was described to them and, after reading the dining scenario, they were shown a picture of the item (full scenario and stimuli in Appendix A).

After viewing a picture of the clothing item, participants were asked to imagine a follow-up scenario in which they either attended an awards ceremony at which they were presented with a prestigious award for their service to their university over the past year (follow-up experience special condition) or an ordinary dinner for students at their university similar to ones they had been to before (follow-up experience non-special condition). Thus, instead of asking participants how likely they would be to wear the item for a future special versus non-special occasion as I did in study 2A, I force participants to re-wear the item for an additional special or non-special occasion to assess how this affects their evaluations of the clothing item and their memory of the initial special experience.

Following the initial and follow-up experience scenarios, participants rated how much they liked the clothing item (1 = Extremely Dislike; 7 = Extremely Like), how likely they would be to repurchase the item if they spilled a drink on it and could not remove the stain (1 = Very Unlikely; 7 = Very Likely) and how much they would pay to repurchase the item (open-ended).

#### *Results:*

*Evaluations of the Clothing Item:* A two-way ANOVA revealed a main effect of initial condition such that participants in the special initial experience condition ( $M_{\text{initial\_special}} = 5.64$ ) liked the clothing item significantly more than those in the non-

special initial experience condition ( $M_{\text{initial\_nonspecial}} = 5.07$ ;  $F(1, 111) = 7.64$ ;  $p < .01$ ; Figure 2.1), a marginally significant main effect of the follow-up experience condition such that participants in the special follow-up experience condition ( $M_{\text{followup\_special}} = 5.53$ ) liked the clothing item significantly more than those in the non-special follow-up experience condition ( $M_{\text{followup\_nonspecial}} = 5.16$ ;  $F(1, 111) = 3.61$ ;  $p < .10$ ), and a significant interaction between the initial condition and the follow-up condition ( $F(1, 111) = 6.71$ ;  $p = .01$ ). Additional analysis revealed that following a special experience, the clothing item was liked significantly more if subsequently worn to another special event ( $M_{\text{initial\_special\_followup\_special}} = 6.11$ ) than if the follow-up event is non-special ( $M_{\text{initial\_special\_followup\_nonspecial}} = 5.18$ ;  $F(1, 113) = 9.36$ ;  $p < .01$ ). There was no significant difference in the initial non-special condition based on whether the follow-up was special or not ( $p > .25$ ).

*Willingness to Repurchase the Clothing Item:* A two-way ANOVA revealed a significant main effect of the follow-up experience condition such that participants in the special follow-up experience condition ( $M_{\text{followup\_special}} = 3.75$ ) were significantly more likely to repurchase the clothing item than those in the non-special follow-up experience condition ( $M_{\text{followup\_nonspecial}} = 3.11$ ;  $F(1, 111) = 4.68$ ;  $p < .05$ ; Figure 2.2), and a significant interaction between the initial condition and the follow-up condition ( $F(1, 111) = 6.83$ ;  $p < .05$ ). Additional analysis revealed that following a special experience, the participants would be significantly more likely to repurchase the clothing item if it was subsequently worn to another special event ( $M_{\text{initial\_special\_followup\_special}} = 4.25$ ) than if the follow-up event is non-special ( $M_{\text{initial\_special\_followup\_nonspecial}} = 2.79$ ;  $F(1, 113) = 11.24$ ;  $p$

< .01). Again, there was no significant difference in the initial non-special condition based on whether the follow-up was special or not ( $p > .25$ ).

*Willingness to Pay to Repurchase the Clothing Item:* A two-way ANOVA revealed a significant interaction between the initial condition and the follow-up condition ( $F(1, 111) = 5.52; p < .05$ ; Figure 2.3). Additional analysis revealed that following a special experience, participants were willing to pay significantly more to repurchase the clothing item if it was subsequently worn to another special event ( $M_{\text{initial\_special\_followup\_special}} = 52.50$ ) than if the follow-up event is non-special ( $M_{\text{initial\_special\_followup\_nonspecial}} = 26.07; F(1, 111) = 3.92; p = .05$ ). Again, there was no significant difference in the initial non-special condition based on whether the follow-up was special or not ( $p > .25$ ).

#### *Discussion:*

For study 2B, I wanted to expand my focus from looking solely at willingness to contaminate a memory with special versus non-special cues, and also consider how consumers react when memories are actually contaminated with new cues. I find support for the notion that consumers view products that are associated with special memories more favorably than those that are associated with non-special memories, and that contamination of a special memory with non-special cues can have a negative impact on product evaluations.

Additionally, in this study I find differences in brand evaluations following a special experience based on whether the follow-up experience is special or non-special, but do not find differences when the initial experience is non-special. Although this may

seem somewhat contrary to my findings in studies 1B and 2A, in which there were differences in willingness to repeat a non-special experience based on whether the follow-up experience would be special versus non-special in nature, it is important to note that the dependent measure in the current study is different. In previous studies, I focused on willingness to repeat the experience whereas in this study, I am looking at the impact of contamination on product evaluations of a product associated with the experience. I suspect that there is no difference in brand evaluations following a non-special experience based on the follow-up experience, but there are in the special condition, because it is only when a product or location has only special associations that it is used for self-definition and therefore viewed more favorably. This suggests that any non-special cues, whether it is from the initial or follow-up experience, devalues the brand and that adding additional special cues is not enough to overcome this devaluation.

### STUDY 3

In study 2B, I find that evaluations of a brand that consumers have special associations with can be impacted by the addition of new memory cues, and that different types of new memory cues, non-special or special, impact brand evaluations differently. However, it still unclear as to whether the contamination by a new non-special memory cue negatively influences evaluations or contamination by a new special memory cue positively influences evaluations, i.e. are the difference found in study 2B due to non-special memory cues decreasing product evaluations or new special memory cues increasing product evaluations. In order to explore this process in greater depth, I ran

study – in 2 parts using a within subject design in which perceptions of how special a dinner was and evaluations were measured immediately after the initial scenario and then again after a follow-up scenario that was manipulated to be either special or non-special.

*Design and Procedure:*

175 undergraduate students ( $M_{\text{age}} = 20.67$  years; 43% male) completed both parts of this study. The study had one between subjects factor (follow-up experience: special vs. non-special) and one within subjects factor (responses to dependent measures at time 1 and time2). Participants completed this study in 2 parts. Part 1 was the first survey taken in a series of 6 studies, while part 2 was the last.

In part 1 of this study, all participants were asked to imagine that they had recently gone out to dinner at Firefly restaurant to celebrate their birthday and that the evening was very special to them. Immediately after reading the initial scenario, participants fill out the first set of dependent measures. Participants then completed a series of unrelated studies before completing part 2 of the study. In part 2, participants were asked to imagine a new scenario in which they had to return to Firefly a second time. In the special follow-up condition, participants imagined that they had gone back to Firefly for an awards night hosted by their university at which they received a special award for their contributions to their university's community. In the non-special follow-up condition, participants also imagined going back to Firefly for a student dinner, but were told that they have been to several of these student dinners before and it was a very ordinary evening. After reading the follow-up scenario, participant filled out the same dependent measures as they had filled out in part 1.

*Dependent Measures:*

*Special at Time 1 and Time 2:* Participants rated how special they perceived their experience to be on a 7-point scale (1-Not at all Special; 7 – Very Special).

*Restaurant Evaluations:* In order to assess evaluations, participants rated their satisfaction with Firefly (1 – very dissatisfied; 7 – very satisfied) and how favorably they feel towards Firefly (1 – very unfavorably; 7 – very favorably). These items were highly correlated (Time 1  $\alpha = .83$ ; Time 2  $\alpha = .89$ ), and were therefore combined into a 2-item restaurant evaluation measure.

*Results:*

*Specialness:* An analysis of variance with the specialness of the follow-up experience as the between-subjects variable (special vs. non-special), time as the within-subject variable (time 1 response vs. non-time 2 response), and perceptions of how special the initial dining experience was as the dependent measure revealed a significant interaction ( $F(1, 173) = 8.11, p < .01$ ; Figure 2.4). Planned contrasts revealed that there was a significant decrease in perceptions of how special the initial dining experience was between time 1 ( $M_{\text{time1}} = 6.00$ ) and time 2 ( $M_{\text{time2}} = 5.59$ ;  $F(1, 57) = 8.32, p < .01$ ) when the follow-up experience was non-special, but there was no significant difference between time 1 ( $M_{\text{time1}} = 5.87$ ) and time 2 ( $M_{\text{time2}} = 5.91$ ) ratings when the follow-up experience was also special ( $p > .10$ ).



*Restaurant Evaluation:* An analysis of variance with the specialness of the follow-up experience as the between-subjects variable (special vs. non-special), time as the within-subject variable (time 1 response vs. non-time 2 response), and restaurant evaluations as the dependent measure revealed a significant interaction ( $F(1, 173) = 10.38, p < .01$ ; Figure 2.5). Planned contrasts revealed that there was a significant decrease in restaurant evaluations between time 1 ( $M_{\text{time1}} = 6.35$ ) and time 2 ( $M_{\text{time2}} = 5.97$ ;  $F(1, 57) = 26.29, p < .001$ ) when the follow-up experience was non-special, but there was no significant difference between time 1 ( $M_{\text{time1}} = 6.22$ ) and time 2 ( $M_{\text{time2}} = 6.16$ ) ratings when the follow-up experience was also special ( $p > .10$ ).

*Discussion:*

These results provide evidence that the contamination of a special memory by a new non-special memory cue does, in fact, negatively influence perceptions of how special an experience was and evaluations of a brand associated with that memory, but additional special cues do not have a positive influence. Thus, the differences found in my prior studies are due to non-special memory cues decreasing evaluations rather than new special memory cues increasing evaluations.

## STUDY 4

In the studies thus far, I found that following special experiences consumers avoid repeating these experiences under non-special, but not under special, circumstances. In study 4, I more closely examine the process underlying these effects, and consider the

role of self-concept threat as the variable underlying memory contamination and protection. I expect to find that consumers perceive a self-concept threat when a special experience is repeated under non-special circumstances, but that non-special memories can be contaminated with either additional non-special or special cues. I suggest that this asymmetry in threat perception is because non-special memories are not as relevant to self-definition, and additional special cues to a special memory should not be seen as threatening because they do not diminish the special status of the memory. In this study, I investigate this process by examining perceptions of a self-concept threat when consumers are forced to contaminate special memories with new cues and the mediating effects that these threat perceptions have on brand evaluations.

#### *Design and Procedure:*

This study was conducted using an online (TurkPrime) sample of 192 English-speaking participants ( $M_{age} = 36.6$  years; 56.5% male). This study used a 2 (initial experience: special vs. non-special) x 2 (follow-up experience: special vs. non-special) between subjects design.

Participants were asked to imagine that they had recently gone out to dinner at a new restaurant called Firefly. All participants were told that the food was delicious, the server was attentive, and the prices were fair. In the special initial experience condition, participants were told that they were celebrating their birthday, they had a meaningful conversation with their friends, and overall the evening was very special. In the non-special initial experience condition, participants were told that they did not go out to eat for any particular reason, it was just an ordinary night and they were hungry.

Additionally, they were told that they had a regular conversation with their friends and overall the evening was very ordinary (full scenario in Appendix A). After reading the initial scenario, participants were asked to rate how meaningful this dinner would have been to them.

After rating the meaningfulness of the initial scenario, participants were asked to imagine a new scenario in which they had to return to Firefly a second time. In the special follow-up condition, participants imagined that they had gone back to Firefly for an annual celebration dinner hosted by their employer. They were told that their company hosts this dinner every year to celebrate its employees and that it is always a very special evening. In the non-special follow-up condition, participants also imagined going back to Firefly for a work dinner, but were told that they have been to several of these work dinners before and it was a very ordinary evening. After reading the follow-up scenario, participant filled out the main dependent measures followed by demographic measures.

#### *Dependent Measures:*

*Self-concept threat:* Two questions were included to measure perceptions of a self-concept threat. The first asked to what extent they felt like a special person (1 – not at all special; 7 – very special). The second asked to what extent they felt confident in their sense of self (1 – not at all confident; 7 – very confident; Trudel et al. 2016). These items were highly correlated ( $\alpha = .73$ ), and were therefore combined into a 2-item scale. Thus, it does seem as though how special one feels as a person is strongly related to their self-view.

*Evaluations:* In this study, I want to look at behavioral intentions along with evaluations. Therefore, participants rated their satisfaction with Firefly (1 – very dissatisfied; 7 – very satisfied), likelihood of going back to Firefly, and their likelihood of engaging in word of mouth about Firefly on social media (1 – very unlikely; 7 – very likely). These items were highly correlated ( $\alpha = .88$ ), and were therefore combined into a 3-item restaurant evaluation measure.

*Results:*

*Manipulation Check:* A one-way ANOVA confirmed that participants in the initial special condition felt as though their dining experience was significantly more meaningful ( $M_{\text{special}} = 6.09$ ) than those in the non-special condition ( $M_{\text{nonspecial}} = 4.71$ ;  $F(1,190) = 56.03, p < .001$ ).

*Self-concept threat:* A two-way ANOVA revealed a significant interaction between the initial condition and the follow-up condition on perceptions of self-concept threat ( $F(1, 188) = 4.38; p < .05$ ; Figure 2.6). Additional analysis revealed that following a special experience, participants in the non-special follow-up condition felt significantly less confident in their sense of self ( $M_{\text{initial\_special\_followup\_nonspecial}} = 4.59$ ) as opposed to those in the special follow-up condition ( $M_{\text{initial\_special\_followup\_special}} = 5.15$ ;  $F(1, 188) = 4.16; p < .05$ ). There was no significant difference in the initial non-special conditions based on whether the follow-up was special or not ( $p > .25$ ).

*Evaluations:* A two-way ANOVA revealed a marginally significant interaction between the initial condition and the follow-up condition on evaluations of the restaurant ( $F(1, 188) = 2.74; p = .10$ ; Figure 2.7). Additional analysis revealed that following a special experience, participants in the special follow-up condition evaluated Firefly more positively ( $M_{\text{initial\_special\_followup\_special}} = 5.83$ ) as opposed to those in the non-special follow-up condition ( $M_{\text{initial\_special\_followup\_nonspecial}} = 5.19; F(1, 188) = 10.17; p < .01$ ). There was no significant difference in evaluations of the restaurant following an initial non-special condition based on whether the follow-up was special or not ( $p > .25$ ).

*Mediation Analysis:* In order to explore whether the interactive effect between the initial and follow-up condition impacts brand evaluations via perceptions of a threat to one's self-concept, I ran mediation analysis using the PROCESS SPSS macro (Model 7; Preacher and Hayes 2004). In the model, the specialness of the follow-up served as the independent variable, of the initial condition as the moderator, confidence in self-concept as the mediator, and satisfaction as the dependent variable. The effect of the mediator, confidence in self-concept, was significant ( $\beta = .32, t = 6.52, p < .001$ ). The bootstrap analysis did show support for moderated mediation (95% CI = .0123 to .2830), and was significant for the initial special conditions ( $\beta = 0.0877, 95\% \text{ CI} = 0.008 \text{ to } 0.1977$ ), but not in for the initial non-special conditions.

*Discussion:*

In the studies conducted thus far, I have provided evidence that consumer avoid contamination by new non-special, but not new special, memory cues and have explored

the process underlying these effects. In study 5, I turn my focus to more specific implications for marketers and show that repeating an experience is not the only means of memory contamination but that ads can also be perceived as a potential contaminate.

## STUDY 5

In this study, I aim to look at the implications of my findings for marketing practitioners by investigating specific marketing activities that may be perceived as non-special cues. Past research has found that advertisements, irrelevant of their content, can be a signal of quality for consumers, as consumers infer an advertising campaign's cost and use that inference as an indicator of financial strength (Kirmani 1990; Kirmani and Wright 1989). Additionally, research has found that brand popularity is one dimension of quality that is relevant in inferences of quality (Agrawal et al. 2011). Therefore, it is possible that viewing an ad can lead consumers to think of the popularity of the brand and of all of the other consumers that have had experiences with the brand.

Importantly for the current research, this signal of popularity could be interpreted as a non-special cue for consumers who have had special experiences with the brand because it signals that the experience may be very common for many people. Effectively, consumers may infer that if everyone has had an experience with the brand, it must not be a very special experience. By making this inference, consumers are changing their perception of the brand to be more commonplace, and, thus, changing their perception of their experience to also be more ordinary.

### *Design and Procedure:*

135 undergraduate students (48% male, mean age = 20.46) participated in this study in exchange for course credit. This study used a 2 (initial experience: special vs. non-special) x 2 (control vs. ad) between subjects design. This study was conducted in two parts, with part one serving as the first study in a sequence of five studies and part two serving as the last study. There was about a 20-minute delay between part one and part two in which participants completed unrelated studies.

In part one of the study, participants were asked to imagine a dining scenario similar to study 4 - at a restaurant called Firefly. In the special experience condition, participants were told that they were celebrating their birthday and that overall the evening was very special. In the non-special experience condition, participants were told that they did not go out to eat for any particular reason, it was just an ordinary night and they were hungry and overall the evening was very ordinary (full scenario in Appendix A). After reading the scenario, participants filled out manipulation check measures, measures assessing their evaluations of the restaurant, and demographic measures.

After the delay, participants filled out the second part of the study in which they were asked to think back to the scenario about Firefly and either shown an ad for Firefly (ad condition) and then taken to the dependent measures or taken directly to the dependent measures (control condition). The ad for Firefly featured a picture of a roasted chicken and vegetables dish, the dish that participants were told that they ate at the restaurant, and a line stating “Firefly is the perfect restaurant for special occasions.” (Appendix A).

*Dependent Measures:*

*Special at Time 1 and Time 2:* Participants rated how special they perceived their experience to be on a two-item, 7-point scale (1-Not at all Special/Memorable; 7 – Very Special/Memorable; Time 1  $\alpha = .89$ ; Time 2  $\alpha = .91$ ).

*Restaurant Evaluations:* Participants rated their evaluations of Firefly on a three-item, 7-point scale. The first item asked how negatively/positively they viewed their experience at firefly (1- Very Negatively; 7 – Very Positively), the second item asked how likely they would be to go back to Firefly in future (1 – Not all likely; 7 – Very likely), and the third item asked how favorably they viewed Firefly (1 – Not at all favorably; 7 – Very favorably). These items were combined to form the measure of brand evaluation (Part 1  $\alpha = .79$ ; Part 2  $\alpha = .89$ ).

*Results:*

*Manipulation Checks:* A one-way ANOVA confirmed that participants in the special condition felt as though their dining experience was significantly more special ( $M_{\text{special}} = 6.27$ ) than those in the non-special condition ( $M_{\text{nonspecial}} = 4.39$ ;  $F(1,133) = 108.97, p < .001$ ).

*Part 1:* One way ANOVA showed that participants in the special condition had significantly more favorable evaluations of the restaurant ( $M_{\text{special}} = 6.27$ ) compared to those in the non-special condition ( $M_{\text{nonspecial}} = 5.58$ ;  $F(1,133) = 26.10, p < .001$ ).



*Mediation Analysis:* A mediation analysis using PROCESS SPSS macro (Model 4; Preacher and Hayes 2004) with special vs. non-special initial experience as the independent variable, participants rating of the specialness of the experience as the mediator, and evaluations of the restaurant as the dependent variable showed that perceptions of how special the experience did mediate the relationship between initial experience and brand evaluations (95% CI [.6264; 1.1087]). In the special condition, participants perceived their experience to be more special which lead to more positive evaluations of the restaurant compared to those in the non-special condition.

*Part 2:* An ANOVA with initial experience (special vs. non-special), marketing communication (ad vs. no ad), and their interaction revealed a significant main effect of the specialness of the initial experience on specialness perceptions at time 2 ( $F(1, 131) = 72.76; p < .001$ ) and on evaluations of Firefly at time 2 ( $F(1, 131) = 26.48; p < .001$ ), a marginally significant main effect of the marketing communication on specialness perceptions at time 2 ( $F(1, 131) = 3.34; p < .10$ ) and a significant main effect on evaluations of Firefly at time 2 ( $F(1, 131) = 3.82; p = .05$ ), and a significant interactive effect on perceptions of special at time 2 ( $F(1, 131) = 3.82; p = .05$ ) and evaluations of the restaurant at time 2 ( $F(1, 131) = 4.41; p < .05$ ).

*Special Time 2:* At time 2, participants were asked to rate how special their initial experience at Firefly was, so any differences between conditions reflects a change in their memory of their initial experience. Planned contrasts revealed that following an initial special experience, participants who were not exposed to an ad (e.g. in the control

condition) viewed their experience as significantly more special ( $M_{\text{control}} = 6.28$ ) compared to those who had viewed an ad for Firefly ( $M_{\text{ad}} = 5.63$ ;  $F(1, 131) = 6.52$ ;  $p < .05$ ; Figure 2.8). There was no significant difference based on viewing the ad in the non-special initial experience condition ( $p > .25$ ).

*Evaluations Time 2:* Planned contrasts revealed that following an initial special experience, participants who were not exposed to an ad (e.g. in the control condition) had significantly more positive evaluations of Firefly ( $M_{\text{control}} = 6.36$ ) compared to those who viewed the ad ( $M_{\text{ad}} = 5.74$ ;  $F(1, 131) = 7.49$ ;  $p < .01$ ; Figure 2.9). There was no difference based on viewing the ad in the non-special initial experience condition ( $p > .25$ ).

*Mediation Analysis:* A mediation analysis using PROCESS SPSS macro (Model 7; Preacher and Hayes 2004) was run with special vs. non-special initial experience as the independent variable, specialness perceptions at time 2 as the mediator, ad vs. no-ad as the moderator, and evaluations of the restaurant as the dependent variable showed that perceptions of how special the experience did mediate the relationship between initial experience and evaluations but that this relationship is moderated by marketing communications (95% CI = [-.8348, -.0180]).

#### *Discussion:*

These results provide additional evidence that consumers avoid contaminating special memories with non-special cues, but not additional special cues, and shows that

information encountered in marketing communications can be perceived as a source of contamination. Importantly for marketers, this study suggests that there may be a specialness-contamination tradeoff such that positioning a product or service as being special may lead the brand to be perceived more favorably, but it also elicits the risk of any subsequent marketing communication being perceived as a memory contaminant, thereby lowering brand favorability.

## GENERAL DISCUSSION

Past research has found that memories of special experiences can be seen as assets, and that consumers will strategically protect memories that they view in this manner (Zauberman et al. 2009). The current research looks to expand our understanding of strategic memory protection by suggesting that consumers do not avoid any situation that may contaminate their special memories, but will only avoid situations that may contaminate special memories with non-special cues. Additionally, the current research investigates the process underlying these effects by proposing that consumers avoid contamination of a special memory by a non-special cue because it is perceived as a self-concept threat.

Across 7 studies, I establish that consumers are less willing to repeat a special experience under non-special circumstances than under new, special circumstances, even when elements of the follow-up experience are different than those in the initial experience (studies 1A-1B), and show that these effects hold not only for locations of special experiences, but also for products used during a special experiences (studies 2A-

2B). Additionally, in study 2B, I show that there is a strong correlation between perceptions of how special an experience is remembered as being and evaluations of the brands associated with that memory. Further, I find that when consumers are forced to contaminate special memories with non-special cues, their evaluations of the products associated with the memory become less favorable (studies 2B, 3-5). Study 3 provides additional evidence that contamination of special memories with non-special cues decreases perceptions of specialness and brand evaluations, rather than the addition of new special cues increasing perceptions of specialness and brand evaluations. I also investigate the process underlying these effects by showing that the addition of a non-special cue to a special memory can be perceived as a self-concept threat and that this perceived threat mediates the relationship between memory contamination and consumer brand evaluations (study 4), and, finally, I show that ads can be perceived as a non-special cue (study 5).

#### *Limitations and Future Research*

While I document these effects using both participants real-life past special experiences and experimentally controlled stimuli, I was not able to provide participants with an actual special experience. Although I feel confident that my effects would hold for new special experiences, future research replicating my results with a new real-life experience would be important.

Additionally, the range of special experiences utilized in my studies is somewhat narrow, as I do not explore whether these effects would hold for all types of special memories. For example, it is possible that there are some memories that are so

exceedingly special, such as a wedding, that consumers may feel it is impossible to contaminate these memories, regardless of the type of new memory cue. Therefore, following their own wedding at a particular location, consumers may be willing to revisit that same location for any new event in the future without fear of memory contamination and without negatively impacting their evaluations of the location. It would be interesting for future research to explore the impact of different levels of special on memory protection strategies.

Further, it would be interesting for future research to investigate the impact of age on memory protection. I find that consumers avoid contaminating their special memories with non-special cues in order to protect the self-defining nature of these memories, but previous research has shown that young people define themselves more so by extraordinary, rather than ordinary experiences, but that this difference reduces as people get age (Bhattacharjee and Mogilner 2014). Older adults define themselves by both extraordinary and ordinary experiences. Therefore, if people are protecting memories of special experience as a means to protect their identities, and older adults define themselves by both special and non-special memories, older adults may also avoid memory contamination of their non-special memories.

ESSAY 2 FIGURES

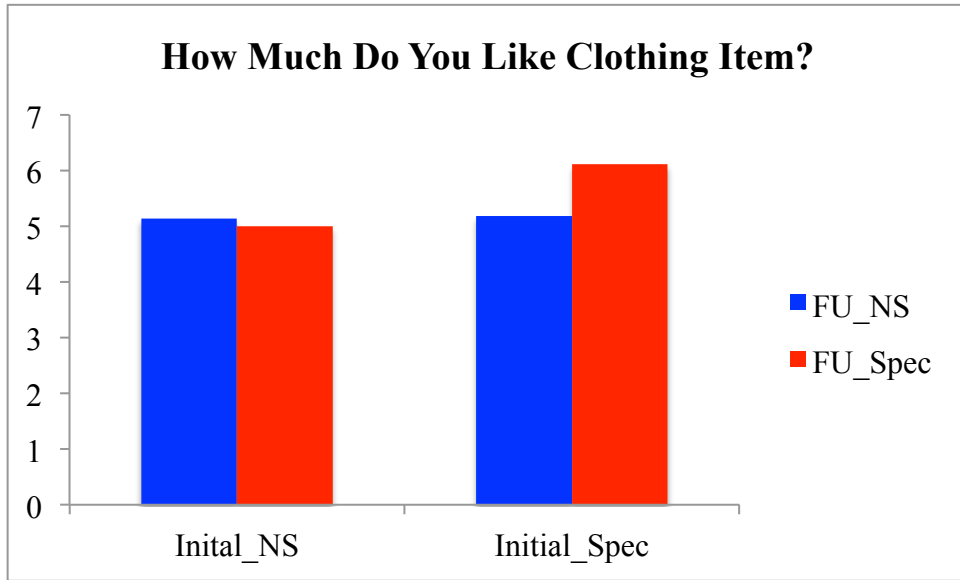


Figure 2.1: Evaluations of the clothing item

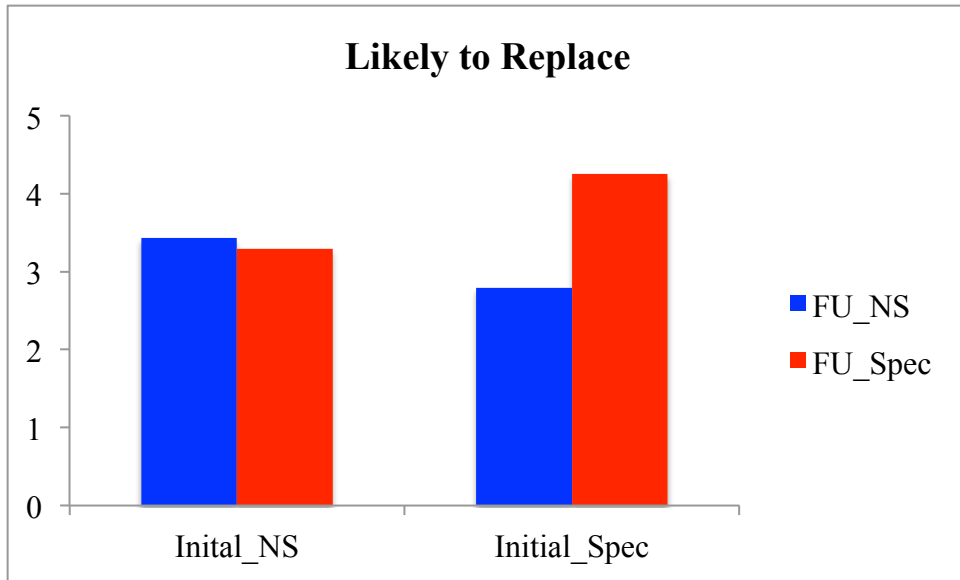


Figure 2.2: Likelihood of replacing the clothing item

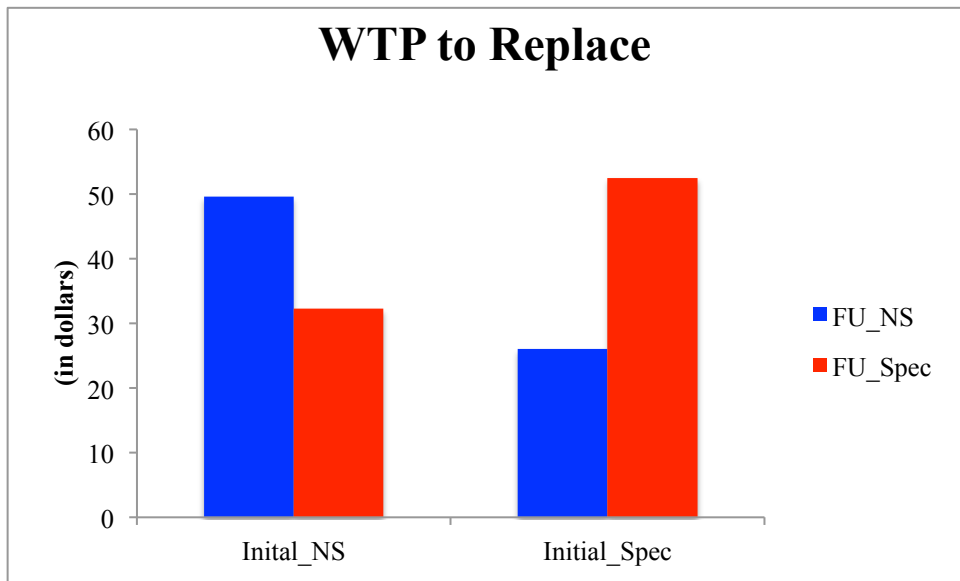


Figure 2.3: Willingness to pay to replace the clothing item

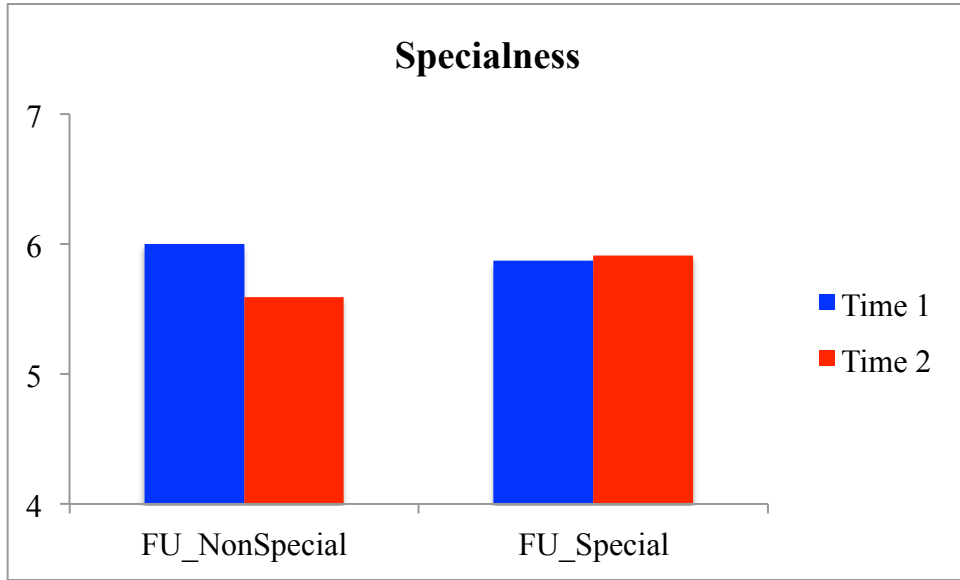


Figure 2.4: Specialness perceptions

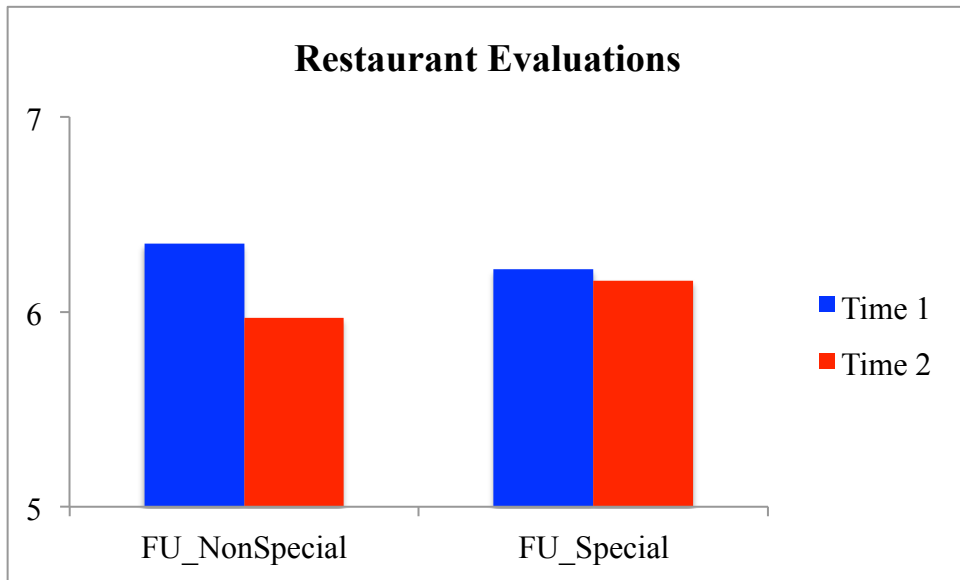


Figure 2.5: Restaurant evaluations



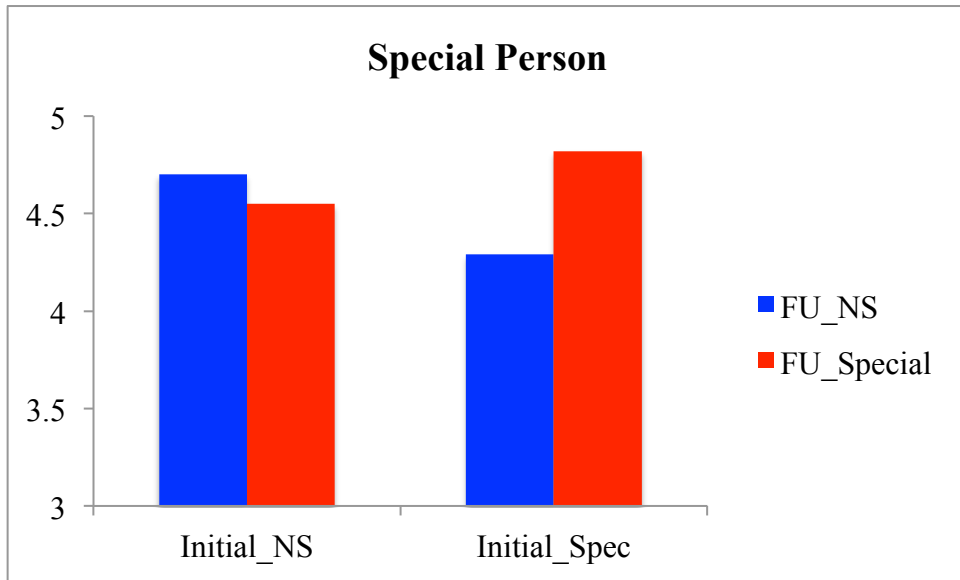


Figure 2.6: Perceptions of personal specialness

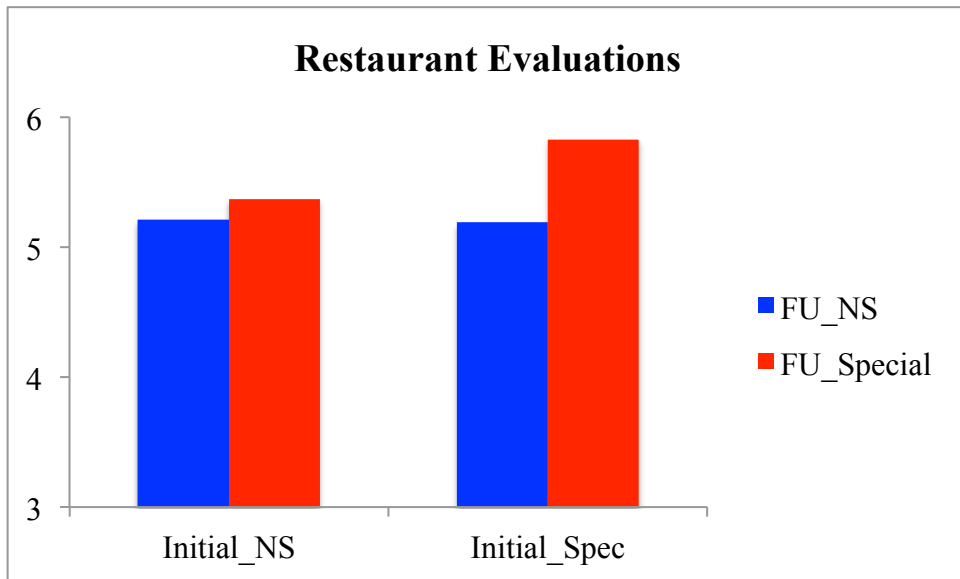


Figure 2.7: Restaurant evaluations

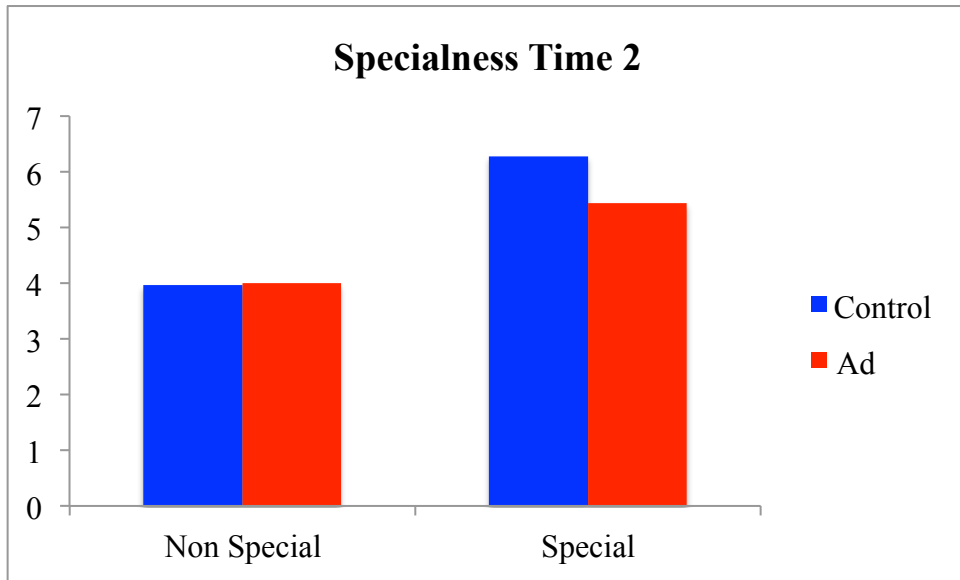


Figure 2.8: Specialness perceptions at time 2

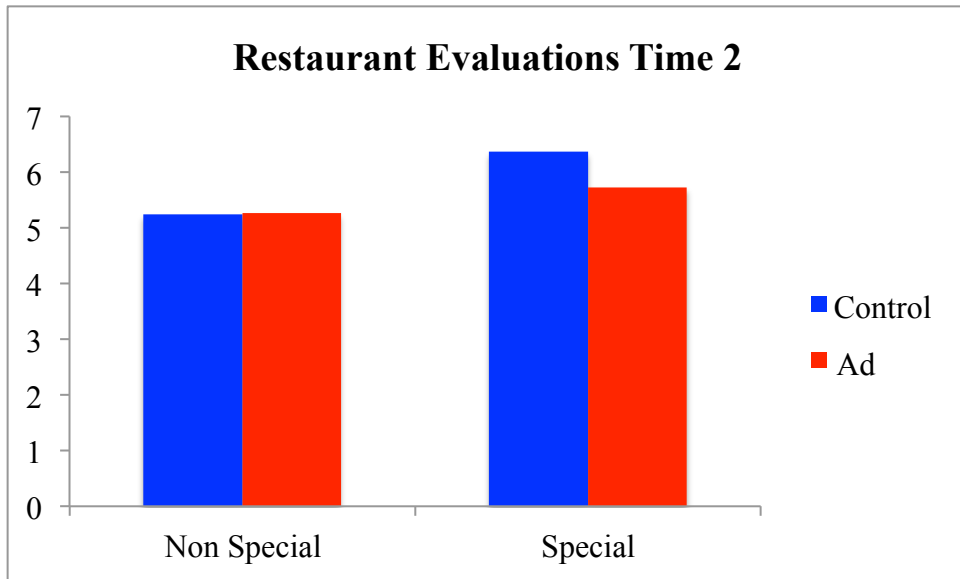


Figure 2.9: Restaurant evaluations at time 2

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## APPENDIX A: STUDY STIMULI

### Essay 1, Study 2 Shopping Scenarios:

Shared/Positive: Imagine that you went shopping with a group of friends last weekend to buy a new pair of jeans and a pair of athletic shoes. When you first arrived at the mall, you and your friends were hungry so you went to the food court and ordered a chicken sandwich meal and a Coke from Chick-fil-A. Once you and your friends were done with your meal, you walked to Dillard's to browse their denim department. You had recently seen an ad in the paper promoting a denim sale that Dillard's had going on, so you were hoping to find a good deal. As soon as you and your friends walked into the denim department, you were immediately able to find the perfect pair of dark wash Lucky brand jeans, and they were on sale! Your friends were also able to find some new pairs of True Religion jeans on sale. Then, you visited FootLocker and were able to find the perfect pair of Nike running shoes that you had been looking for! When you went to check out, you were pleasantly surprised to find out that your shoes were 15% off for that day only. Overall, everyone had a very positive shopping experience that day.

Individual Positive: Imagine that you went shopping last weekend to buy a new pair of jeans and a pair of athletic shoes. When you first arrived at the mall, you were hungry so you went to the food court and ordered a chicken sandwich meal and a Coke from Chick-fil-A. Once you were done with your meal, you walked to Dillard's to browse their denim department. You had recently seen an ad in the paper promoting a denim sale that Dillard's had going on, so you were hoping to find a good deal. As soon as you walked into the denim department, you were immediately able to find you the perfect pair of dark wash Lucky brand jeans, and they were on sale! You also found a pair of True Religion jeans that you liked. Then, you visited FootLocker and were able to find the perfect pair of Nike running shoes that you had been looking for! When you went to check out, you were pleasantly surprised to find out that your shoes were 15% off for that day only. Overall, you had a very positive shopping experience that day.

Shared/Negative: Imagine that you went shopping with a group of friends last weekend to buy a new pair of jeans and a pair of athletic shoes. When you first arrived at the mall, you and your friends were hungry so you went to the food court and ordered a chicken sandwich meal and a Coke from Chick-fil-A. As soon as you sat down to eat, you accidentally knocked your soda over and it spilled all over you. You were able to clean most of the soda off of yourself, but had to walk around the mall with damp pants for the rest of the day. Once you and your friends were done with your meal, you walked to Dillard's to browse their denim department. You had recently seen an ad in the paper promoting a denim sale that Dillard's had going on, so you were hoping to find a good deal on the pair of dark wash Lucky brand jeans. Unfortunately, they were sold out of

your size, and you were not able to find any other jeans that you liked so you had to leave empty handed. Your friends were not able to find the pair of True Religion jeans they had been looking for on sale either. Then, you visited FootLocker to find a pair of Nike running shoes, but couldn't find anything that you liked. As you and your friends were walking to your car, you tripped over a crack in the concrete and hurt your ankle. Overall, everyone had a very negative shopping experience that day.

Individual/Negative: Imagine that you went shopping last weekend to buy a new pair of jeans and a pair of athletic shoes. When you first arrived at the mall, you were hungry so you went to the food court and ordered a chicken sandwich meal and a Coke from Chick-fil-A. As soon as you sat down to eat, you accidentally knocked your soda over and it spilled all over you. You were able to clean most of the soda off of yourself, but had to walk around the mall with damp pants for the rest of the day. Once you were done with your meal, you walked to Dillard's to browse their denim department. You had recently seen an ad in the paper promoting a denim sale that Dillard's had going on, so you were hoping to find a good deal on a pair of dark wash Lucky brand jeans or True Religion brand jeans. Unfortunately, they were sold out of your size, and you were not able to find any other jeans that you liked so you had to leave empty handed. Then, you visited FootLocker to find a pair of Nike running shoes, but couldn't find anything that you liked. As you were walking to your car, you tripped over a crack in the concrete and hurt your ankle. Overall, you had a very negative shopping experience that day.

### Essay 1, Study 3 Concert Scenarios:

Shared/Positive: Imagine that a local music hall is hosting a classical music concert series. One Saturday afternoon, you and some of your friends decide to attend one of the concerts because you read in the newspaper that the conductor, James Bates, is supposed to be very talented. You and your friends arrive at the music hall at 1 p.m. and decide to get a snack and a drink before the concert begins. You purchase a bag of Rold Gold pretzels, a bag of milk chocolate M&M's, and a bottle of Lipton iced tea. You and your friends then go and find your seats, and you are very impressed with the decor of the concert hall. The seats are black leather and comfortable, and the walls are painted a pretty shade of gray. There is also a portrait of Mozart hanging on the back wall. You and your friends have very good seats and will be able to see the concert well. When you sit down in your seat and open your snacks, the pretzels are well-salted and crunchy, the iced tea is perfectly chilled, and the M&M's add just the right amount of sweetness to your snack.

At 1:30 p.m., the conductor comes on stage and the concert begins.

On the next page, you will listen to a music clip from the concert. Please click on the continue button to proceed.

Individual/Positive: Imagine that a local music hall is hosting a classical music concert series. One Saturday afternoon, you decide to attend one of the concerts by yourself because you read in the newspaper that the conductor, James Bates, is supposed to be very talented. You arrive at the music hall at 1 p.m. and decide to get a snack and a drink before the concert begins. You purchase a bag of Rold Gold pretzels, a bag of milk chocolate M&M's, and a bottle of Lipton iced tea. You then go and find your seat, and you are very impressed with the decor of the concert hall. The seats are black leather and comfortable, and the walls are painted a pretty shade of gray. There is also a portrait of Mozart hanging on the back wall. You have a very good seat and will be able to see the concert well. When you sit down in your seat and open your snacks, the pretzels are well-salted and crunchy, the iced tea is perfectly chilled, and the M&M's add just the right amount of sweetness to your snack.

At 1:30 p.m., the conductor comes on stage and the concert begins.

On the next page, you will listen to a music clip from the concert. Please click on the continue button to proceed.

Shared/Negative: Imagine that a local music hall is hosting a classical music concert series. One Saturday afternoon, you and some of your friends decide to attend one of the concerts because you read in the newspaper that the conductor, James Bates, is supposed to be very talented. You and your friends arrive at the music hall at 1 p.m. and decide to get a snack and a drink before the concert begins. You purchase a bag of Rold Gold pretzels, a bag of milk chocolate M&M's, and a bottle of Lipton iced tea. You and your friends then go and find your seats, and you are not at all impressed with the decor

of the concert hall. The seats are black leather and uncomfortable, and the walls are painted an ugly shade of gray. There is also a portrait of Mozart hanging on the back wall. You and your friends do not have very good seats and will not be able to see the concert well. When you sit down in your seat and open your snacks, the pretzels are much too salty and stale, the iced tea is very warm, and the M&M's are melted and mushy.

At 1:30 p.m., the conductor comes on stage and the concert begins.

On the next page, you will listen to a music clip from the concert. Please click on the continue button to proceed.

Individual/Negative: Imagine that a local music hall is hosting a classical music concert series. One Saturday afternoon, you decide to attend one of the concerts by yourself because you read in the newspaper that the conductor, James Bates, is supposed to be very talented. You arrive at the music hall at 1 p.m. and decide to get a snack and a drink before the concert begins. You purchase a bag of Rold Gold pretzels, a bag of milk chocolate M&M's, and a bottle of Lipton iced tea. You then go and find your seat, and you are not at all impressed with the decor of the concert hall. The seats are black leather and uncomfortable, and the walls are painted an ugly shade of gray. There is also a portrait of Mozart hanging on the back wall. You do not have a very good seat and will not be able to see the concert well. When you sit down in your seat and open your snacks, the pretzels are much too salty and stale, the iced tea is very warm, and the M&M's are melted and mushy.

At 1:30 p.m., the conductor comes on stage and the concert begins.

On the next page, you will listen to a music clip from the concert. Please click on the continue button to proceed.

## Essay 1, Study 4 Coffee Shop Scenarios:

Friends/Positive: Imagine that you are at Cool Beans, a local coffee shop that recently opened, with a few of your close friends. You hang out with these friends very often and know them very well. You order a medium coffee with cream and sugar, and also purchase a KIND chocolate and sea salt granola bar, and a banana. When you receive your coffee, it is the perfect temperature and has just the right amount of cream and sugar. You also like the ambience of the store. The walls are a pretty yellow color, the chairs are grey and comfortable, and the Michael Bublé music playing in the background is very enjoyable. After finishing your coffee and breakfast, you purchase a bottle of Evian water and a bag of Snack Factory Pretzel Chips so that you have a snack later in the day.

Unknown Others/Positive: Imagine that you are by yourself at Cool Beans, a local coffee shop that recently opened. There are several other customers in the coffee shop, but you do not know any of them. You order a medium coffee with cream and sugar, and also purchase a KIND chocolate and sea salt granola bar, and a banana. When you receive your coffee, it is the perfect temperature and has just the right amount of cream and sugar. You also like the ambience of the store. The walls are a pretty yellow color, the chairs are grey and comfortable, and the Michael Bublé music playing in the background is very enjoyable. After finishing your coffee and breakfast, you purchase a bottle of Evian water and a bag of Snack Factory Pretzel Chips so that you have a snack later in the day.

Individual/Positive: Imagine that you are by yourself at Cool Beans, a local coffee shop that recently opened. You order a medium coffee with cream and sugar, and also purchase a KIND chocolate and sea salt granola bar, and a banana. When you receive your coffee, it is the perfect temperature and has just the right amount of cream and sugar. You also like the ambience of the store. The walls are a pretty yellow color, the chairs are grey and comfortable, and the Michael Bublé music playing in the background is very enjoyable. After finishing your coffee and breakfast, you purchase a bottle of Evian water and a bag of Snack Factory Pretzel Chips so that you have a snack later in the day.

Friends/Negative: Imagine that you are at Cool Beans, a local coffee shop that recently opened, with a few of your close friends. You hang out with these friends very often and know them very well. You order a medium coffee with cream and sugar, and also purchase a KIND chocolate and sea salt granola bar, and a banana. When you receive your coffee, it is much too hot and does not have the right amount of cream or sugar. You also do not like the ambience of the store. The walls are an ugly yellow color, the chairs are grey and uncomfortable, and the Michael Bublé music playing in the background is much too loud. After finishing your coffee and breakfast, you purchase a bottle of Evian water and a bag of Snack Factory Pretzel Chips so that you have a snack later in the day.

Unknown Others/Negative: Imagine that you are by yourself at Cool Beans, a local coffee shop that recently opened. There are several other customers in the coffee shop, but you do not know any of them. You order a medium coffee with cream and sugar, and also purchase a KIND chocolate and sea salt granola bar, and a banana. When you receive your coffee, it is much too hot and does not have the right amount of cream or sugar. You also do not like the ambience of the store. The walls are an ugly yellow color, the chairs are grey and uncomfortable, and the Michael Bublé music playing in the background is much too loud. After finishing your coffee and breakfast, you purchase a bottle of Evian water and a bag of Snack Factory Pretzel Chips so that you have a snack later in the day.

Individual/Negative: Imagine that you are by yourself at Cool Beans, a local coffee shop that recently opened. You order a medium coffee with cream and sugar, and also purchase a KIND chocolate and sea salt granola bar, and a banana. When you receive your coffee, it is much too hot and does not have the right amount of cream or sugar. You also do not like the ambience of the store. The walls are an ugly yellow color, the chairs are grey and uncomfortable, and the Michael Bublé music playing in the background is much too loud. After finishing your coffee and breakfast, you purchase a bottle of Evian water and a bag of Snack Factory Pretzel Chips so that you have a snack later in the day.

## Essay 2, Study 1B Scenarios:

Special Scenario: Imagine that you recently went to a new restaurant in downtown Columbia called Firefly with two of your good friends. You went to Firefly to celebrate your 21st birthday, a very special occasion to you. You had a very good experience at Firefly - the food was delicious, the server was attentive, and prices were fair. You had a meaningful conversation with your friends and, overall, the evening was very special to you.

Non-Special Scenario: Imagine that you recently went to a new restaurant in downtown Columbia called Firefly with two of your good friends. You did not go to Firefly for any particular reason, it was just an ordinary night and you were hungry. You had a very good experience at Firefly – the food was delicious, the server was attentive, and prices were fair. You had a regular conversation with your friends and, overall, the evening was very ordinary to you.

## Essay 2, Study 2A Stimuli:

Special Scenario: Imagine that you recently went out to dinner at a new restaurant in town. You went to out to dinner to celebrate your birthday, a very special occasion to you. For dinner, you wore a new navy dress with a white floral print on it (men – navy tie with a red polka dot print). The food and the service at the restaurant were very good, and overall the evening was very special to you.

Non-Special Scenario: Imagine that you recently went out to dinner at a new restaurant in town. You did not go out to dinner for any particular reason, it was just an ordinary night and you were hungry. For dinner, you wore a new navy dress with a white floral print on it (men – navy tie with a red polka dot print). The food and the service at the restaurant were very good, but overall the evening was very ordinary to you.





## Essay 2, Study 2B Stimuli:

Special Initial Experience Scenario: Imagine that you recently went out to dinner at a new restaurant in town called The Southern Kitchen. You went to out to dinner to celebrate your birthday, a very special occasion to you. For dinner, you wore a new pink lace dress (blue and white plaid shirt). The food and the service at the restaurant were very good, and overall the evening was very special to you.

Non-Special Initial Experience Scenario: Imagine that you recently went out to dinner at a new restaurant in town called The Southern Kitchen. You did not go out to dinner for any particular reason, it was just an ordinary night and you were hungry. For dinner, you wore a new pink lace dress (blue and white plaid shirt). The food and the service at the restaurant were very good, but overall the evening was very ordinary to you.

Special Follow-Up Experience Scenario: Now imagine that a couple of weeks later you attended a USC awards dinner and wore this dress. At this awards dinner, you were presented with a very prestigious award for your contributions to the USC community over the past year, so it was a very special evening for you.

Non-Special Follow-Up Experience Scenario: Now imagine that a couple of weeks later you attended a dinner for USC students and wore this dress. You have been to several of these USC student dinners before, so it was a very ordinary evening for you.



## Essay 2, Study 3 Scenario:

Special Initial: Imagine that you recently went to a new restaurant called Firefly with two of your good friends. You went to Firefly to celebrate your birthday, a very special occasion to you. You had a very good experience at Firefly - the food was delicious, the server was attentive, and prices were fair. You had a meaningful conversation with your friends and, overall, the evening was very special to you.

Non-Special Initial: Imagine that you recently went to a new restaurant called Firefly with two of your good friends. You did not go to Firefly for any particular reason, it was just an ordinary night and you were hungry. You had a very good experience at Firefly – the food was delicious, the server was attentive, and prices were fair. You had a regular conversation with your friends and, overall, the evening was very ordinary to you.

Special Follow-Up: Now imagine that a couple of weeks later you attended an annual celebration dinner hosted by your employer at Firefly. The company hosts this dinner to celebrate its employees every year, and it is always a very special evening for you.

Non-Special Follow-Up: Now imagine that a couple of weeks later you attended a work dinner at Firefly. You have been to several of these work dinners before, so it was a very ordinary evening for you.

## Essay 2, Study 4 Stimuli:

Special Scenario: Imagine that you recently went to a new restaurant called Firefly. You went to Firefly to celebrate your birthday, a very special occasion to you. As you walk in to the restaurant, you are impressed with the modern décor, and when you look at the menu, you feel that the prices are fair. You order a roasted chicken with vegetables dish to eat, and, when the food arrives, the chicken is perfectly cooked and the vegetables are very tasty. You had a good experience at Firefly, and overall the evening was very special to you.

Non-Special Scenario: Imagine that you recently went to a new restaurant called Firefly. You did not go to Firefly for any particular reason, it was just an ordinary night and you were hungry. As you walk in to the restaurant, you are impressed with the modern décor, and when you look at the menu, you feel that the prices are fair. You order a roasted chicken with vegetables dish to eat, and, when the food arrives, the chicken is perfectly cooked and the vegetables are very tasty. You had a good experience at Firefly, but overall the evening was very ordinary to you.

Ad Condition -



The advertisement is presented on a textured, parchment-like background. At the top, the word "Firefly" is written in a large, elegant serif font. Below it, the tagline "A New Dining Experience" is centered in a smaller, simpler font. In the middle of the ad is a photograph of a roasted chicken with vegetables, including potatoes and onions, served in a dark bowl. At the bottom, a line of text reads: "Firefly is the perfect place to celebrate **special occasions** – we are open for lunch and dinner!".

## APPENDIX B: MEASURES

### Involvement Measures (all studies):

While taking this survey, I was:

1 – Very uninvolved; 7 – Very involved

1 – Concentrating very little; 7 – concentrating a lot

1 – Paying very little attention; 7 – Paying a lot of attention

### Essay 2, Special Manipulation Check Measures:

To what extent was the scenario:

1 – Not at all special; 7 – Very Special

1 – Not at all memorable; 7 – Very Memorable

1 – Very Ordinary; 7 – Very Unique

1 – Very Usual; 7 – Very Unusual