HEDONIC BENEFITS OF EXPERIENTIAL PREPARATION

by

Daniel Stephen Lieb

Department of Business Administration
Duke University

Date:_____

Approved:

_____
Joel C. Huber, Co-chair

_____
Mary Frances Luce, Co-chair

_____
John G. Lynch

_____
Gregory W. Fischer

_____
Wendy Wood

Dissertation submitted in partial fulfillment of
the requirements for the degree of
Doctor of Philosophy in the Department of
Business Administration in the Graduate School
of Duke University

2007

ABSTRACT

HEDONIC BENEFITS OF EXPERIENTIAL PREPARATION

by

Daniel Stephen Lieb

Department of Business Administration
Duke University

Date:_____

Approved:

_____
Joel C. Huber, Co-chair

_____
Mary Frances Luce, Co-chair

_____
John G. Lynch

_____
Gregory W. Fischer

_____
Wendy Wood

An abstract of a dissertation submitted in partial fulfillment of
the requirements for the degree of
Doctor of Philosophy in the Department of
Business Administration in the Graduate School
of Duke University

2007

Abstract

While a vast amount of research in marketing has examined how information prior to purchase helps consumers to make purchase decisions, relatively little work has considered how marketers can increase the value consumers derive from subsequent experiences using this information. This dissertation develops a construct called "experiential preparation" that describes how consumers can increase the hedonic benefit of their experiences. This dissertation defines "experiential preparation" as any mechanism that allows consumers to familiarize themselves with upcoming experiences in advance of consumption, while the "preparation effect" refers to the increase in liking for an event due to experiential preparation.

In a series of ten experimental studies this dissertation demonstrates that experiential preparation increases satisfaction, particularly where the respondent is in a positive mood. It also identifies the primary mechanism through which experiential preparation works, showing that increased satisfaction is fully mediated by fluency. These effects occurred across a range of experiences and modes of preparation. In all the studies, participants viewed feature-length and short films and read short stories. Participants who engaged in experiential preparation received previews in the form of plot summaries or actual excerpts from the films and stories. In all studies, participants reported their enjoyment for the experiences, and in several studies additional preference measures were collected. Finally, measures were developed to test for the ways in which fluency mediates and mood valence moderates the preparation effect.

This dissertation is organized in three chapters. In Chapter One, experiential preparation and the preparation effect are defined and background literature is discussed. Chapter Two analyses the results of the ten studies thematically around various mechanisms, some of which have a significant impact on the preparation effect and some little impact. Chapter Three presents the studies' results in detail.

Contents

List of Tables

List of Figures

1. Experiential Preparation Introduced

1.1 Introduction - The Concept of Experiential Preparation

Picture a home theater aficionado sitting down to spend an evening watching a new DVD. After having viewed the movie for a few minutes, suppose he stops it to take a call from a family member whom he loves. Quite apart from the affect the call generates, will the viewer be happier starting the movie from the beginning or resuming from where it left off? Lay theories of behavior suggest that consumers avoid repeating events or viewing the same information more than once. Classic work in economics has modeled time as a scarce resource where consumers try to maximize their utility from leisure activities given constraints from making work-leisure tradeoffs (Becker 1965). Such models assume that consumers seek to derive the most pleasure from time spent, just as they would from money spent. It follows that consumers may view repeating events as wasting a precious resource. Marketing research has shown that periods of repetition may be evaluated negatively because they don't appear to generate progress toward a goal (Soman 2003; Soman and Shi 2003). Taking this back to our DVD viewer, if he were to believe theories that suggest repetition decreases enjoyment of an experience, the movie buff would resume his movie from where he stopped. But does this action reduce his potential for greater enjoyment of the film?

The purpose of this dissertation is to present evidence that, if the DVD viewer's goal is to maximize satisfaction with the film, the best strategy may often be to take the

counter-intuitive action of restarting the movie from the beginning. More generally, this dissertation examines contexts in which preparing for an experience can enhance its subsequent enjoyment. This dissertation also explores mechanisms by which this phenomenon might occur, demonstrating that experiential preparation increases the fluidity of the experience and therefore its direct and recalled pleasure. Surprisingly, this gain from experiential preparation does not lead to measurable changes in knowledge or understanding of the experience, and it is insensitive to the depth or personal nature of the experiential preparation. It is, however, moderated by whether the mood of the person as he prepares for the experience is positive. Positive moods appear to enable greater appreciation of a previewed experience rather than evoking resentment of wasted effort.

1.2 Dissertation Organization

The remainder of this dissertation is organized as follows. In this chapter I introduce the concept of experiential preparation. I discuss ways to engage in experiential preparation and contrast experiential preparation to theories of mental simulation and mere exposure. In Chapter Two of this dissertation, I first discuss two studies in which I document the preparation effect, and then I discuss all ten of the dissertation studies thematically around five potential drivers of the preparation effect. In Chapter Three, I report detail on these ten studies.

1.3 The Definition of Experiential Preparation

Central to this dissertation is the hedonic value of an experience. Hedonic consumption is generally defined to include events that are multi-sensory and related to the emotive aspects of a consumer's usage of a product (Hirschman and Holbrook 1982). Unlike events that are primarily utilitarian, hedonic consumption events have subjective meaning beyond the concrete attributes of the event (Hirschman and Holbrook 1982) and provide experiential pleasure and excitement beyond utilitarian goods, which are more associated with functional and instrumental use (Wertenbroch and Dhar 2000).

This dissertation defines "experiential preparation" generally as any mechanism that allows a consumer to become familiar with an upcoming experience in advance of consumption. (For several more specific examples of how one might prepare, see the section labeled "ways to prepare" below.) I use the term "preparation effect" to refer to the increase in enjoyment of an event from experiential preparation.

Experiential preparation shares formal roots with notions of mental simulation (Pham and Taylor 1999) and mental practice (Driskell, Copper and Moran 1994). Both mechanisms describe a process where one imagines himself or herself engaging in some future action without actually having engaged in that action. One important difference between experiential preparation and these theories is that mental practice and mental simulation are both concerned with imagining a goal state or an action leading to a goal state (e.g. taking a test or throwing a javelin), where experiential preparation describes the process of familiarizing oneself for an upcoming experience. To illustrate this

difference, these earlier theories would suggest that the javelin thrower might imagine himself taking the approach run before releasing the spear as a way to get ready for the actual throw, whereas experiential preparation is concerned with whether the athlete would enjoy the process more.

In this dissertation, the scope of experiential preparation is limited to "pre-experiencing" a larger experience through a summary description or experiencing a small part of the larger experience before the ultimate experience takes place. The studies will be limited to stories and films, but conceptually experiential preparation should apply to a wide variety of experiences such as a vacation, a bicycle trip or a massage.

More specifically, to examine the preparation effect, this dissertation makes use of films and short stories. Full length films are experience, hedonic goods that typically generate various affective responses. Most previous research in marketing with regard to films has examined factors the lead to strong ticket sales, including promotional activities (Zufryden 1996), web-sites (Zufryden 2000) and critics' reviews (Kamakura, Basuroy and Boatwright 2006). Other research has examined how consumers form opinions of films after reading critics' reviews (d'Astous and Touil 1999), how critics' reviews serve as indicators for ticket sales (Eliashberg and Shugan 1997), how word-of-mouth via internet message boards influences ticket sales (Gershoff, Mukherjee and Mukhopadhyay 2003; Liu 2006), and how consumers' evaluations differ from critics' evaluations (Holbrook 1999). (For a review of many open marketing issues surrounding the film industry, see Eliashberg, Elberse and Leenders 2006.) Despite the fair amount of previous research and open theoretical issues, no research to my knowledge has

examined how (or, for that matter, even asked if) pre-film behavior affects the experience of the film.

Quite similarly, the use of short stories in psychology as stimuli has been less concerned with responses to the short story itself than with other effects. Similar to movies, short stories are affectively rich experiences that can elicit a variety of responses. Short stories have been used heavily in psychology, especially to study memory effects (Dudukovic, Marsh and Tversky 2004; Tversky and Marsh 2000). Just like movies, short stories are another affectively rich experience in which experiential preparation can be further studied. The studies in this dissertation that make use of short stories build on previous work by Tal and Huber (2006). Their work has examined the preparation effect for short stories and demonstrated that the preparation effect is moderated by the reader's processing mode.

1.4 Why the Preparation Effect Occurs

In Chapter Two of this dissertation I show that the preparation effect occurs because experiential preparation leads events to feel more fluent. That is, fluency mediates the preparation effect in that experiential preparation increases subjective feelings of fluency. This in turn fully accounts for the gain in enjoyment of the experiences. I also show an important moderator for the preparation effect where experiential preparation works best for people high in positive moods. This moderation

occurs because people in positive moods are more open to preview information from experiential preparation and process this information more broadly.

1.5 Ways to Prepare

Experiential preparation can occur through many mechanisms. Before meeting a long-lost friend, one might look at his picture or think about shared adventures from the past. Before a hike through the woods, a backpacker may view a trail map and imagine himself on the journey. An upscale French restaurant might offer a small bite of food known as an "amuse bouche" (literal translation: "mouth amuser") before the meal to excite the palate. Finally experiential preparation can arise from experiencing part of a forthcoming event via preview information, as in the DVD example. Quite similar to our movie-buff, a short story reader may read an excerpt from a story before settling down to read the entire piece of fiction. This dissertation chapter determines contexts in which preview information acts as a mechanism for people to prepare for, and subsequently have greater enjoyment of the experiences.

Experiential preparation is a distinct construct from repetition, a notion that has seen heavy research in marketing. In much of that research, the effects of watching an entire ad multiple times are explored. This research has found that ad repetition leads to various interesting, and perhaps conflicting, results. For example, repeated showing of an ad for an unfamiliar brand may be a signal of low or high product quality depending on

factors such as perceptions of the manufacturer's effort and confidence (Kirmani 1997) or ad complexity (Krugman 1962).

Marketers can see clear value in understanding how consumers' valuations of events change with experiential preparation. Consider promotional trailers for movies. Clearly, movie trailers serve as part of the firm's promotion strategy designed to increase the likelihood of ticket purchase. However, the effect of trailers on subsequent enjoyment is not completely understood.

Numerous other examples exist where promotional materials that are designed to increase purchase rates may themselves lead to downstream positive impacts on satisfaction. Before a new show, art galleries often send patrons a postcard containing a picture of an original artwork that will be displayed; travel tour companies routinely use brochures describing the different places a bus tour will take to an exotic location, and on-line music sites offer short clips of songs. Clearly these promotional materials are designed to entice purchase, but the effect that these forms of advertisement have on eventual experiences of events (e.g. enjoyment of a painting, foreign travel, or music) has seen relatively little research.

This strategy of firms encouraging experiential preparation is even clearer after a purchase decision has been made. Consider operas that start with an overture, an event that serves to preview the melodies and themes the audience will be experiencing throughout the performance. While the positive effects of a sample of music on understanding and comprehension seem obvious, very little research has sought to

examine how these pre-experiences of an event lead to increased satisfaction for the event itself.

The theory presented in this dissertation suggests that all of the mentioned strategies may increase the value consumers place on an experience. Specifically, this dissertation suggests that experiential preparation before an event changes the subsequent value of the experience itself. This happens because the preparation changes how experiences feel and, in essence, are experienced.

The question, "How does advertising and promotion change the eventual experience of a consumption event?" suggests that advertisements, aside from being informational or persuasive, are also transformational. Transformational advertising is defined by the American Marketing Association as "the advertising that associates product usage with certain feelings, images, or meanings that then transform the experience of using the product" (AMA online dictionary). Puto and Wells, (1984) originally introduced this concept, stating that these psychological characteristics are typically not associated with "the brand experience to the same degree without exposure to the advertisement…Advertisements in this category 'transform' the experience of using the brand by endowing this use with a particular experience that is different from that of using any similar brand." In other words, transformational ads change the experience of consumption beyond what would occur absent the advertisement (Puto and Wells 1984). Experiential preparation describes a parallel mechanism where preparing for events is a transformational device that changes how the subsequent experience feels.

1.6 Experiential Preparation versus Mental Simulation

Mental simulation is defined as an imitative representation of real or hypothetical events. It includes rehearsals of likely future events, replays of past events that can be "highly functional for self regulation by providing an explicit vision of the future and enabling the person to construct a pathway for getting there" (Pham and Taylor 1999). Mental simulation is akin to experiential preparation in that both theories describe ways of preparing for a future event. Mental simulation, however, is generally concerned with objective task performance, while experiential preparation is concerned with affect.

Research in mental simulation has divided simulation into two types. In process simulation, simulators imagine themselves undertaking the steps necessary to achieve a goal (e.g. filling the car with gas, getting on the interstate, exiting the interstate at the right exit) whereas in outcome simulation, a simulator imagines the final outcome and its associated feelings (e.g. smiling because one arrived at his destination). It has been demonstrated that process simulation is more effective than outcome simulation in reaching a desired goal (e.g. a high mark on a exam) because it leads people to visualize the steps and effort necessary to achieve a goal that might otherwise not have been realized (Oettingen and Mayer 2002; Pham and Taylor 1999; Rivkin and Taylor 1999; Taylor and Schneider 1989). Finally, in consumer research Escalas and Luce (2003, 2004) show that process-focused ads can more effectively increase intentions to purchase compared to outcome-focused ads.

Mental practice (Driskell, Copper and Moran 1994) is a similar construct to mental simulation that is generally concerned with an imaginative simulation of a physical experience (e.g. playing the tuba). Experiential preparation is distinct from mental simulation in that experiential preparation is defined as the act of pre-experiencing a larger event by overt processing of the future event. Imaginative simulation is not an experiential preparation tactic because it does not consist of overt processing. The DVD viewer imagining himself watching the movie is not engaged in experiential preparation. Further, for tasks with clear goals that also contain an affective component (e.g. solving a crossword puzzle), mental simulation and mental practice examine how to perform the task better while experiential preparation asks how to enjoy the task more.

1.7 Experiential Preparation versus Mere Exposure

Experiential preparation can be seen as an extension of the mere exposure effect (Zajonc 1968) whereby repeated exposure to a stimulus causes an increase in liking for the stimulus. For reviews of typical mere exposure experiments, see Harrison (1977) and Bornstein (1989). Mere exposure is often linked to "dissipation of neophobia," the fear of novel experiences. Uncertainty is an aversive state because unfamiliar stimuli are not known not to be harmful. Exposure thus reduces the generally disliked state of uncertainty (Berlyne 1970). Mere exposure has been shown to arise from a two-step process where exposure leads to fluency, which in turn influences liking (Lee 2006; Whittlesea and Williams 2001).

Previewing part of a stimulus may be thought of as a form of exposure. Two important differences are noteworthy, however. First, unlike studies in mere exposure, experiential preparation measures change in liking for an experience from the pre-experience of an event – not the change in liking from repeated exposure to the entirety of the stimuli. Pre-experiencing an event, in this sense, may be thought of as an extension of the mere exposure effect wherein exposure is defined as exposure to a smaller part of the larger experiences. Second, in mere exposure experiments, participants are typically exposed to "simple" stimuli such as a few notes or foreign characters (Bornstein 1989) rather than affectively rich experiences such as stories or films, as examined in this dissertation. While it is very likely that mere exposure accounts for part of the effectiveness of experiential preparation, it is possible to estimate the impact of mere exposure by contrasting studies where the experiential preparation is an abstract compared with seeing an actual scene or reading from a story.

Since research in mere exposure typically examines repeated exposure to the same stimulus, a mere exposure model of the preparation effect would predict that the more congruent the preparation is to the experience, the greater would be the preparation effect (Lee and Labroo 2004; Whittlesea 1993). Across studies, I find little evidence to support this. Most specifically, in study two, participants prepare for films by reading text previews and in study three, participants prepare for films by viewing 20-second previews taken directly from the film. According to mere exposure, the latter experiment should produce bigger effect sizes than the earlier experiment. This, however, was not found because the effect sizes are comparable. In study two, there were two experiential

preparation conditions, and both had an almost identical gain in enjoyment of the films. The Cohen's-d calculated from the F-scores of the planned contrasts is about .37 for both contrasts (each experiential preparation condition compared to the no-experiential preparation control condition). In study three, which used the more congruent video previews, the Cohen's-d associated with the preparation effect is .44. Both of these figures are well within the range of a small to medium effect size (Cohen 1998).

1.8 Experiential Preparation and Subjective Well-Being

The notion that experiential preparation may lead to subsequent changes in the affective value of events is related to work in subjective well-being (Kahneman, Diener and Schwarz 1999). Subjective well-being is concerned with how people evaluate their lives and the experiences that bring about pleasure (Diener, Suh and Oishi 1997). In an exploratory review of this field, Hsee and Tsai (2006) separate the traditional economic view of how one can increase his happiness for an external stimulus (i.e., acquire more of it) from what they term "hedonomics." Hedonomics describes the practice of increasing one's happiness with an experience by optimizing the relationship with this stimulus and other external stimuli. Just as in economics, in hedonomics the consumer strategically seeks to increase happiness. However, unlike in economics, these strategies involve external mechanisms. Numerous such strategies have been documented. Consumers may try to integrate the experience with another experience so that the bundle of experiences brings the most happiness (Thaler 1985). Similarly, they may try to schedule

the experience so that it arrives at a point in a sequence where the series of experiences brings an optimal level of pleasure (Loewenstein and Prelec 1993) or postpone an event so that they can derive pleasure from anticipating the event (Elster and Loewenstein 1992; Nowlis, Mandel and McCabe 2004).

Experiential preparation is another way in which consumers can strategically increase their pleasure from an experience. It is, however, unlike strategies of bundling, sequencing, integration and delay the well-being literature describes. All these mechanisms describe ways in which the pleasure associated with an event involves mechanisms external to the experience. For example, anticipating a positive event is itself positive. Well-being suggests that overall utility is increased by the added period of anticipation but makes no prediction about the change in satisfaction for the actual event.

2. Demonstrating Experiential Preparation and Theory

2.1 Demonstrating the Preparation Effect and Framework for the Theoretical Chapter

In this section, I first discuss two studies that demonstrate the preparation effect. In both of these studies, I show that experiential preparation in advance of watching a movie leads participants to enjoy the movie more than when participants do not prepare. After these two demonstrations, I provide an overview of five theoretical mechanisms that I have explored as key theoretical drivers of the preparation effect. Each of these mechanisms is discussed in detail in the subsequent five sections.

Example 1: Movie Club (Study 1)

As an investigative entry point into examining the effects of experiential preparation, I ran a movie club study outside the laboratory. This study has two goals. The first goal is to demonstrate experiential preparation in a realistic setting in which the preparation occurs over time. The second goal is to test whether repeated preparation has a greater effect than a single preparation. To achieve these goals, I formed a documentary feature film club where participants were invited to watch full-length movies. During the months prior to the time of this study, several, feature length documentary movies drew huge audiences and generated much discussion. It seemed reasonable to assume that a documentary movie club would excite and engage willing participants. This study is introduced here and in greater detail in the Studies Chapter.

Participants, Methods and Procedure

Participants watched a total of four documentary films once a week over a one-month period. Participants were recruited via advertisements through campus fliers and e-mail. Participants were promised $5 for each week they attended the club. A total of fifty-nine participants attended at least one week of the film club. Because attendance was not mandatory (self-selection issues are discussed in the Studies Chapter), not all participants attended every film. In total, there were 149 movie viewings.

A mixture of undergraduate, graduate and professional students, staff members and community members signed up to participate in the study. The movies were selected to meet the following criteria. First, films were sought that few potential participants would have previously seen or heard of. Second, the films had to have general appeal rather than cater to special interests. I therefore chose documentaries with compelling character development over issue documentaries to avoid polarizing the audience. Finally, films had to be from approximately the same time period so that they were cohesive as a set. Four documentary films from a film festival met these criteria and were chosen for the study. A description of the movies is given in Table 5 of Chapter 3.

For the movie club study, experiential preparation was implemented by allowing participants to read summary information by e-mail in advance of the film. This summary information was taken directly from the film festival's description of each movie. Here is an example of such information:

> "Shadow Boxers," 1999, USA. Directed, produced and edited by Katya Bankowsky. 72 min.

> The flashy, music video style of this documentary belies the affecting story of women's boxing champion Lucia Rijker, which gradually emerges as its centerpiece. A formidable fighter, Rijker is also a strikingly serious and spiritually centered woman, qualities which fly in the face of the boorish and boastful norm established by men's boxing. Woven throughout are the narratives of other women boxers, both amateur and professional. The star, however, is Rijker, and her commitment to becoming a world champion on her own terms.

Each week, participants randomly served in one of three experimental conditions. First, participants in the control condition only had access to the film's title and summary upon entering the theater. Thus, they would have the same information as the other participants but had very little time to think about it. Second, there was a standard experiential preparation condition in which participants were e-mailed the film's title and summary two days before the film. Third, there was an extra experiential preparation condition in which participants received an identical e-mail two days before the film plus an additional e-mail four days before the film. This earlier last e-mail also contained the movie's title and summary information giving participants in the extra experiential preparation condition additional time to prepare for the film.

On movie nights participants came to the theater and watched the movies as a group. After the movie, participants were asked to rate how much they liked the movie on an 11-point scale anchored on -5 ("One of the worst movies") and 5 ("One of the best movies") with a midpoint of 0 ("Average").

Results

Across all four films, when participants were in the experiential preparation conditions, they rated the movies as more enjoyable than when they were in the experiential preparation control condition (M's = 2.76, 2.00; $F[1,85] = 8.11$, $p = .0055$) with no effect from the extent of experiential preparation. Participants in the extra experiential preparation condition rated the movies as more enjoyable than participants in the no-experiential-preparation control condition (M's = 2.61, 2.00; $F[1,85] = 4.50$, $p = .0368$). Participants in the standard experiential preparation condition also rated the movies as more enjoyable than participants in the no-experiential-preparation control condition (M's = 2.89, 2.00; $F[1,85] = 7.66$, $p = .0069$). There were no differences between the two experiential preparation conditions ($F[1,85] < 1$). The figure below illustrates that by engaging in experiential preparation, participants were better able to enjoy the films.

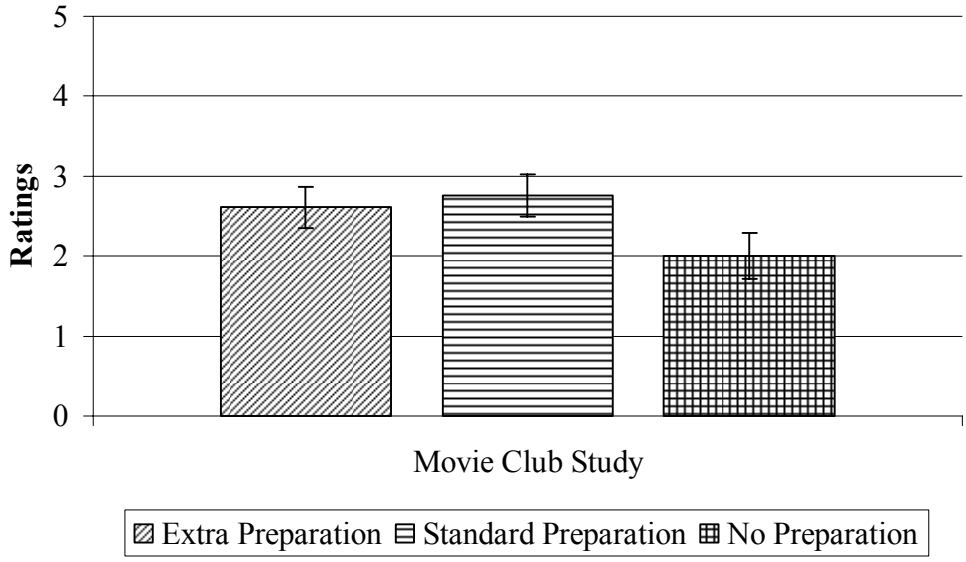

Figure 1: Experiential Preparation Increases Liking for Events as Shown in Movie Ratings from the Movie Club (Study 1)

While the movie club study provided compelling evidence for the preparation effect, several fundamental drawbacks led to the laboratory designs of the nine additional studies reported in this dissertation. First and foremost was the issue of self selection. Because participants received the summary ahead of time, they may have chosen to attend a movie because they liked the summary or not to attend because they did not like the summary. While I present an argument for why I believe self-selection did not occur in the Studies Chapter, the issue of self selection is best resolved in a laboratory setting where everyone evaluates all experiences. Second, the movie club was logistically difficult to conduct, requiring over one month to recruit participants and one additional month to run. The logistics of the study (all participants watching the same movie together) made it impossible to separate order effects from film effects. Without the requirement of having all participants view every movie, it was also not possible fully to

manipulate additional factors (such as cognitive load and expectations) within participants. This left little room for understanding the key theoretical drivers of the preparation effect in such a study, and I accordingly ran the remainder of the studies in the laboratory. The follow-up studies in the laboratory provide more evidence for the preparation effect and enable tests of moderators and mediators of the effect.

In the rest of this section, I highlight one additional example to document the preparation effect once more. After this second demonstration, I will summarize the remainder of this chapter and will discuss the theoretical drivers of the preparation effect. Full details of the studies can be found in the Studies Chapter, and an overview of the studies can be found in §3.1.

Example 2: Short Films with Video Previews Study (Study 3)

The short films with video previews study replicates the positive effect of experiential preparation in the laboratory. In this study twenty-nine participants viewed four short films, two in an experiential preparation condition in which they viewed a 20-second video preview of the film and two in a control (no-experiential-preparation) condition. After each film, participants rated how much they enjoyed watching the film on an 11-point scale question: "How much did you enjoy watching the film: In terms of enjoyment the film was…" anchored on -5 ("Very, very bad") and +5 ("Very, very good") with a 0 ("Neutral") midpoint. Replicating the results from the movie club, when participants prepared for films by viewing video previews, they enjoyed the films more

than when they were in a no-experiential-preparation control condition (M's = 3.21, 2.50; F[1,80] = 5.30, p = 0.033). (See figure below.)

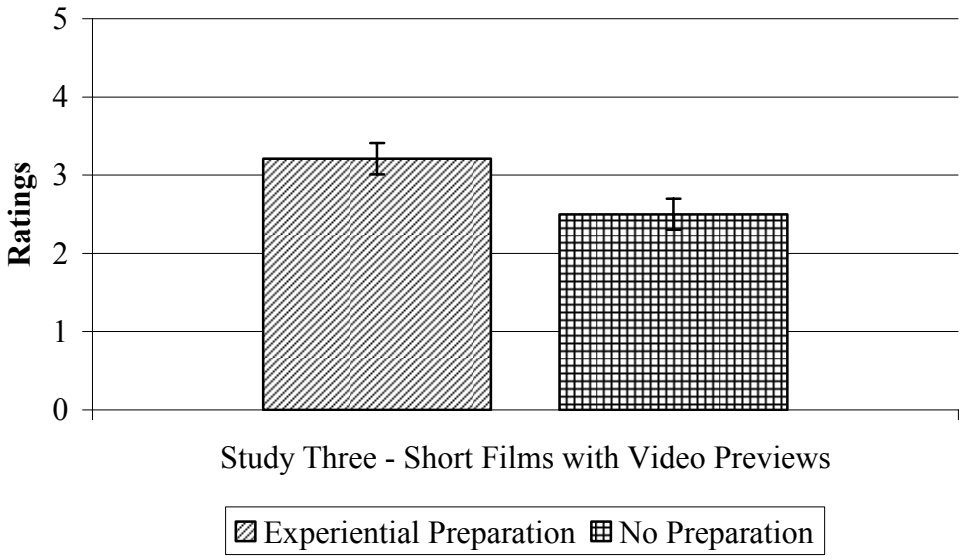

Figure 2: Experiential Preparation Increases Liking for Events as Shown in Movie Ratings from the Short Films with Video Previews Study (Study Three)

Theory Overview

The remaining eight studies share many commonalities with this short film experiment. All nine of the studies involve narratives in which participants viewed films (studies two through seven) or read short stories (studies eight through ten). Unless specified, all participants served in each experimental condition (e.g. experiential preparation or control) at least once, and both the ordinal position of a narrative and the pairing of a narrative to a particular condition were randomized across respondents.

The first two demonstrations of the preparation effect raise important questions. For example, why does the preparation effect occur? To answer this question, I discuss

the results of the ten studies thematically around five main theoretical mechanisms that may drive the preparation effect. First, I show that fluency mediates the preparation effect. That is, experiential preparation increases subjective feelings of fluency, which in turn fully account for the gain in enjoyment for the experiences. I then demonstrate that background positive moods moderate the preparation effect. In particular, the preparation effect is strongest for participants high in positive moods and can be negative where a positive mood is missing.

Following the discussion of fluency and background positive moods, I discuss a number of mechanisms that have the potential to moderate the preparation effect. First, I find that stating expectations seems to play a role in reducing the preparation effect, though the evidence is somewhat inconclusive. Second, I present null results for two additional mechanisms, schema and self-referencing, both of which were earlier hypothesized to moderate the preparation effect.

The table below provides a roadmap to the remaining theory parts of this chapter. The first column in the table contains the five theoretical mechanisms and lists the dissertation section where they are discussed in detail. The middle column contains general predictions of the theory. The final column contains the study or studies in which these predictions were examined and the appropriate measure for testing the each prediction.

Table 1: Summary of Theories that will be Examined as Determinants of The Preparation Effect

Theoretical Mechanism	**Prediction of Theory**	**Measure and Study / Studies**
Fluency (§2.2)	Increases the perception of comprehension and understanding of the experience.	Added measures to test for mediation of fluency (studies eight and ten).
Positive Moods (§2.3)	Increases broader thinking about preparation information.	Mood manipulation to increase positive moods and mood scale to test for moderation (study ten). Additional analysis of time spent on preparation to find support for broadening.
Expectations (§2.4)	Dampen Preparation Effect.	Additional questions where expectations are explicitly stated (studies three through six).
Schema (§2.5)	Reinforcement of schema increases positive attitudes.	Additional Experiential Preparation Condition (study one – Movie Club).
	Leads to better actual comprehension and understanding.	Memory Test: Factual Recall (study three and four). Memory Test: Ability to recreate temporal order of scenes (study six).
	Attitude Polarization.	Examine if the preparation effect is greater for better-liked films / stories (meta-analysis).
Self-Referencing (§2.6)	Increased liking for an experience leads to greater involvement of self.	Protocol analysis for self-related terms (studies one through four).
	Self-related experiential preparation should enhance the preparation effect.	Different (Self/Other) experiential preparation conditions (study two).

2.2 Fluency Mediates the Preparation Effect

This section provides evidence that fluency mediates the preparation effect. This evidence for mediation comes from study eight and is replicated in high-positivity participants in study ten.

Fluency is broadly defined as ease in processing new information (Schwarz 2005; for reviews see Jacoby, Kelley and Dywan 1989; Schwarz 1998). In an excellent conceptualization of fluency, Reber, Fazendeiro and Winkielman (2002) reconcile different characterizations of fluency that share many similar traits. First, "perceptual fluency" is defined as "the ease of low-level, data-driven operations that deal primarily with surface features of the stimulus" (Winkielman et al. 2003). When a stimulus is high in perceptual fluency, it is perceived with greater accuracy and speed. Second, "conceptual fluency" is defined as "the ease of mental operations concerned with stimulus meaning and its relation to semantic knowledge structures" (Reber, Schwarz, and Winkielman, 2004 citing Whittlesea 1993). When a stimulus is high in conceptual fluency, it becomes easier to integrate the stimulus with exciting knowledge. Both characterizations of fluency suggest that, as feelings of fluency are increased, feelings of familiarity are also increased.

In line with previous work (Reber, Fazendeiro and Winkielman 2002; Winkielman et al. 2003), I use a more general term, "fluency," to refer to the commonalities between both notions of fluency. Broadly, all notions of fluency find that, as fluency with respect to a stimulus is increased, the positive affect associated with that stimulus also increases (Janiszewski 1993; Lee 2002; Zajonc 1998). This occurs because

fluency increases the ability to process and understand stimuli. Applied to experiential preparation, any variable that increases fluency for an experience is likely to increase positive affect for that experience. In this dissertation I demonstrate that the experiential preparation effect is mediated by feelings of fluency. That is, experiential preparation leads an experience to be more fluent and this feeling of fluency fully accounts for the gain in liking associated with the preparation effect.

In consumer research, downstream consequences of fluency have been well studied. For example, a series of studies (Novemsky et al. 2006) manipulate perceptual fluency by degrading the visual clarity of options in a choice set. This makes the choice more difficult and leads consumers to defer choice and exhibit more context-related compromise. In another series of studies manipulating conceptual fluency, Lee and Labroo (2004) find that consumers have more positive attitudes toward a product when they are previously exposed to a closely related product (e.g., viewing a mayonnaise ad before a target ketchup ad).

It is important to note, however, that direct fluency effects have been difficult to measure. Fluency has typically been studied by manipulating fluency (e.g. using degraded fonts or different story boards) rather than asking participants about how easy a stimulus is to process (Winkielman et al. 2003). Subjective feelings of fluency are conceptualized as existing at the periphery of conscious awareness. As a result, if attention is brought to the source of fluency, fluency effects can be nullified, and positive affect is attributed to the fluency itself (Clore 1992; Jacoby, Kelly and Dywan, 1989; Schwarz and Clore 1996). For example, in a study by Winkielman et al. (2003)

participants listened to background music during a standard fluency task in which they were primed with words before being asked to evaluate target pictures. Fluency suggests that the word primes generally increase liking for the target pictures. This is exactly what the researchers found in a standard fluency condition. However, Winkielman et al. added a misattribution manipulation where one group of participants was told that their reactions to the pictures might be influenced by the background music. While the no-misattribution group of participants showed fluency effects (increased liking for the pictures), the misattribution group of participants did not show fluency effects. (They failed to report increased liking for the pictures.) For these participants, their feeling of fluency during the experience, rather than the experience itself, served as the basis of judgment.

Demonstrating That Fluency Mediates the Preparation Effect: Short Stories and Fluency (Study Eight)

In study eight, I show that it is possible to measure fluency towards stories and demonstrate its critical role in mediating experiential preparation. This result is importantly not dependent on the order of repeated measures, implying that sensitization to the construct does not cancel its effect. To measure fluency, I use a check-off task that industry employs but is far less common in psychological studies.

Fifty-two participants took part in this experiment. Participants read six short stories selected from earlier work by Tal and Huber (2006). The short stories varied in length and took, on average, between three and six minutes to read.

Experiential Preparation

For three of the short stories, participants served in an experiential preparation condition. For the other three stories, participants served in a no-experiential-preparation (control) condition. In the experiential preparation condition, participants read a short preview (approximately 1-2 paragraphs) from an early part of the text and completed a preparation task where they answered the following free response question: "Please write a brief paragraph depicting what you imagine the full story will be like. What will the story be about? What will take place?" After the experiential preparation, participants read the entire story from the beginning. For the other three stories, participants simply read the stories in a no-experiential-preparation control condition.

As with other studies, the pairing of a story to the experiential preparation condition or no-experiential-preparation control condition was randomized by experimental design. For each participant, the computer randomized the particular ordinal position of a story.

Dependent variables

Rating: Immediately following the story, participants rated their enjoyment of the experience using an 11-point scale question: "How much did you enjoy watching the film: In terms of enjoyment the film was…" anchored on -5 ("Very, very bad") and +5 ("Very, very good") with a 0 ("Neutral") midpoint.

Fluency Indices: Following the ratings question, participants were given the adjective check-off task that served as the basis for their fluency indices. The task is described below:

Measuring fluency through an adjective check-off task:

To limit reactive evaluations that would draw participants' attention to the feeling of fluency and report less liking for subsequent stories, I created a task in which fluency could be assessed in a novel way with minimal direct attention to the particular construct. For this task, participants were presented with 24 words and phrases and were asked to check boxes next to each word or phrase that they felt could be used to describe the story. (Additional procedural details can be found in the Studies Chapter.)

I included in the set of 24 words and phrases key adjectives that strongly relate to fluency. For a short story, the above-mentioned literature suggests that fluency is related to the ease or difficulty in which a story could be read and understood as well as judgments about the quality of its writing. I thus included phrases directly measuring these dimensions.

Feelings of fluency are also often associated with the ease and error-free progress towards a goal (Winkielman et al. 2003). This suggests a fluent experience should feel "smooth" as opposed to "rough" and that the experience should be "flowing" rather than "abrupt." Thus, I included these four terms in the check-off procedure. Finally, feelings of fluency have also been shown to lead people to describe an experience as "pleasant" (Lee 2007), and I accordingly included this term as well as "unpleasant" to test for

feelings of fluency. (The table below contains the full list of fluency-related words and phrases.)

In addition to fluency related words, I also included words that relate to an affective-based evaluation of the story that should not relate to feelings of fluency. These terms were: "Interesting," "Fascinating," "Creative," "Pleasant," "Good," "Exciting," "Dull," "Uninspiring," "Unpleasant," and "Bland." Finally, I included three additional items as exploratory terms that could relate to either fluency or evaluations. These terms were "Absorbing," "Frustrating" and "So-So." These three may all describe feelings of ease (or difficulty) while reading the story (i.e. fluency) or may be used to evaluate the story itself.

The table below summarizes the 24 words used for the adjective selection task.

Table 2: Words and Phrases for Adjective Check-Off Task

Fluency Related Items	Evaluative Related Items	Additional Items
Easy to Understand	Interesting	Absorbing
Easy to Read	Creative	So-So
Good Writing Quality	Good	Frustrating
Smooth	Exciting	
Flowing	Fascinating	
Pleasant	Bland	
Hard to Understand	Frustrating	
Difficult To Read	Dull	
Bad Writing Quality	Uninspiring	
Rough		
Abrupt		
Unpleasant		

Results

Index Creation: To create indices for fluency and for evaluative affect, I ran a principal components factor analysis with varimax rotation on participants' responses to the adjective check-off list using the binary variables associated with each of the twenty-four words and phrases from the task. The factor analysis showed that twenty of the twenty-four items loaded uniquely (loadings with absolute values less than .40 are omitted from the results) on four separate factors. The four factors are orthogonal, and the covariance scores between the factors are all zero. (See tables 28-30 in Chapter 3.)

Factor one contains items that all relate to the presence of fluency and has been labeled "high fluency." Factor two contains items that all relate to the lack of fluency and has been labeled "low fluency." Factor three contains positive evaluative terms and has been labeled "positive evaluation." Factor four, labeled "negative evaluation," contains negative evaluative items, as well as a negative loading of "interesting."

I combined the two fluency factors to form a fluency index, providing convergent validity for the fluency index as well a divergent validity because the evaluative index is orthogonal to the fluency index. (The correlation between the two fluency factors is .-40 and the correlation between the two evaluative factors is -.46. The correlation between the two indices is .39.) The figures below summarize the results of the factor analysis and the coefficient alphas associated with the four components and the two indices. The first figure displays the results for the fluency construct build:

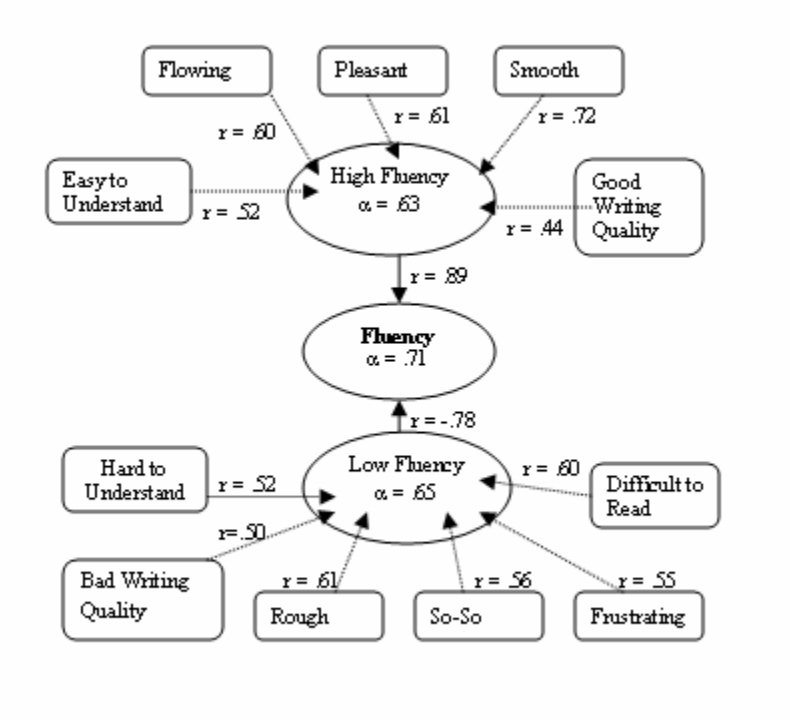

Figure 3: Fluency Construct Built from Adjective Check-offs

The second figure displays the results for the affective evaluation construct build.

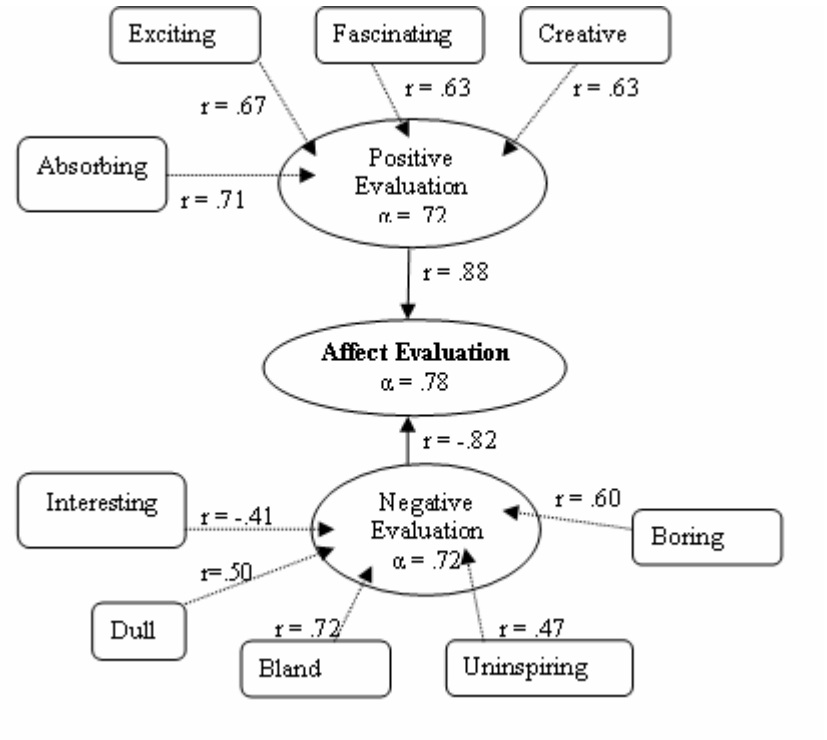

Figure 4: Affect Evaluation Construct Built from Adjective Check-offs

Testing Mediation of Fluency

To test for mediation, I ran a series of regression models following the Baron and Kenny (1986) procedure. I find that the fluency index mediates the preparation effect. The full series of tests are reported in the Studies Chapter, and the figure below highlights the mediation result.

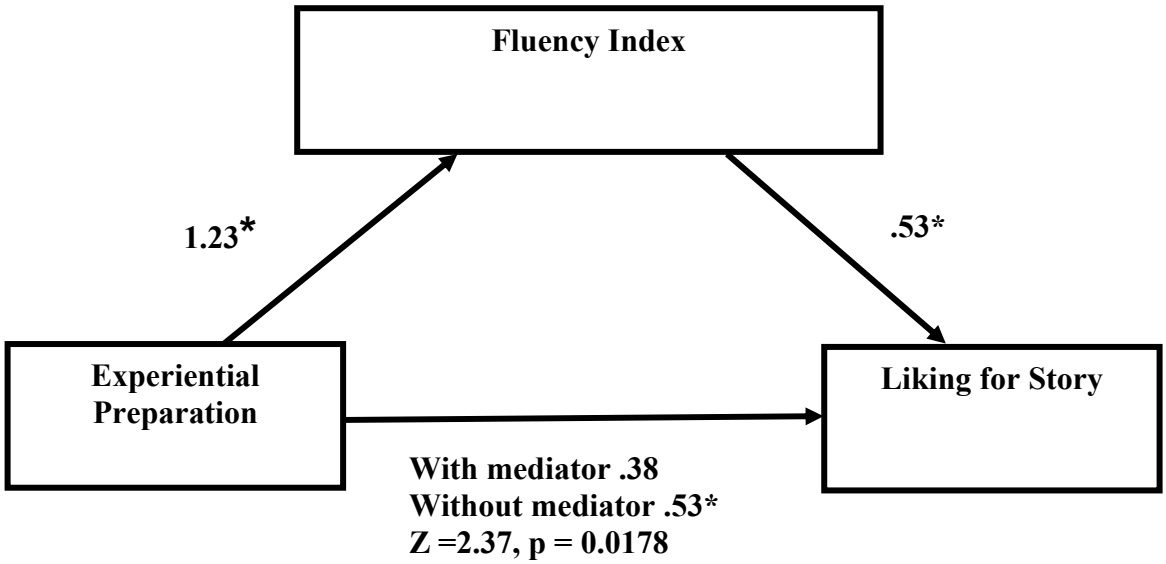

Figure 5: Fluency Index Mediates the Preparation Effect
The numbers next to the arrows represent beta-coefficients
(*) refers to significance at $p < .05$

Summary:

As demonstrated here, the fluency index mediates the preparation effect. In addition, in study ten, I replicate the fluency mediation among high-positivity participants.

2.3 Positive Moods Moderate the Preparation Effect

In the previous section, I found strong evidence that fluency acts as a mediator of preparation effect. Ratings and fluency were measured right after a participant read the story and asked about attitudes towards the story itself. Quite separately from affect toward the story as measured by ratings, in this section I discuss how background positive moods moderate the preparation effect. Such background moods are both manipulated and measured before participants read any stories. Thus, they are distinct from affect toward the story. To accomplish this, I review the results of study ten. While the manipulation of positive mood did not alter participants' positive mood, the measure of participants' positive mood moderated the preparation effect.

Why Positive Moods Moderate the Preparation Effect

The most direct evidence that positive moods might play a role in moderating the preparation effect comes from Barbara Fredrickson's "broaden and build theory of positive emotions" (Fredrickson 2001). The "broaden and build" theory posits that positive emotions build personal resources that range from physical, social, and psychological to intellectual. More specifically, various positive moods such as joy, pride and interest all have effects of "broadening people's momentary thought action repertories, widening the array of the thoughts and actions that come to mind" (Fredrickson 2001).

Central to experiential preparation, the "broaden and build" theory suggests that positive emotions promote discoveries of novel and creative ideas. Since the preparation effect requires one to be open to enjoying a story that one has not experienced before, being more open should be associated with larger gains from experiential preparation. If so, positive moods should lead to bigger gains from experiential preparation, and their lack should inhibit gains from experiential preparation. Consistent with the "broaden and build" theory, lack of positive moods should lead to an inability to think and process information more broadly, which may lead to decreases in liking when preparing for an event.

The "broaden and build" theory is also similar to work in positive affect by Alice Isen and her colleagues. Isen (2001) summarizes these findings:

> "[The] effects of positive affect on problem solving, flexibility, and innovation were observed in a wide variety of applied settings and among diverse populations. For example, this effect of happy feelings on flexible thinking was studied in the literature on consumer decision making, extending to the way consumers think about and decide to purchase and use products and services."

Where Alice Isen uses the word "affect," I use the more general term "mood" to capture the commonalities between all types of "happy" feelings. Positive moods generally lead people to be more open to experiences, often increasing cognitive capacity and motivation (Isen 2001). Positive affect has also been shown to stimulate cognitive elaborations and diversify thoughts in response to a stimulus (Isen et al. 1985; Kahn and Isen 1983).

Together, these findings by Fredrickson and Isen suggest that positive mood and affect may enhance preparation effects because positive moods lead people to be more

open to enjoying experiences. In other words, as part of being prepared to enjoy experiences, the consumer (DVD watcher, short story reader, etc.) must be intrinsically motivated to enjoy the experience and be ready to process the preparation information. Otherwise, lack of positive moods should lessen the consumer's ability to process preparation information.

The theory on positive moods leads to two straightforward hypotheses. First, there should be an interaction between positive mood and experiential preparation, reflected in a greater gain from experiential preparation in people high in positive moods than in people low in positive moods. Second, as predicted by broadening, people in positive moods should spend greater time expanding on preview information then those not in positive moods. Study ten supports both of these hypotheses.

I ran two separate studies, which I labeled replicate A and replicate B of study ten. The two studies were identical except for differences in the mood manipulation and in the four short stories used as stimuli. Sixty-nine participants took the initial study (replicate A), and one hundred eight participants took the replicating study (replicate B). All the reported results hold across the two replicates, and the analysis presented here combines the two replicates. I validate the combination of the two studies in the Studies Chapter.

Procedure Summary: Both replicates used the same design. Each aspect of the design will be detailed below. At the start of the study, participants were given a mood manipulation task. Following the mood manipulation task, participants' moods were measured. Then participants completed the focal part of the study in which they read

four short stories. Participants were in an experiential preparation condition for two of the stories and in a no-experiential preparation control condition for the other two stories. After each story, participants responded to the ratings question, the adjective check-off task and the free response question. After all four stories, participants completed the mood measure for a second time.

Mood Manipulation: At the start of the study, in an attempt to manipulate moods, participants were given a "tell a story" task. This task was designed to induce happy or less happy moods. In replicate A of the study, participants were randomly assigned to either a "happy story" condition or an "angry story" condition. Replicate A participants responded to the following task: "We would first like you to spend five minutes writing about an event from the recent past that made you very [happy / angry]. Please go in to detail and focus on why you felt [happy / angry] and discuss what these feelings felt like." In replicate B of the study, participants were randomly assigned to either a "very happy" story condition or an "ordinary day" story condition where the goal was to induce a neutral mood. Participants in the "ordinary day" (labeled control) condition responded to the task: "We would first like you to spend five minutes writing about your ordinary day tasks. Think about what an ordinary day is like and write about your ordinary activities."

Mood Measure: To measure participants' moods, I created a modified version of the original PANAS scale by Watson, Clark and Tellegen (1998). To examine positive moods I selected three positive items that connate high arousal: "Enthusiastic," "Inspired" and "Attentive." In line with other research (Kim and Hatfield 2004; Wright

and Straw 1999), I also used the word "pleased" as a positive affect item. As a fifth positive affect item, I included the word "Involved" instead of the original PANAS's "Interested" because involvement better conveys openness to the experience. In addition to the five positive items, I used five high arousal negative affect items. Four of these were selected directly from the original PANAS. These were: "Upset," "Hostile," "Irritable" and "Distressed." In addition, I included the word "Vengeful" because vengefulness may indicate a degree of anger towards a target person or experience, and I could not use "angry" from the PANAS because that might have caused demand effects from participants in the "tell an angry story" condition.

The PANAS was first administered right after the "tell a story" task and was administered a second time at the end of the experiment. Each item in the modified PANAS was presented within the following question: "Right now, do you feel: ---?" Participants responded using a 5-point scale question with the following terms: "1) Not At All," 2) "A Little," 3) "Moderately," 4) "Quite a Bit" and 5) "Extremely." Each of the ten items was randomly ordered.

All the reported results in this section discuss the PANAS from immediately after the "tell a story" task. The follow-up PANAS from the conclusion of the experiment is a less clean measure since moods measured at that time may be affected by reactions to the stories and thus may not capture background moods as effectively as the first measure. In the Studies Chapter, I report additional moderation analyses showing the results do not change depending on the time mood is measured.

Stories and Ratings: As discussed in detail in the Studies Chapter, after the "tell a story" task and the PANAS measure, all participants read and evaluated four short stories. For two of the four short stories, participants were in experiential preparation conditions in which they were given a brief (one-to-two-paragraph) preview of the story and were asked to "write a brief paragraph depicting what imagining what the full story will be like, what it will be about, and how it will take place." For the other two stories, participants were not given a preview or the subsequent preparation task. Following each story, participants rated their enjoyment of the story using the standard 11-point scale used throughout this dissertation.

Results

PANAS Validation: To validate the modifications to the PANAS scale, I ran a principal components factor analysis on the ten items using varimax rotation. This factor structure includes loadings with absolute values higher than .60. It demonstrates that all five positive items contributed to a positivity factor and that all five negative items contributed to a negativity factor. From these two factors, I created a "positivity" index equal to the sum of participants' responses on the five positive items and a "negativity" index equal to the sum of the participants' responses to the negative items. Both indices have a potential range of 5 to 25. The figure below summarizes the results of the factor analysis and highlights the loadings and alpha levels for each index.

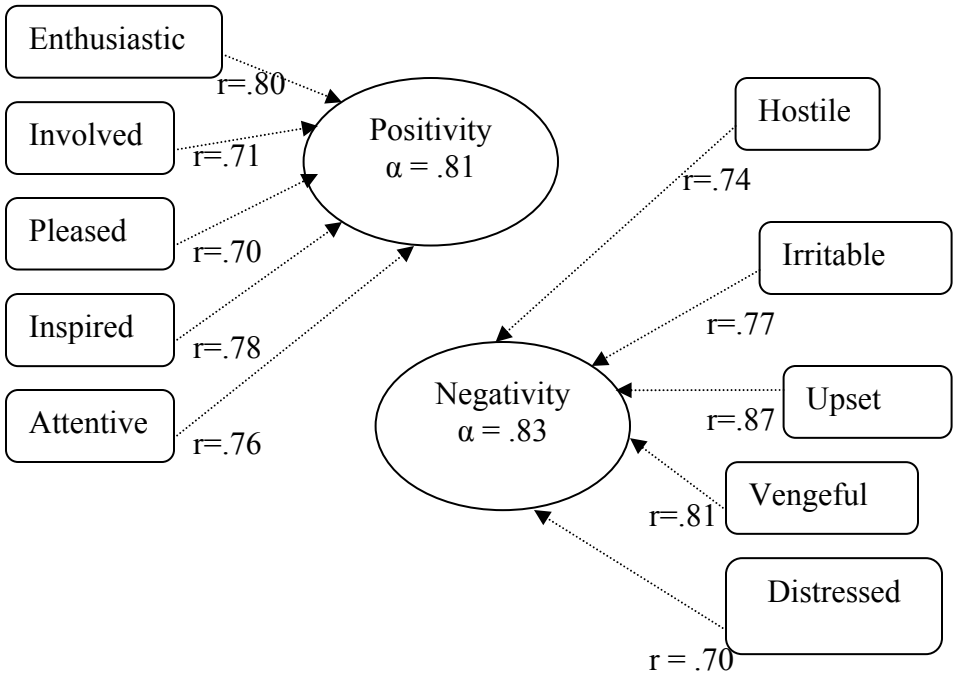

Figure 6: Component Build from Modified PANAS

Mood Manipulation Check – Positivity Scores: The "tell a story" task did not alter participants' positivity index in either replicate A or replicate B of the study. In replicate A of the study, participants' mean positivity index was 14.1 in the happy story condition and 13.8 in the angry condition. This difference is not significant ($F[1,67] = 0.08$, $p = .78$). In replicate B of the study, participants in the very happy story condition had a mean positivity index of 14.0, and participants in the ordinary day task had a mean positivity index of 13.3 ($F[1,104] = 0.08$, $p = .78$). The figure below illustrates these contrasts:

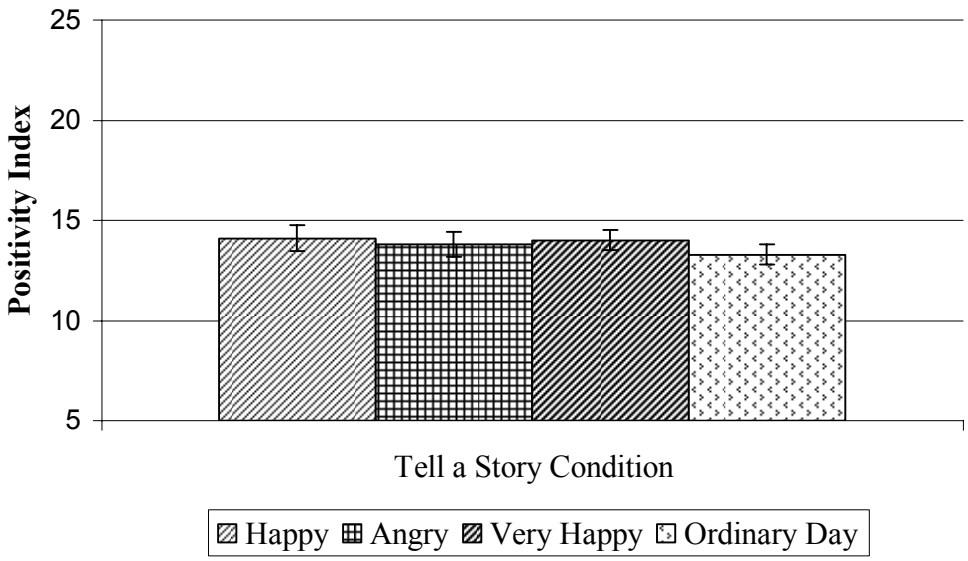

Figure 7: Mood Manipulations Fail to Change Positivity

To account for the lack of results from the manipulation on positivity consistently with research in positive psychology (Diener and Diener, 1996; Diener and Seligman, 2004), it seems that participants had a "positivity offset" so that the mood inductions failed to leave them feeling less positive in the angry and ordinary day conditions. Examples from the written responses illustrate this notion. Stories of anger sometimes included resolution or at the least some sense of no longer feeling angry.

> "Recently, a family member made a very hurtful statement about me. She accused me of being a homosexual and that my Christian lifestyle is a fraud. This has irritated me greatly because I am very serious about my faith in God and living my life according to his will. …. But I have now accepted that my trials are similar to that of Jesus. Because of persecution, he did not perform miracles in his hometown and maybe I might have to take that approach when dealing with members of my extended family."

Second, "ordinary day" stories were fairly positive and described happy lives in themselves.

> "I normally wake up, shower, brush my teeth, wash my face, and check my email. Then I will go to the Blue Express for lunch before going to my first class, which usually starts at 1:15. After class I will typically stop at the Bryan Center Lobby Shop to pick up milk, bread, etc. and go to check my mailbox, as well as go to the ATM if I need to. Then I walk back to my room and relax until dinner. I go out to dinner with friends, then relax for the evening. I will usually do some homework and also watch some TV."

> "On an ordinary day I wake up at around 12:30 PM. Some days I have to go to class. I go for about 4 hours and am done at 5:30. For the rest of the afternoon I do homework, surf the internet, and use Instant Messenger. At about 10:00 PM I go to the gym and lift for about an hour. After my workout I hang out with my friends for a few hours and finish up any homework that is necessary."

Mood Manipulation Check – Negativity Scores: The "tell a story" task did have an effect on the negativity index in replicate A of the study. Participants who were asked to tell a happy story had an average negativity index of 6.9, and participants who were asked to tell an angry story had a negativity index of 10.9. This difference is significant ($F[1,67] = 19.30$, $p < .0001$). There were no differences between the very happy story and the ordinary day story on the negativity index in replicate B of the study (M's = 7.8, 7.4; $F[1,104] < 1$). The figure below illustrates these contrasts:

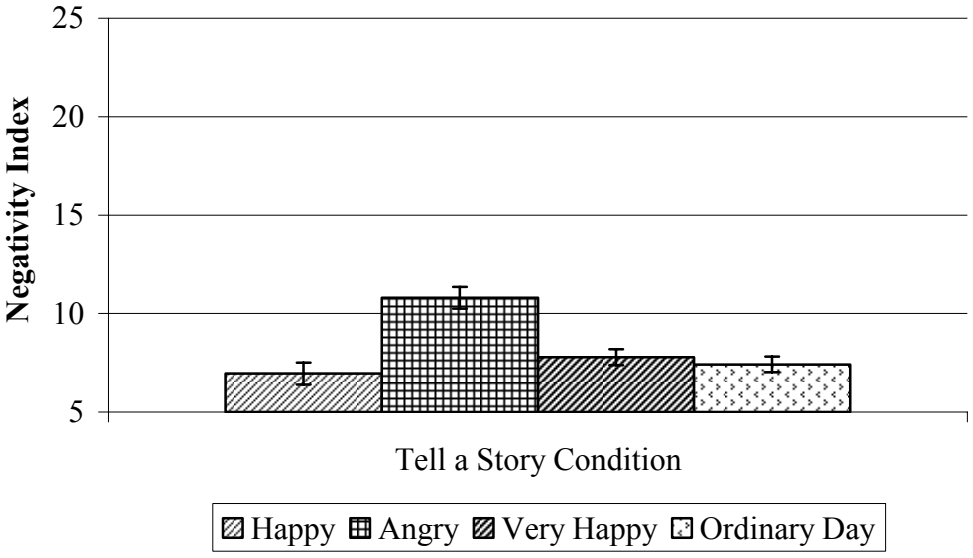

Figure 8: Mood Manipulations Have Some Effect on Negativity Indices

The above analyses show that the mood manipulations did not produce differences in positivity scores in either phase of the study and failed to produce differences in negativity scores in the second phase of the study. Using the measures of positivity and negativity for the remainder of the analyses, however, I do find significant results as hypothesized. In other words, preparation has a significant interaction with measured moods but not with manipulated moods.

Interaction Results

Full PANAS score and negativity index do not interact with experiential preparation

Before examining the positivity score individually, I examined whether the full PANAS score (as calculated by the positivity index minus the negativity index) interacted

significantly with experiential preparation. To test for this, I ran a regression model that predicts ratings as a function of a binary variable associated with experiential preparation, the PANAS score and the interaction between PANAS and experiential preparation. (The effects of a particular participant, story and a story's particular ordinal position were controlled for in the analysis.) As a directional test for the hypothesis that positive moods enhance the preparation effect, the beta-coefficient for the interaction term should be significantly greater than zero. The interaction term was in the predicted direction, but the effect failed to achieve significant levels ($F[1,522] = 1.81$, $p = .179$, $\beta=.034$). Thus, the full PANAS score does not reliably interact with experiential preparation when predicting liking for an experience.

To understand the above result, I examined the negativity index as a separate component. When the negative component of the PANAS replaces the full PANAS in the above model, the beta coefficient and p-value associated with the interaction of mood and experiential preparation drops considerably ($F[1,522] = 0.16$, $p = .688$, $\beta= -0.02$). The negativity index as a separate measure does not interact with experiential preparation when predicting liking for an experience. It is highly likely that the negative items used for the negativity scale (hostility, irritability, etc.) do not apply to the participant population. Tables 35-37 in the Studies Chapter illustrate this fact. For instance, 80% of participants selected the lowest point on the scale when asked if they were feeling vengeful; 84% of participants selected one of the lowest two points on the scale when asked if they were upset, and 88% of participants selected one of the lowest two points on the scale when asked if they were feeling hostile.

Positive Mood Interacts With Experiential Preparation

To examine the moderating result of positive moods I ran the same regression model with the positivity score and with the interaction term of positivity and experiential preparation as a predictor of ratings. As hypothesized, the interaction term has a significant effect on ratings ($F[1,522] = 6.22$, $p = .0148$). The beta-coefficient associated with the interaction ($\beta = .0957$, standard error of beta = .039) demonstrates that the preparation effect increases with increasing positivity.

To visualize these effects further, I created a median split variable on the positivity score. Participants whose positivity score was higher than the median (above 14) are labeled "high positivity" and participants whose positivity score was not higher than the median (14 and below) are labeled "low positivity."

I ran a regression model similar to the one above replacing the continuous positivity score with the median split variable. This model shows the interaction (experiential preparation and the median split on positivity) term's effects on liking for the stories to be significant ($F[1,522] = 10.19$, $p = .0015$). Two planned contrasts associated with the interaction show compelling results. The preparation effect occurs for high-positivity participants (M's = 2.08, 1.48; $F[1,522] = 4.82$, $p = .0286$) but is completely reversed for low-positivity participants (M's =1.15, 1.65; $F[1,522] = 5.63$, $p = .0180$). The figure below demonstrates this interaction:

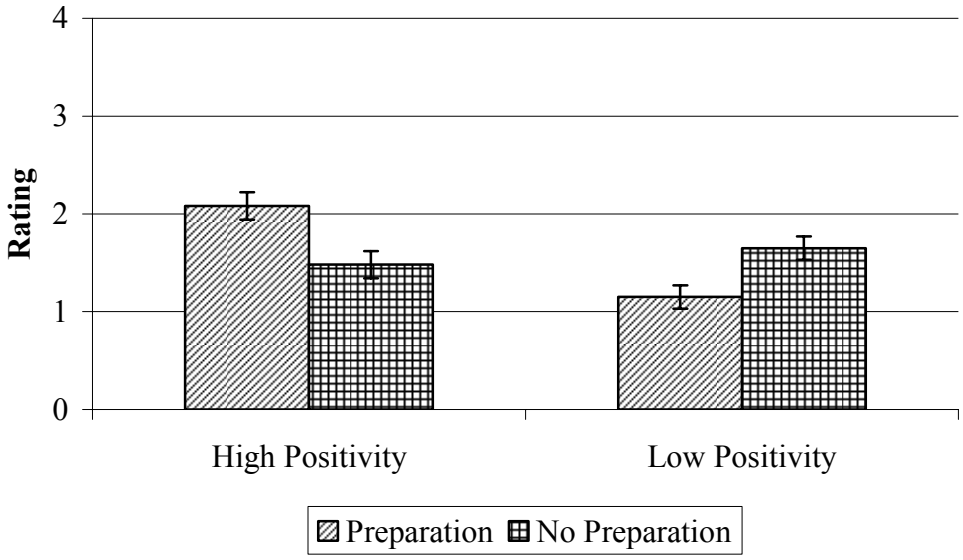

Figure 9: Experiential Preparation Helps High-Positive People but not Low-Positive Participants

Positivity Interaction: "Spotlight Test"

To ensure that the reported interaction using the median split of positivity did not produce spurious results and to generate meaningful interpretations of the coefficients of the interaction term, I ran a "spotlight test" using the methods described by Irwin and McClellan (2001). First, I normalized the positivity scores to create a new variable, labeled "pos-mid" for each participant. Then, I created a variable equal to pos-mid minus 1.0 (labeled "pos-low") and a variable equal to pos-mid plus 1.0 (labeled "pos-high").

I then ran a series of three regression models, all similar to the above model that tests the interaction of experiential preparation and the continuous positivity score. The three models replace the positivity score with pos-low, pos-mid and pos-high respectively and replace the interaction of positivity and experiential preparation with the corresponding interaction of experiential preparation and pos-low, pos-mid or pos-high.

The series of models allows for testing the effect of preparation at various points in the continuous positivity variable. Table 40 in the studies chapter and the figure below summarize the results, demonstrating a similar pattern in which experiential preparation leads to increases in liking for participants high in positivity, but not for participants low in positivity. The beta coefficient associated with the preparation effect for pos-high (β = .429, p = .040) demonstrates that experiential preparation helps people high in positive moods. The beta coefficient associated with the preparation effect for pos-low (β = -.294, p = .154) suggests that experiential preparation may hurt people low in positive moods; however, this effect is not significant.

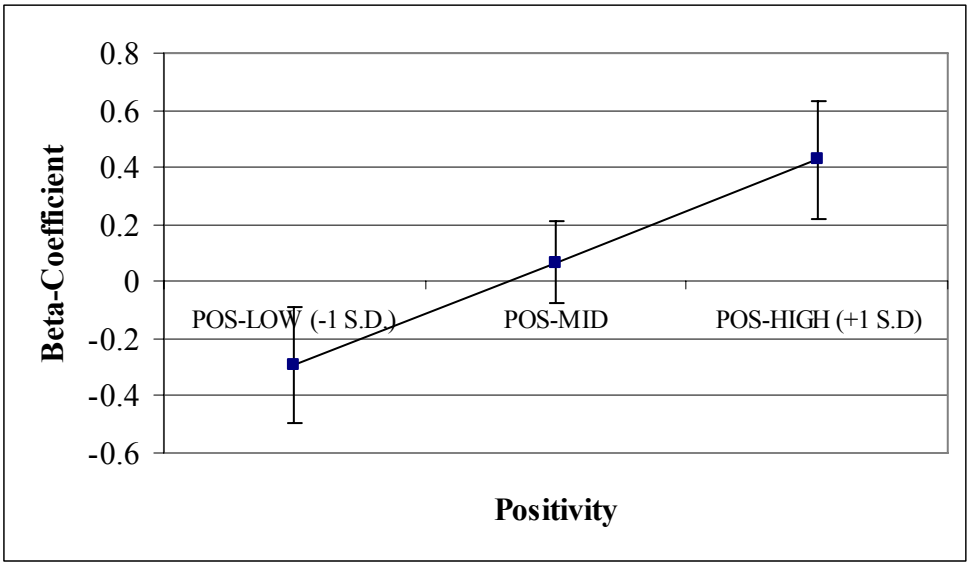

Figure 10: Experiential Preparation and Positive Mood Interaction - Spotlight Test

Positivity Interaction: Robustness Check

As a robustness check of the positivity interaction, I ran a model that predicted ratings as a function of the positivity index and the negative index as separate terms. This model also included both the interactions of positivity and negativity with

experiential preparation. Consistent with the above results, the interaction of positivity and experiential preparation term has a significant effect on ratings ($F[1,521] = 6.98$, $p = .0098$), and the interaction of negativity and experiential preparation has a non-significant effect on ratings ($F[1,521] < 1$).

It appears that, consistent with the "broaden and build" theory, positive moods promote an ability to integrate and expand information during experiential preparation and that a lack of positive moods results in a lack of ability to integrate and expand during experiential preparation. I test this below by analyzing the amount of time participants spend writing about a story's preview during the experiential preparation task. This differing ability to expand and integrate can then account for the gain in liking from experiential preparation among the high positivity participants and the decrease in liking among the low positivity participants.

Accounting for the interaction: The interaction occurs through the broaden-and-build theory of positive emotions

Earlier in this section, I discussed how positive moods lead people to be more open to experiences. Fredrickson's broadening theory suggests that people high in positive moods will use more thoughts in experiential preparation than people low in positive moods. A series of models demonstrates this to be the case. Participants that were high in positive moods spend more time than participants not high in positive moods on the free-response task during experiential preparation in which they talk about

the story. I tested this using the positivity score as both a continuous variable and by examining the median split of positivity in the two models that follow.

Model 1) Using the continuous variable to predict the time spent on the preview essay: Since there are only two observations for each participant, this model includes a story's ordinal position as a covariate but does not include the effects of a particular story. To improve the reliability of the estimates, participants' total time during the reading and writing portions of the experiment are included as covariates. As hypothesized, the positivity score is a significant driver of the time spent discussing the preview information ($F[1,350] = 5.88$, $p = .0158$). The beta-coefficient on this model ($\beta = 1.43$, st. err. = .59) suggests that, for every additional one point in the positivity scale (which had a possible range from 5 to 25), participants spent an average of almost 1.5 additional seconds on the free response question.

Model 2) Using the median split variable of positivity to predict time spent on the preview essay: I ran a similar model to Model 1 above, replacing the continuous positivity score with the median split variable. High positivity participants spent more time (69.4 seconds, on average) writing about the preview than low-positivity participants (61.7 seconds, on average). This difference is significant ($F[1,350] = 4.06$, $p = .0448$). The figure below summarizes these results:

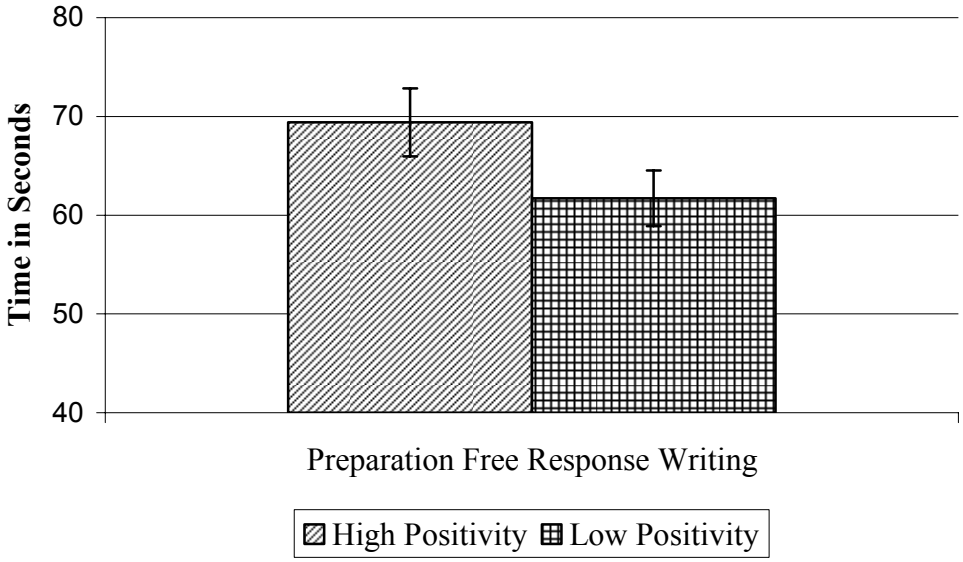

Figure 11: Positivity Leads to Broadening – High Positive Participants Spend More Time Writing in the Preparation Task

Positivity Summary and Additional Comments

This study finds strong evidence that positive moods moderate the preparation effect. In fact, in this study I found that the preparation effect occurred for high-positivity participants and was reversed for low-positivity participants. I stress here that low-positivity is not an identical construct to negativity. This view suggests that positive and negative moods are separate, but not opposing, constructs and is supported by previous research (Cacioppo and Berntson 1994; Larsen, McGraw and Cacioppo 2001). According to that research, feelings of happiness and sadness are separable, but mixed feelings of happiness and sadness can co-exist.

The fact that the low-positivity participants' enjoyment of the stories was hurt by experiential preparation is an interesting finding that may also help to explain some of the

patterns of results in earlier studies where the overall effect of experiential preparation was not significant. Specifically, in studies nine and seven I did not find that experiential preparation benefited participants' liking for experiences.

In study nine, I attempted to manipulate to the fluency of the story experience with a cognitive load task. In this study, I used a 2 (experiential preparation) X 2 (cognitive load) design where participants (N=74) were able to prepare for half of the stories by reading previews. Participants read two stories under low cognitive load where they had to memorize a four digit number. For the other half of the stories, participants were in a high load condition where they had to memorize a 9-digit number. I had hypothesized that the preparation effect would be diminished in the high load condition but not in the low load condition. This was not the pattern of results that I found. There was no effect of experiential preparation in either condition. Contrary to the fluency hypothesis, the preparation effect did not occur in either the low load or high load conditions. The preparation effect was slightly reversed for the low load conditions. Participants who were given the opportunity to prepare enjoyed the stories just as much as those who were not able to prepare (M's = 1.94, 2.13; $F[1,215] < 1$). Participants in the high load conditions who prepared enjoyed the stories the same as those that did not prepare (M's =1.74, 1.80; $F[1,215] < 1$).

It seems likely that both load manipulations may have affected participants' positive moods and in turn damped the preparation effect. While I did not measure moods in this study, there is some evidence that the load manipulations led to this effect from participants' responses to an open end question at the end of the experiment in

which they were asked to describe how they felt about the entire experience. Here are two compelling examples:

> "I would have enjoyed it much better if I didn't have to memorize the numbers before reading the passages. … That said, I did not enjoy memorizing the numbers…"
>
> "I was more focused on memorizing the numbers than on fully immersing myself in the story."

As more evidence that decreased positive moods can dampen the preparation effect, I examined some of the free response questions from the end of study seven. In this study participants (N=32) viewed four films. This study used a different experiential preparation manipulation where, for half of the films, participants viewed the first sixty seconds as a preview before repeating the film from the beginning. In the other half of the films participants in no-experiential preparation control conditions viewed the first sixty seconds of the film and then continued with the film after a brief pause. This new manipulation of experiential preparation failed to produce any gain in liking. The average rating for participants who viewed the first 60 seconds of the film as a preview was 2.62, and the average rating for participants who viewed the first 60 seconds of the film before continuing on with the balance of the film was 2.94. This difference is not significant ($F[1,92] = 1.46$, $p = 0.2303$) and is in the opposite direction from what the preparation effect suggests.

Again from participants' free responses to the question at the end of the study that asked how they felt during the experiment, it seems that the manipulation may have had a

negative impact on positive moods. This would then have lessened the preparation effect. Here is one compelling example:

> **"**The movies where the 60 second preview was repeated again in the full length were irritating because I had to watch the same thing twice in a short interval of time.**"**

Similarly to study nine, study seven failed to demonstrate the preparation effect. It seems that the different experiential preparation task in study seven may have lessened participants' positive moods, causing this null result for experiential preparation.

2.4 Expectations and the Preparation Effect

Explicitly stating expectations has been shown to change how people evaluate experiences. With regard to experiential preparation, it was hypothesized that explicitly stating expectations could limit the benefits from experiential preparation. Specifically, it was suggested that stating expectations might overwhelm the preparation effect such that there should be no increase in liking for an experience. Here I present results that generally support this hypothesis.

One can easily imagine a typical encounter where one both prepares for and states expectations for an upcoming experience. For example, while out at a movie a couple might view a trailer for an upcoming film and then ask one another how much they expect to like the soon-to-be-released film.

Substantial research in both psychology and consumer literature has explored the effect of stating expectations about a forthcoming experience. From these varying research streams, however, it is unclear what role stating expectations might have when combined with experiential preparation. As the literature discussed below demonstrates, stating expectations may cause an experience to be less enjoyed or it may cause attitude polarization where initial expectations can cause assimilation and contrast effects.

One way in which stating expectations may cause attitude polarization is through the biased search process of selective hypothesis testing (Sanbonmatsu et al. 1998). Selective hypothesis testing leads to biases in how information is gathered or interpreted (Posavac et al. 2004). For a film, a preview provides some information from which an

expectation can be generated. Selective hypothesis testing suggests that consumers often simplify judgments of an ultimate experience by focusing solely on their initial expectation (their initial hypothesis) during the experience, rather than more broadly taking expectations-inconsistent information into account. In turn, this leads to polarization because a hypothesis is more likely considered plausible in this setting than when multiple hypotheses are taken into account.

It is more likely, however, that stating expectations combined with a preview may cause people to enjoy experiences less than when they do not engage in experiential preparation. This hypothesis stems from work in consumer research showing that, when people expect to evaluate a product or service encounter, they tend to be more negative towards the product or service. This backfire effect leads consumers to have lower final evaluations of an experience. In a series of studies, Ofir and Simonson (2001) present evidence that expecting to evaluate a service encounter and explicitly stating these expectations both leads people to become more aware of negative aspects of the service, a phenomenon the authors label the "negativity bias." This occurs because consumers begin their evaluations with low expectations, which cause an enhancement in negative aspects of the experience.

In a follow-up paper Ofir and Simonson (2007) discuss two different types of expectations for a service encounter. First, as discussed, expectations can be a forward-looking hypothesis on how one expects the encounter with the firm to be. But, expectations can also be formed based on previous encounters with the firm. These two types of expectations can be labeled as forward-looking expectations and backward-

looking expectations. Interestingly, the authors find that even when an evaluation of a previous encounter with a firm is indistinguishable from an expectation of the next encounter, the two types of expectations lead to different results. In line with their earlier (2001) findings, forward-looking expectations cause lower post-purchase satisfaction, but backward-looking expectations cause higher post-purchase satisfaction. (Both comparisons are to a control condition where no expectations are stated.)

Stating expectations is also consistent with the notion of "should expectations" Boulding et al (1993) where consumers develop expectations for the level of service quality a firm should provide. In that paper, the authors also discuss "will expectations" which is an expectation based on the quality a firm will provide. Importantly, Boulding et al (1993) find that consumers update their evaluation of the actual service via Bayesian-like updating process that combines should and will expectations. "Will expectations" are likely to lead to positive effects of stating expectations and "should expectations" are likely to lead to negative effects.

To test for the combined role of stating expectations and experiential preparation in study four, immediately after viewing a 20-second preview of the film, participants were asked to state their expectations for how much they would enjoy the film by responding to the question "How much do you think you will like watching the film?" Participants responded via an 11-point scale question anchored on 1 ("Not at all") and 11 ("Very Much").

It is worth noting here that the only difference between study three and study four was the inclusion of this expectations question. In study three, when participants

prepared for films by viewing video previews, they enjoyed the films more than when they were in the no-experiential-preparation control condition (M's = 3.21, 2.50; F[1,80] = 5.30, p = 0.033). They also had higher satisfaction for the films as reported by the results of their choice task (M's = 0.40, -0.46; F[1,80] = 4.32, p =.0409). The inclusion of this question reversed the positive gain from experiential preparation seen in the previous dissertation studies. In study four, when participants prepared for the films and stated expectations, they enjoyed the films less than when they did not prepare (M's = 1.89, 2.91; F[1,89] = 7.37, p = 0.008). They also had less satisfaction for the films as reported by the results of their choice task (M's = -0.34, 0.34; F[1,89] = 2.91, p =.0915).

The figures below illustrate these reversals from expectations:

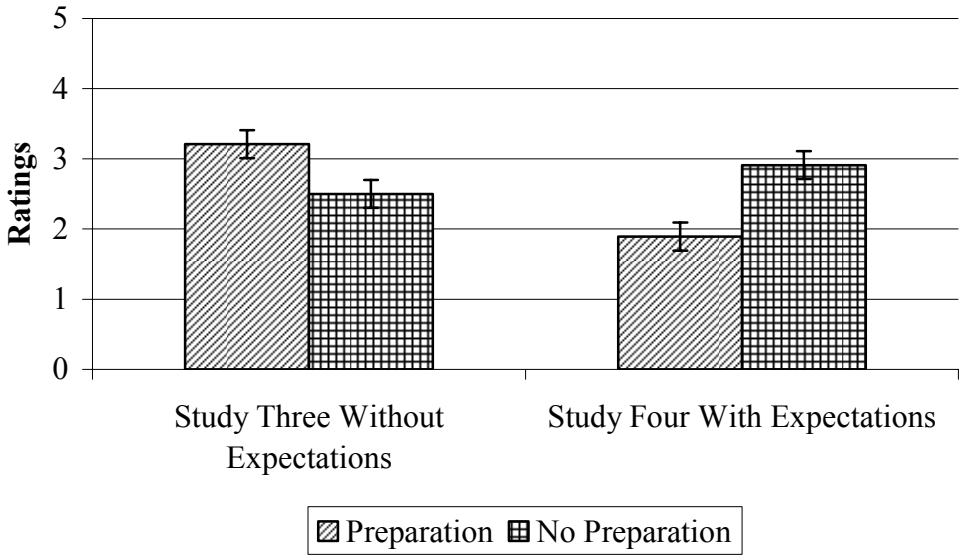

Figure 12: Expectations Reverse the Preparation Effect (Ratings)

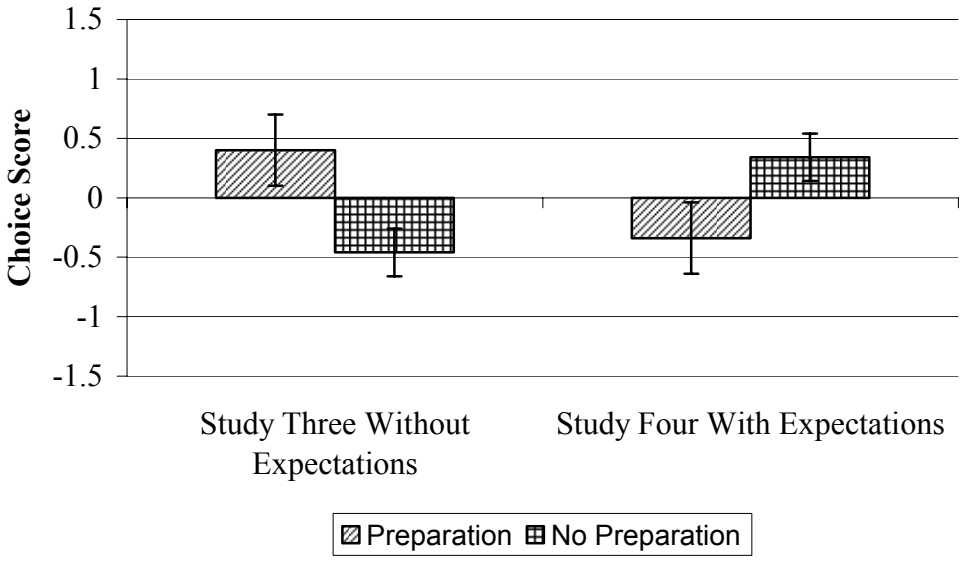

Figure 13: Expectations Reverse the Preparation Effect (Choice Score)

As a follow-up, study five tested two types of stating expectations similar to Ofir and Simonson's (2007) paradigm of forward and backward expectations. In this study, participants in forward expectations conditions answered the same question as in study four after viewing the preview. Again this question was "Based on the preview, how much do you expect to enjoy the film?" Additionally, participants in the backward expectations questions were asked how much they enjoyed the preview. For completeness, a standard experiential preparation condition (without expectations) and a no-experiential-preparation condition was also included.

When participants were in the control condition, they reported an average liking rating of 2.35. When participants were in the no expectation with experiential preparation condition, they reported an average rating of 2.75. This difference directionally replicates the preparation effect, but fails to achieve significance (F[1,165] =

1.60, p = .2072). When participants stated forward expectations, they had an average rating of 2.06, and when participants stated backward expectations, they had an average rating of 2.03. These numbers are not significantly different from the no-experiential-preparation control condition (forward expectation: F[1,165] < 1 ; backward expectation F[1,165] < 1) and are significantly lower than the rating from the experiential preparation without expectations condition for both the forward expectation (F[1,165] =4.07, p = .0454) and backward expectation (F[1,165] = 4.14, p = .0434). The figure below illustrates these contrasts:

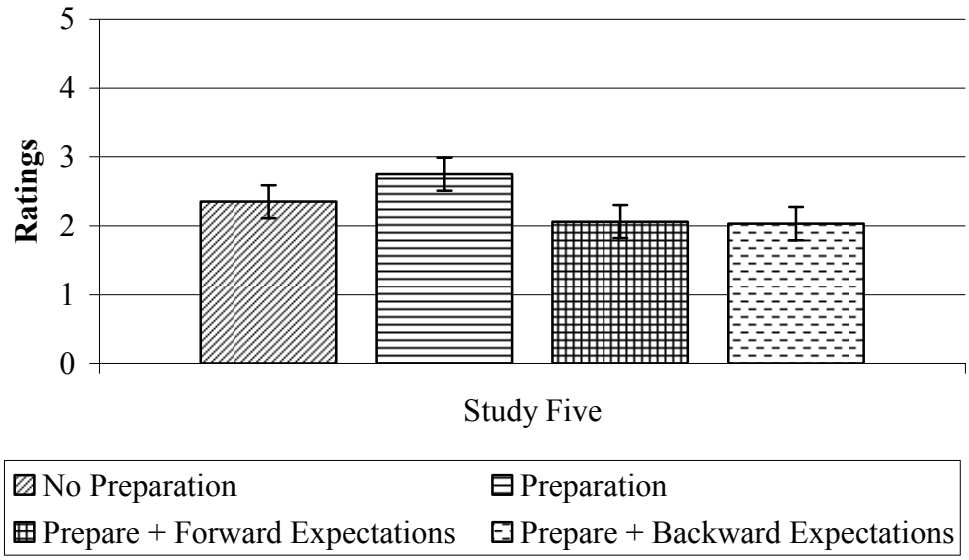

Figure 14: Both Types of Expectations Overwhelm Preparation Effect

Study five again demonstrates that negativity created by expectations overwhelms experiential preparation. However, study five fails to replicate Ofir and Simonson's (2007) positive result of a backward expectation. It is noteworthy that in their studies participants were asked to evaluate their expectations for a service encounter at a

supermarket. Such reactions to a service encounter are importantly different from attitudes towards films and stories. The first tends to be an evaluation of a utilitarian experience (filling a need) while the second tends to be a reaction to a primarily hedonic experience (liking for the film or story). This difference between their studies and the hedonic domain of this dissertation may account for the different result with backward expectations.

The results from these studies are silent as to the separate effects of expectations and experiential preparation simply because it is difficult to generate an expectation for an upcoming film or story without some sort of previewing knowledge. In an attempt to generate an interactive effect of experiential preparation and expectations, I ran an additional study using a new type of preview.

In study six, I used a 2 X 2 design manipulating both experiential preparation and explicitly stating expectations for participants so that each participant served in each of the four conditions once. For every film, all participants viewed its first minute. In experiential preparation conditions, participants where told that they would watch the first minute of the film as a preview and then repeat the entire film from the beginning. In the no-experiential-preparation condition, participants were told that they would watch the first minute of the film and then continue on with the rest of the film. Participants in expectations conditions stated their expectations before they continued with the film or repeated it from the beginning. This study failed to produce any effects of experiential preparation when expectations were not stated. When expectations were not stated participants had an average rating for the film of 2.24 under no-experiential-preparation

condition and 2.35 under experiential preparation condition. This difference is not significant (F[1,155] < 1). When expectations were studied, no gain or loss from experiential preparation occurred. Participants had an average rating for the film of 2.07 under no-experiential-preparation and 2.37 under experiential preparation. This difference is not significant (F[1, 155] < 1) and is directionally opposite from the previous studies. The figure below highlights these results:

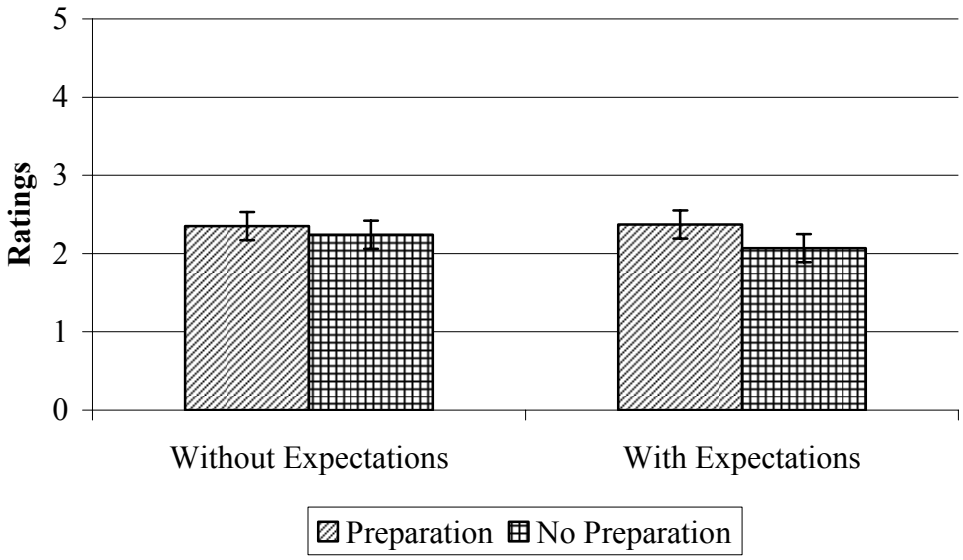

Figure 15: No Results of Experiential Preparation or Expectations Using a Different Type of Experiential Preparation Mechanism (Study Six)

It seems possible that the new 60-second previews included in both conditions may have diminished the preparation effect. A follow-up study (study seven) also showed a null result of experiential preparation using the 60-second continue and repeat previews. (See the Study Chapter below for a discussion of study seven.)

Taken together, the results from all studies provide evidence that stating expectations dampens the preparation effect. Upon using a different experiential preparation mechanism, however, these results did not appear to replicate using the 60-second previews.

2.5 No Evidence that Schema Theory Accounts for the Preparation Effect

Initially I hypothesized that experiential preparation effects occur because experiential preparation evokes a schema which enables people to better appreciate the event. As this section will illustrate, this dissertation finds little evidence of a schema-based account for the preparation effect.

A schema can be defined as the as general knowledge a person possesses about a particular domain, construct, or object (Alba and Hasher 1983; Tesser, 1978). Schemas provide a framework for understanding and interpreting new information and a way to encode old information (Alba and Hasher 1983). For a movie, a schema may be evoked simply by a title, a genre or a more nuanced description of the film. A vast array of research (discussed below) has shown that having a schema leads to improved cognitive performance on tasks, both for comprehension during the experience of an event and for memory after an event. Little research, however, has examined the ways in which a schema may lead to increased pleasure for an event in itself. An early hypothesis of this dissertation argued that preparing by experiencing previews creates a schema for the upcoming experience to be more easily enjoyed and understood. As this section will illustrate, such a schema theory hypothesis of the preparation effect would predict that experiential preparation (in additional to enjoyment of events) would lead to increased cognitive ability to recall an event. It would also predict that a reinforcing schema should lead to an enhanced preparation effect and that the preparation effect would be even stronger for more liked experience. This section will present null results from several

studies and meta-analysis across studies that together provide strong evidence that schema theory does not drive the preparation effect.

Schema is somewhat similar to the use of scripts (Schank and Abelson 1977). A script is a set of ideas about what will happen in a familiar situation or experience (Schank and Abelson 1995). Scripts are different from schemas in that ithey are typically not applied to specific experiences (e.g. going to a particular documentary) but rather to a category of experiences where a script may apply (e.g. going to a documentary). Scripts are similar to schemas in that they help make mental processes easier by making clear what is supposed to happen in a situation. That is, scripts too, lead to better comprehension for an event. If scripts are generated by the experiential preparation for the narrative, they should be apparent in better memory for the particular sequence that evolved in the story. The studies below will show that this did not occur.

Research in schema theory is related to other research that demonstrating that preparation leads to better understanding and ability to achieve tasks. Research by Lynne Reder (1980; 1982) demonstrates that people's ability to comprehend passages is enhanced when they can map a given schema to their own memory structures. She argues that self-generated elaborations (i.e. reading a small passage and elaborating on the passage before a more complex text) is effective in enhancing understanding the reading task because such elaboration reinforces one's own idiosyncratic schema.

Schema theory suggests that holding an appropriate schema is necessary for improved understanding of an experience and ability to recall the experience afterwards. With respect to prose, a title can serve as a schema from which to gain an understanding

for the text. These consequences of schema were demonstrated in a series of studies by Bransford and Johnson (1972) where participants were presented with ambiguous prose passages like these: "A newspaper is better than a magazine / A seashore is a better place than a street / At first it is better to run than to walk / You may have to try several times…" (Bransford and Johnson 1972, p. 722). Across their studies, some participants were presented with the title for the prose (in this example, "Making and Flying a Kite") before reading the prose while others were presented with this information only after having read the text or were not presented with this information at all. The participants who held a schema before reading the passage report greater understanding and recall for the passage than those who did not hold the schema while reading the passage.

As mentioned above, schema theory suggests that activation of schema before an experience should lead to greater memory of it after the experience. Bransford and Johnson (1972) found that participants who were given a schema to understand the prose exhibited better recall of the text when they were asked to list lines from the text. Follow-up studies by Alba et al. (1981) tested not only recall of passages from the prose, but also recognition of the text. In this series of experiments participants had to determine if a line (for example "It takes some skill at running with it," p. 291) was from the actual prose or was a distractor line not contained in the passage. Alba and his colleagues found that schema helped recall but not this recognition task. This finding implies that activation of a relevant, originally-held schema may not be necessary to encode new information. These findings sparked debate as to whether memory is

schematic or if memory is richer and more detailed then schema notions suggest (Alba and Hasher 1983). This debate, however, is beyond the scope of this dissertation.

To test for the hypothesis that experiential preparation leads to gains in enjoyment through a schema, several studies in this dissertation gave participants memory tests that asked for recall in two different ways. Additional work by Tal and Huber (2006) tested whether experiential preparation leads to better memory in a third type of factual recall task. As evidence that schema theory may not be a driver of preparation effects, none of these studies produced any positive results showing that experiential preparation leads to better memory for experiences. The results from the studies are presented here at a high level, and the reader is directed to the next chapter for details.

In study three (short films with video previews) participants were given a memory test where they were asked a series of six factual questions about each film. (E.g., "In the film "Sleep," what did Arthur leave behind in the telephone booth?") This task served as a test of their recall about each movie. I calculated a memory score from a sum of the correct responses to a particular film. Thus each participant had a score on the memory test for each of the four movies. When participants prepared for films they had an average memory score of 4.27. When participants were not able to prepare, they had an average memory score of 4.18. This difference is not significant ($F[1,80] < 1$). The same test was repeated in study four where experiential preparation was combined with expectations. When participants prepared and stated expectations for films, they had an average memory score of 4.16. When participants did not prepare, they had an average

memory score of 3.85. This difference is not significant (F[1,89] < 1). The figure below illustrates the results from both studies.

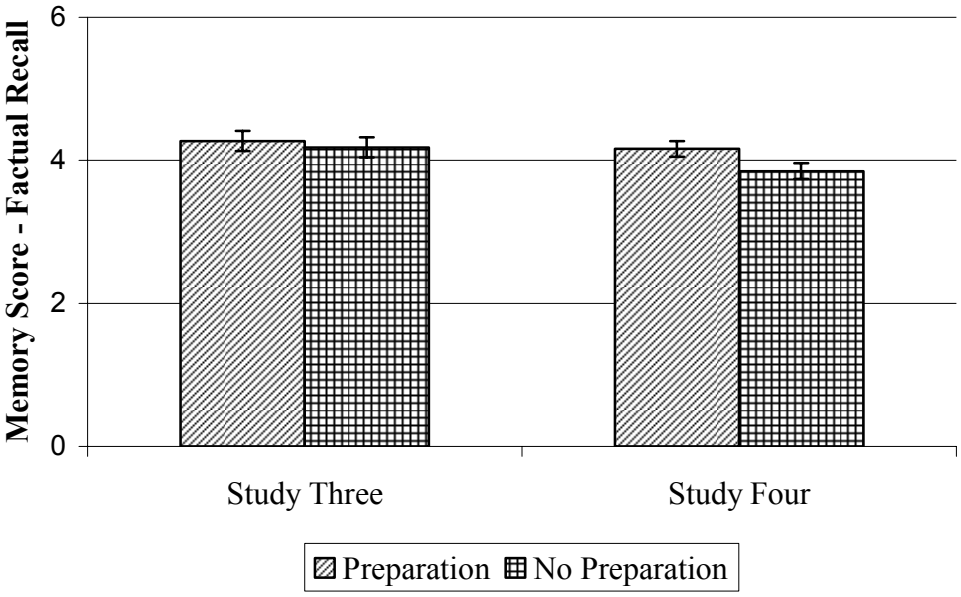

Figure 16: Experiential Preparation Does Not Significantly Enhance Memory as Tested by Factual Recall Tasks

In study six (separating expectations and experiential preparation), I created a new memory task in which participants had to rank scenes from the film by their order. In this task, participants were presented (on one side of the computer screen) with six pictures from different parts of a film in random order. Participants were instructed to rank the pictures by order (on the other side of the screen) so that they appeared, from top to bottom, in the correct temporal order. This task allows for a straightforward memory score using the Spearman-rank correlation coefficient where the deviation between the actual temporal order of a scene and the stated order serves as the rankings for the

calculation. Again, this test failed to show any effect of experiential preparation on memory.

This study also examined the role of stating expectations. The results here are from the planned contrasts between stating expectations and not stating expectations. In the no-stated-expectations conditions, participants who prepared had an average memory score of .59 while participants who did not prepare had a score of .55 ($F[1,155] < 1$). In the stated-expectations conditions participants who prepared had an average memory score of .59 while participants who did not prepare had a score of .53 ($F[1,155] < 1$). (Please see the figure below.)

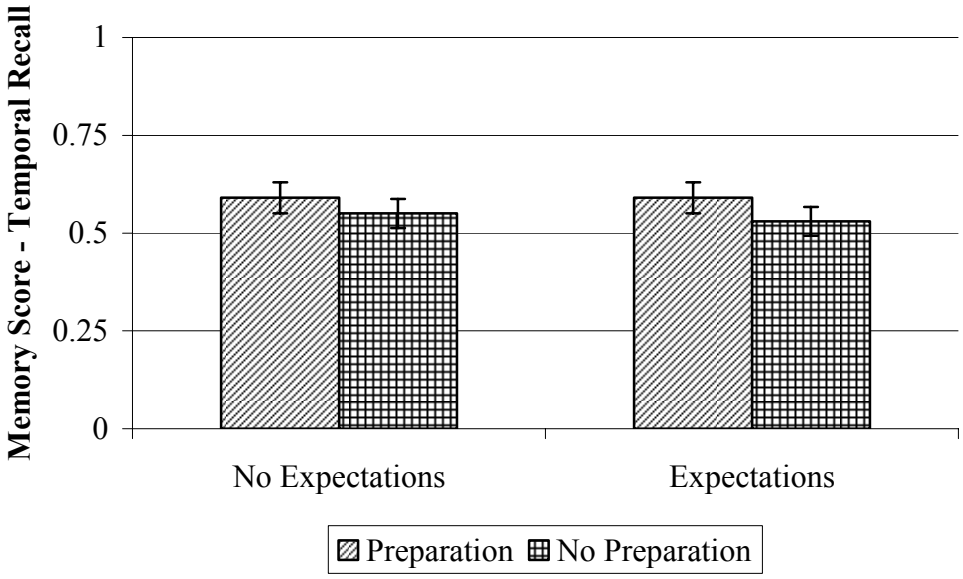

Figure 17: Preparation Does Not Enhance Memory Effects in Either Expectations and No-Expectations Conditions as Tested by a Temporal Recall Task

From work in attitude change, if a schema were a main theoretical driver of the preparation effect, we should see that, if some preparation works, then additional

experiential preparation should produce even larger effects. This notion is similar to basic findings in attitude change research showing that allowing people to spend additional time thinking about a person or subject of which they have initial opinions leads peoples' attitudes to become polarized (Tesser 1978). In one experiment by Sadler and Tesser (1973) one set of participants was asked to think about a person they liked or disliked. Another set of participants was distracted from thinking. Participants who were given time to think about a likable person had more positive cognitions about the initially positive target person than those not given time to think about the target. The opposite pattern emerged for those exposed to an initially negative target. Follow-up studies have replicated this effect in many domains. For example, in experiments by Tesser and Conlee (1975) participants were instructed to spend time thinking about an issue (i.e. legalizing prostitution). Participants were given 30, 60, 90 or 180 seconds to gather their thoughts. Participants' opinions about the issue became more polarized with additional time. This polarization occurs because additional thought provides ways to reinterpret cognitions (Tesser 1978) and new cognitions that tend to support existing attitudes (Tesser and Cowan 1975, Tesser and Leone 1977). To demonstrate this latter mechanism, in one experiment by Tesser and Leone (1977) participants were asked to think about their attitudes about football and fashion. A gender effect occurred where attitudes of males (who most likely had prior schematic knowledge of football that was positive) about football became more positive and attitude of females (who most likely had prior schematic knowledge of fashion that was positive) towards fashion became more positive, but males' attitudes towards fashion and females' attitudes towards

football had little change. These were topics about which they presumably had little prior schematic knowledge.

To apply this back to the preparation effect, usage of a schema would suggest that a) additional time spent preparing should lead to even bigger preparation effects and b) a polarization effect implies that experiential preparation should produce the biggest effects for experiences that are more liked. As will be shown below, across the studies no evidence exists for either of these predictions. To address point a), I use study one (movie club) to demonstrate that additional time spent on experiential preparation does not matter. To address point b), I construct a meta-analysis across studies to show that polarization does not occur.

First, in response to the first prediction, in study one (movie club), there were two conditions in which participants were able to prepare in advance of the films. One condition was to be able to read the plot summary a few days before the movie. A second condition was to be able to read the plot summary a second time during the days before the movie. While both these conditions enjoyed the film more than when participants who were not given the opportunity to prepare, the two experiential preparation conditions did not differ in participants' liking for the films ($F[1,85] < 1$, see Figure 1).

In response to the second point, that a schema prediction would suggest that the preparation effect should lead to even larger gains for more well liked films, I ran a meta-analysis across several studies that examined the gain from experiential preparation and the average liking for a film. For this analysis, I selected studies one through three as

well as study eight, where no auxiliary moderators existed that could inhibit the preparation effect. I also included data from study five, withholding the effects of expectations by only including the first two film observations. Finally, I also included the participants in study ten who were high in positivity (as discussed in this chapter, the locus of the preparation effect occurs in these participants). I mean shifted the average liking for a film or story within studies by subtracting the mean rating of all films or stories within that experiment. To calculate the gain from preparation, I took the difference between mean evaluation for prepared films (or stories) and films (or stories) that were not prepared for. In the figure, each data point is an average rating for a film or story (mean shifted by study) across participants on the x-axis and its associated gain from preparation is on the y-axis. As the figure below illustrates, the correlation between the gain from experiential preparation and the average liking for a film (or story) is weakly negative (-.32). This is in the opposite direction from what a schema approach would predict.

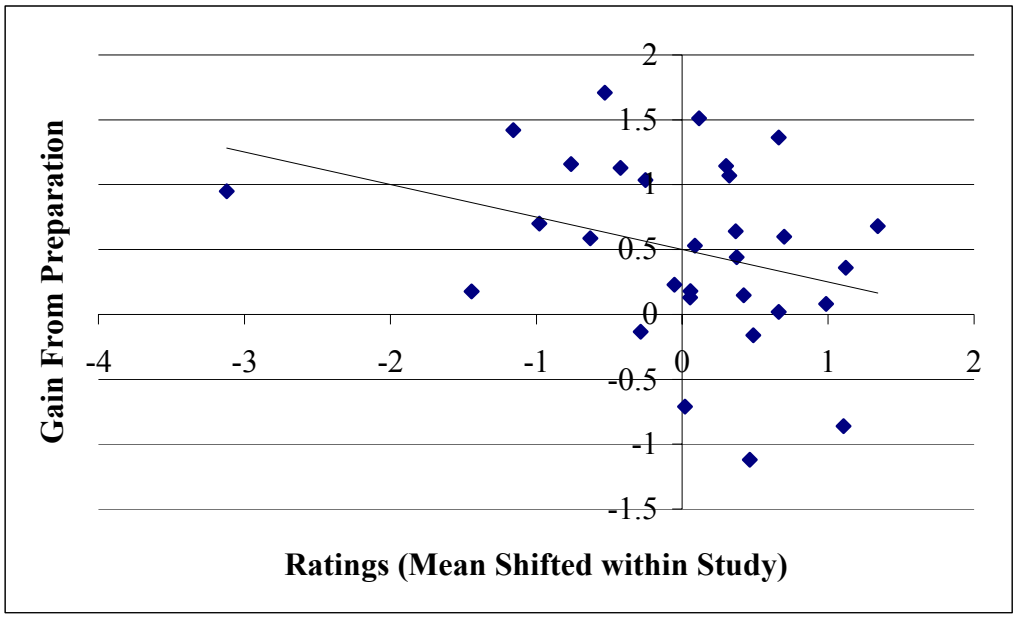

Figure 18: Experiential Preparation Does Not Lead to Attitude Polarization – A film or story's average liking does not correlate with its gain from the preparation effect

2.6 Self-Referencing Does Not Account For the Preparation Effect

Narratives have been shown to influence satisfaction with experiences, particularly when those narratives involve the self or allow the self to feel "at one" with the protagonists. The importance of self-referencing narratives has been attributed to the "storied nature of human conduct," in which people view experiences by constructing stories about their experiences (Sabrin 1986). Narratives add more meaning to experiences by creating a temporally-structured and context-sensitive account of the past (Bruner 1990) and can serve as the basis for comprehending and evaluating new experiences (Adaval and Wyer 1988). The use of the self in narratives enhances both the ability to learn new information and to recall information later (Klein and Loftus 1988; Rogers, Kuiper and Kirker 1977). On the basis of this research, I initially hypothesized that experiential preparation that encourages readers to relate the narrative in the story to their own experiences would produce an even greater liking for the story.

Supporting this expectation, consumer researchers have found that advertisements that tell a narrative story are more effective than ads that do not use narratives because they are able to involve, captivate and entertain the viewer (Escalas 1998). By encouraging the viewer to process the information in narrative form, an advertisement is more likely to encourage viewers to imagine themselves in the ad and relate the ad's story to their own experiences. For example, in a series of studies by Adaval and Wyer (1998) participants read travel brochures describing different vacations. In one brochure, the itinerary was described as a narrative where respondents were presented with a sequence of activities that would occur during the trip. In the other brochures, the

itinerary was presented as a list with no indication of the activities' sequence. In their studies, participants preferred the travel brochures that promoted use of self in the narrative because they more easily fostered mental representations of the trip.

Applying these findings to the preparation effect, relating a preview to the self through narrative can be expected to encourage self-related thoughts about the experience. For the preparation effect, this notion suggests that relating preview information to the self may lead people to feel "transported" by an experience, a process by which positive affect is increased when the participant becomes completely immersed in a story (Escalas 2004; Green and Brock 2000, 2002). Thus it was initially expected that self-referencing experiential preparation should produce a bigger increase in liking than non-self referencing experiential preparation. I explored this possibility in study two, which manipulated the degree of self-referencing in the preparation task. Participants in one experiential preparation condition were encouraged to relate the preview information to their own experiences of watching other films, and participants in another condition were asked a neutral distraction question asking them to focus on how the preview information might relate to other movies, books and experiences they had had encountered. While participants in both conditions enjoyed the films significantly more then when they did not read the summary, there were no differences between the self-referencing experiential preparation condition and the other-task experiential preparation condition. When participants read the summary and related the information to their own experiences, they had an average rating of 2.6. This figure is identical to when participants read the summary and did not relate it to their own experiences

(F[1,196] < 1). When participants did not prepare, they had an average rating of 1.88. Thus experiential preparation led to higher enjoyment of the films for both the other-task experiential preparation condition (F[1,196] = 4.41, p = 0.037) and the self-referencing experiential preparation condition (F[1,196] = 6.05, p = 0.015). The figure below illustrates these results.

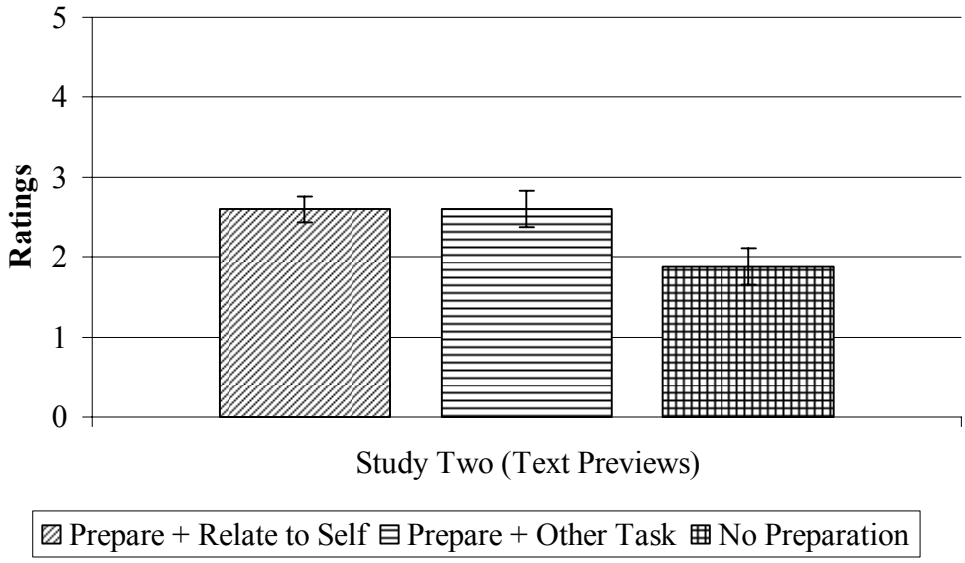

Figure 19: Self Related Experiential Preparation Does Not Lsead to Additional Gain (Ratings)

This result replicates in the choice task given to participants after they viewed all four films. (See the Chapter 3 for details on the choice task.) Again, both groups enjoyed the films significantly more than participants that did not read the summary, but there were no differences between the self-referencing experiential preparation group and the other-task experiential preparation group. Participants who read the summary and related the information to their own experiences had an average choice score of 0.34. This figure is not significantly greater than choice score of those who read the summary

and did not relate it to their own experiences (M=.25) (F[1, 196] = 0.09, p = .765). Participants who did not engage in experiential preparation had an average choice score of -0.99. Thus experiential preparation lead to higher enjoyment of the films for both the other-task preparation group (F[1, 196] = 15.04, p < 0.001) and the self-referencing experiential preparation group (F[1, 196] = 9.62, p < 0.01). The figure below illustrates these results.

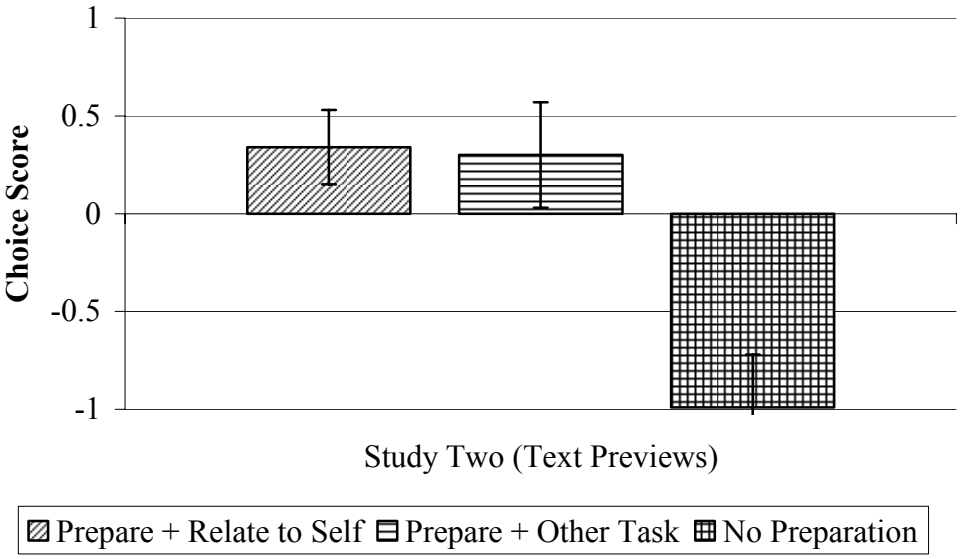

Figure 20: Self Related Experiential Preparation Does Not Lead to Additional Gain (Choice Score)

Another initial hypothesis related to the use the self in narratives was that, along with a gain in liking for experiences, participants should use more self references when they describe the experience in a free response task. This hypothesis stems from findings by Melanie Green and her colleagues (Green, Strange and Brock 2006), who investigated how the varying use of narratives shapes individual affective responses to stories. More specifically, her work with Timothy Brock (Green and Brock 2000; 2002) has examined

the process of "transportation into narrative world," which is a type of mental involvement in a story that facilitates integration of knowledge from the real and narrative worlds. Highly transportive stories lead readers to feel immersed in a story, often identifying with the characters and imaging themselves experiencing the characters' experiences. This leads to downstream effects where the reader or ad viewer may enjoy the experience more (Escalas, Moore and Edell-Britton 2004). Therefore, experiential preparation should be an act that facilitates the degree to which films and short stories are transportive, leading participants to feel more self-involved with the story. The appropriate test for this is to examine participants' responses when they are asked to describe the film or story. If the use of the self is a mechanism for the preparation effect, one would expect that participants in experiential preparation conditions would use self-related terms more in these responses than participants who do not so prepare. Across studies, little evidence was found to support this hypothesis. As illustrated by the figure below, in study one (movie club) there were no increases in self-referencing in either of the experiential preparation conditions. In the no-experiential-preparation condition participants used an average of 2.00 self references in their free responses to the open-end questions. This figure is not significantly different from the self-referencing in standard experiential preparation condition ($M = 1.77$; $F[1,85] < 1$) or the extra experiential preparation condition ($M = 1.80$; $F[1,85] < 1$).

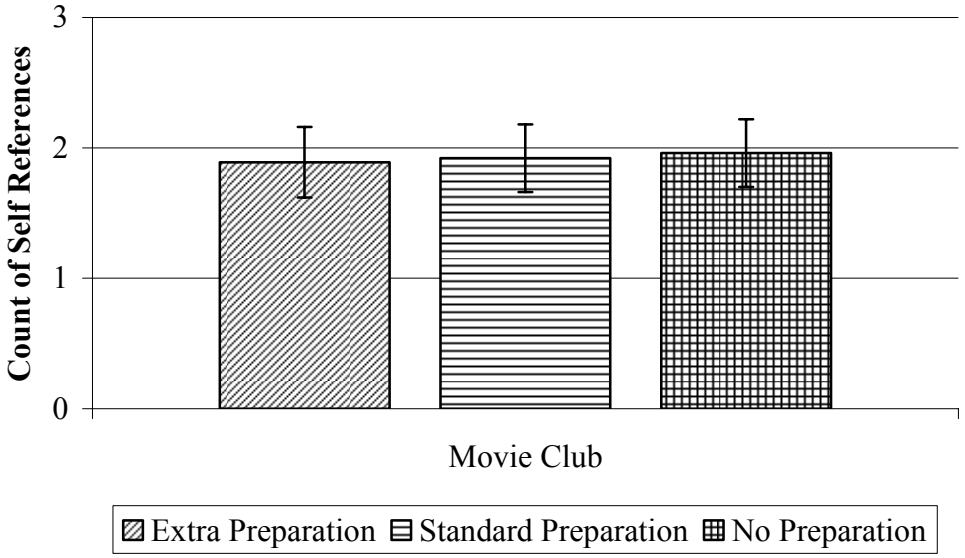

Figure 21: Movie Club - Experiential Preparation Does Not Increase Self Referencing

In studies two and three, which used text previews (study two) and video previews (study three) as experiential preparation for short films, there were no robust differences in self-referencing. In study two, there were no increases in use of self in either experiential preparation condition. In the no-experiential-preparation control condition participants used an average of 0.34 self references. This number is not significantly different from either the other-task experiential preparation condition ($M = 0.37$, $F[1,195] < 1$) or the self-referencing experiential preparation condition ($M = 0.32$, $F[1,195] < 1$). Study three produced the only significant gain in self referencing from experiential preparation as compared to the no-experiential-preparation control condition (M's = 0.52, 0.11; $F[1,80]=4.99$, $p = .028$). This significant difference did not occur in the other studies. The figure below illustrates the results from both studies. (Study three used two conditions and did not have an experiential preparation with a distraction task.)

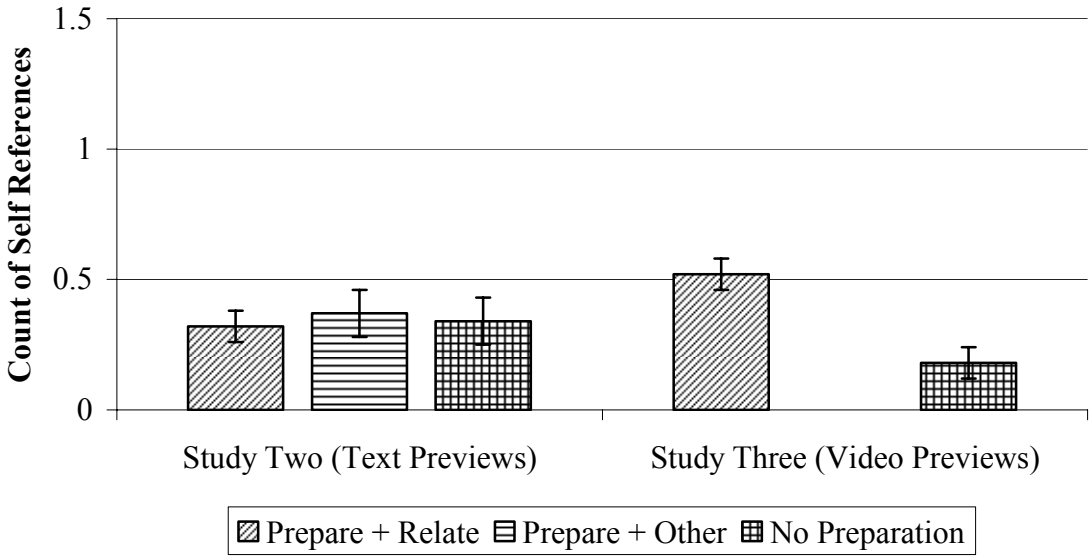

Figure 22: Short Films (Studies 2 and 3) – Experiential Preparation Does Not Robustly Increase Self Referencing

2.7 Discussion

In this dissertation I have defined "experiential preparation" as any mechanism that allows consumers to familiarize themselves with an upcoming experience in advance of consumption and the "preparation effect" as the increase in liking for an event from that preparation. Experiential preparation can take many forms, such as watching a movie trailer or reading a travel brochure. I have demonstrated the preparation effect and have explored five key mechanisms as its key theoretical drivers. To accomplish this I have schematically presented a series of ten studies around these mechanisms.

As an initial demonstration of the preparation effect, the movie club study demonstrated that experiential preparation by reading e-mail containing an upcoming movie's summary a few days prior to the movie leads people to increase their enjoyment of experiences in a setting that closely resembles how people prepare for and actually watch movies. This finding replicates in a number of laboratory studies using short films and stories and various modes of preparation.

The focus of this dissertation is why and when the preparation effect occurs. In it I tested five key theoretical mechanisms that have the potential to mediate or moderate the preparation effect.

Fluency: I have found direct evidence to support my hypothesis that the gain from experiential preparation is fully mediated by feelings of fluency. In doing so, I constructed a fluency index using an adjective check-off task that I show can be used without causing participants to become aware of the source of fluency (where they would

then attribute their liking of the story to the fluency itself) and that provides a measure of fluency that is valid for repeated measure designs.

Positive Moods: In study ten, I have shown that positive moods play a key role as a moderator of the preparation effect where experiential preparation works best for people high in positive moods and can actually backfire for people low in positive moods. This moderation occurs because people in positive moods are more open to preview information from experiential preparation and process this information more broadly.

Expectations: I initially hypothesized that explicitly stating expectations would dampen the preparation effect. In this dissertation, I have found mixed results with regard to this hypothesis. I found support for this hypothesis in studies four and five, where explicitly stating expectations combined with experiential preparation decreased participants' satisfaction for films. This effect appears not to be robust when expectations and experiential preparation are both manipulated because study six failed to replicate this finding.

Schema: I have investigated whether the preparation effect occurs through a process similar to schema theory, where experiential preparation enables more liking for an experience because exposure to preview information fosters cognitive processing of information. Across several studies, however, little evidence supports schema theory's predictions with regard to reinforcement of schema, memory or attitude polarization. For example, in the movie club study (study one) participants who had additional time to prepare did not have even larger gains from preparation as schema theory would predict.

In studies three, four and six, where memory was tested, none of the results showed any increased ability to recall factual or temporal elements of the movie. Finally across studies, I found no evidence to suggest attitude polarization as predicted by a schema approach. Indeed, the positive impact was strongest among the least-liked, rather than the most-liked stories and films.

Self-Referencing: I found no evidence that experiential preparation occurs through greater use of the self. First, in the short films with text previews study (study two) participants who related a film's plot summary to their own experiences had the same gain from experiential preparation as participants who read the summary and then completed a distraction task. Second, in studies one through four, there was little evidence that participants use the self in their free response questions when asked to discuss what they liked about the movie or how they would describe the movie.

Limitations and Future Extensions

As stated in the opening chapter, experiential preparation has thus far been limited to "pre-experiencing" a larger experience through a summary description or experiencing a small part of the larger experience before the ultimate experience occurs. Experiential preparation should conceptually apply, however, to a wider variety of experiences, such as getting a massage or taking a fancy vacation. Future extensions may examine how experiential preparation alters even more robust experiences and its downstream implications. For example, consider an MBA program that sends pictures of the campus to admitted students before they are to visit the campus. These pictures provide

experiential preparation, allowing the prospective students to become more familiar with the university by "previewing" their visit. The theory presented here suggests that these prospective students will enjoy their campus visits more. This should, in turn, lead to a greater probability of their matriculation.

The theory presented in this dissertation has been limited to hedonic events that were generally pleasurable. It is possible that experiential preparation could increase liking for mildly aversive hedonic events (e.g., a bad movie). It is also possible that experiential preparation may help increase liking of neutral utilitarian experiences (e.g., going to the bank) or negative utilitarian events (e.g., going to the dentist), but such events are not typically pleasurable in themselves. Therefore, the question about liking for those types of experiences is not closely related to the theory presented here. Perhaps experiential preparation can decrease feelings of dread or anxiety before the aversive dental visit. Theories of anticipatory utility (Lowenstein 1987) state that dread causes negative utility from contemplating a future aversive event and that this negative utility from looking towards the future decreases overall utility even further than the disutility from the negative event alone. If experiential preparation decreases disutility from dread, then the overall utility may not suffer from anticipating the future. Again though, this change is not identical to changing liking for the visit itself.

While measured moods were strongly related to the positive impact of preparation, the manipulation of moods in study ten failed to produce significant differences in positivity. Thus, a relevant question for future research attempts is to use different mechanisms to manipulate moods. There are numerous clever manipulations

from the work of Alice Isen and her colleagues that have induced positive moods in subtle ways. These have included giving participants a small gift of 29-cent nail clippers (Isen et al. 1978), giving participants a cookie (Isen and Levin 1972), having participants find a dime in a telephone booth (Isen and Levin 1972; Levin and Isen, 1975) and giving participants bags of candy (Erez and Isen 2002). Such introductions lead people to be in more positive moods and thus produce downstream consequences of positive moods consistent with broadening. This manipulation should then also moderate the preparation effect, providing more evidence that the preparation effect is indeed strongly influenced by positivity.

The lack of positive results for schema theory also leads to some interesting future research possibilities. One weakness of the lack of results mentioned in the schema section is the fact that the memory tests and test of extra elaboration did not produce different effects across measures of ratings and memory. To better rule out a schema-based account of experiential preparation, a future study's manipulation should demonstrate that increasing levels of experiential preparation (i.e., more time elaborating on preview information) may lead to better memory but not an extra gain in liking for the film. This would demonstrate a memory result consistent with schema, while showing that schema would not seem to lead to increased liking.

Managerial Implications

The preparation effect has direct managerial implications. Clearly firms want to have consumers enjoy their products. If consumers can have increased satisfaction by

experiential preparation, firms should encourage consumers to preview an experience before consumption. Such experiential preparation may occur through promotion strategies used today. For example, consider movie posters displayed outside the cinema. Posters not only alert passers-by about what films the cinema is showing, but they also enable patrons who have already decided to see the movie to experience a preparation mechanism before the film. These strategies not only improve consumer welfare by leaving consumers happier, but they should increase firms' performance as well.

The compelling interaction with positive moods leads to some further interesting consequences for marketers. The findings suggest that the preparation effect should increase liking when consumers are in positive moods but may decrease liking when they are not. This suggests that managers could profitably evoke positive moods prior to allowing their consumers to engage in experiential preparation. For example, a recent animated movie called "Ratatouille" started its marketing campaign with a television advertisement asking viewers to view an extended trailer on the internet. In effect, the television advertisement may serve as a means to create positive feelings and interest before the viewer actually engages in the experiential preparation task of viewing the extended trailer at their computer. This viewer who experiences the internet trailer would ultimately benefit from increased liking of the actual film. And the firm would benefit as well.

3. Studies

3.1 Studies Overview

In this chapter, ten studies are presented to demonstrate the preparation effect and to gain an understanding of the theoretical mechanisms that lead experiential preparation to increase enjoyment of events. To examine the preparation effect, a variety of stimuli are studied. In all studies, the main dependent variable is measured liking for an experience. The studies differ with respect to their additional dependent variables, by the implementation of experiential preparation, by the auxiliary measures and manipulations that provide information on boundary conditions, moderation and mediation. The tables below provide a summary of the ten studies.

Experiential Stimuli

In the first study, I examine participants' liking for documentary length films during a movie club. In studies two through seven, I examine enjoyment of short films. In studies eight through ten, I examine reactions to short stories. These stimuli were chosen as movies and short stories tend be experiences undertaken because they bring about pleasure. More importantly, individual films and short stories were selected because they could bring about a range in responses from participants and thus the preparation effect could be measured.

Experiential Preparation Information

Across the studies, experiential preparation is implemented via several different mechanisms. For the documentary length film club, participants that prepare are given plot summaries in the days before the movies. For the first short film study, participants that prepare are given previews in the form of written text summaries (study two) to prepare for the film. In the remaining short film studies, participants that prepare view video previews. In the short story studies, some participants read a short excerpt from an early part of the story.

Enjoyment Ratings and Other Measures

In all studies, I measure liking for the experience using scale questions. In some studies (as specified) additional enjoyment measures are collected. The tables provide an overview of the studies.

Table 3: Summary of Studies – Measures and Manipulations

Study Name and Number	**Stimuli + Experiential Preparation Mechanism**	**Dependant Measures**	**Auxiliary Moderators**
Study One – Movie Club	Full length films - Reading plot summaries	Ratings Free-response questions	Additional experiential preparation
Study Two – Short Films with Plot Summaries as Experiential Preparation	Short films - Reading plot summaries	Ratings Free-response questions Choice task	Type of experiential preparation (Relate to knowledge of other experiences vs. other)

Study Three – Short Films with Video Previews as Experiential Preparation	Short films - Viewing video previews	Ratings Free-response questions Memory task Choice task	None
Study Four – Short Films with Video Previews and Expectations	Short films - Viewing video previews	Ratings Free-response questions Memory task Choice task	Expectations questions (Combined with experiential preparation)
Study Five – Short Films Two Types of Expectations	Short films - Viewing video previews	Ratings Choice Task	Expectations questions (Combined with experiential preparation)
Study Six – Separating Expectations and Experiential Preparation	Short films - Viewing first minute of film before viewing entire film	Ratings Free-response questions Memory task Choice task	Expectations questions (Both expectations and experiential preparation are manipulated within person.)
Study Seven – Short films with continue and repeat previews	Short films - Viewing first minute of film before viewing entire film	Ratings Free-response questions Choice task	None
Study Eight – Short Stories and Fluency	Short stories - Reading a small preview of the story	Ratings Free-response questions Adjective task Choice task	None
Study Nine - Short Stories with Cognitive Load	Short stories - Reading a small preview of the story	Ratings Free-response questions Adjective task Choice task	Cognitive load as means to decrease fluency.
Study Ten - Short Stories with Positive Mood Moderation	Short stories - Reading a small preview of the story	Ratings Free-response questions Adjective task Choice task	Mood manipulations (“tell a story task.”) Mood measures at two points in study

Table 4: Summary of Studies – Key Findings

Study Name and Number	Key findings
Study One – Movie Club	Experiential preparation leads to higher liking for films. Additional experiential preparation does not lead to even greater liking.
Study Two – Short Films with Plot Summaries as Experiential Preparation	Experiential preparation leads to higher liking for films. Relating the film to one's own experiences as experiential preparation did not lead to greater liking than using an unrelated experiential preparation task.
Study Three – Short Films with Video Previews as Experiential Preparation	Experiential preparation leads to higher liking for films. Experiential preparation does not help increase memory for films.
Study Four – Short Films with Video Previews and Expectations	Expectations appear to overwhelm the preparation effect where participants that prepare and state expectations have less liking for films than those that do not prepare.
Study Five – Short Films with Two Types of Expectations	The drop from expectations occurs both when stating expectations about the upcoming film and when retrospectively evaluating the preview.
Study Six – Separating Expectations and Experiential Preparation	Experiential preparation did not lead to any changes in either the expectations stated or no expectations stated conditions. This may have been caused by the change to the experiential preparation manipulation.
Study Seven – Short Films with Continue and Repeat Previews	In line with study six, experiential preparation via one minute introductory previews did not lead to enhanced liking for a film.

Study Eight – Short Stories and Fluency	Experiential preparation lead to higher liking for short stories. This effect is mediated by fluency. Fluency is shown to be a distinct factor from an evaluative index.
Study Nine – Short stories with Cognitive Load	There were no effects of experiential preparation. This may have been due to the lack of fluency from both the high and low load conditions.
Study Ten – Short Stories with Positive Mood Moderation	Positive moods moderate the preparation effect. That is, participants high in positive moods gain from experiential preparation and participants not high in positive moods do not gain from experiential preparation. These results are consistent with the "broaden and build" framework. Fluency mediates the preparation effect for the high positive participants.

General overview of methods and analysis

A more general question is "what causes liking for hedonic experiences?" For films and for stories, individual level differences play a large role in answering this question. In any given study assessing enjoyment of such experiences, there will be participants that generally like movies or short stories and people that generally do not so much like movies or short stories. Because of heterogeneity both in fundamental values and in scale use, all the studies use repeated measure designs where all participants experience all conditions. The effects of particular participants thereby serve as control variables, allowing individual differences to be controlled for while obtaining a better estimate of the effects of experiential preparation and the other auxiliary measures. In addition, (unless stated) the ordinal position of a particular film or story is randomized (by the computer) and the pairing of a film or story to an experiential preparation

condition is randomized (by experimental condition). These factors also serve as control variables in the analysis.

More specifically, the ten studies document various experiential preparation effects. Study one demonstrates that experiential preparation leads to increases in liking for experiences by forming a documentary film club where participants are shown full length movies, once per week. Studies two and three replicate study one using short films and two different experiential preparation mechanisms (written and video previews).

Studies four, five and six test the role of expectations first in combination with experiential preparation and then as a moderator of the preparation effect. Study seven tests for the experiential preparation effect using longer previews for the short films. In addition, all participants view some information before the film.

Study eight switches to a new domain (short stories) to document the preparation effect. In addition, study eight develops a measure of fluency and shows that fluency mediates the preparation effect. Study nine manipulates fluency by use of a cognitive load task.

Study ten finds that positive mood moderates the effect of experiential preparation. Specifically, the locus of the preparation effect is seen in individuals who are high in positive moods. Fluency's mediational role is replicated for these individuals.

3.2 Study One - Movie Club Study

Introduction

As an investigative entry point into examining the effects of experiential preparation, study one was conducted as an initial experiment run outside the laboratory. This study has two goals. The first goal is to demonstrate experiential preparation leads people to enjoy events more when the event is both substantial and meaningful. The second goal is to show that experiential preparation has a positive effect, even when the experiential preparation is days in advance of the experience. To achieve these goals, a documentary feature film club was formed where participants were invited to watch full length movies. During the months prior to the time of this study, several high-profile, successful, feature length documentary movies (e.g. "Super Size Me," "Fahrenheit 9/11," etc.) drew huge audiences and generated much discussion. It seemed reasonable to assume that a "documentary movie club" would excite and engage willing participants.

Participants, Methods and Procedure

Participants watched a total of four documentary films, once a week over one month. Unlike the laboratory experiments that follow, the ordinal position of films was not randomized between participants. Participants were recruited via advertisements through campus fliers and emails. Participants were a mixture of undergraduate, graduate

and professional students, staff members and community members. There were no effects of participant status, age or gender and these variables are not discussed further. Participants were paid $5 for each movie they attended. Movies were shown in an on-campus theater open only to study participants. The movies were selected to meet the following criteria. First, films were sought that few potential participants would have previously seen or heard of. Second, the films had to have general appeal rather than cater to special interests. I therefore chose documentaries with compelling character development over issue documentaries to avoid polarizing the audience. Finally, films had to be from approximately the same time period so that they were cohesive as a set. Four documentary films from a film festival met these criteria and were chosen for the study.

A total of fifty-nine participants attended at least one week of the film club. Because attendance was not mandatory (self selection issues are discussed below), not all participants attended every film. Twelve participants attended the club for all four weeks. Twenty-two participants attended the club for three of the four weeks, ten participants attended the club for two weeks, and fifteen participants attended the club for one week.

For the movie club study, experiential preparation was implemented by allowing participants to read summary information by e-mail in advance of the film. This summary information was taken directly from the film festival's description of each movie. A factorial design was used where each participant [if they showed up to each movie] served in each condition at least once. Participants were asked not to discuss

upcoming movies to prevent participants in certain conditions from being exposed to information sent to participants in other conditions. Three conditions were used:

Experiential Preparation Condition

Two days before a movie, participants in the experiential preparation condition received an email containing the film's title and plot summary. To insure participants read the email, these participants were asked to reply to the email and were also asked the following question: "on the basis of the description, how much do you think you will like the movie?" Participants responded using an 11-point scale, anchored by -5 ("One of the worst movies") and 5 ("One of the best movies") with midpoint 0 ("Average").

Extra Experiential Preparation Condition

Four days prior to the movie, participants in the extra experiential preparation condition received an email identical the one that participants in the experiential preparation condition received two days prior to the movie. These participants in the extra experiential preparation condition were given additional time to prepare through a second email, two days before the movie. This second email again contained the film's title and plot summary.

No-experiential preparation Control Condition

A third condition was used in which participants were not provided with any details about the upcoming film. This served as a control condition where participants were not able to prepare for the movie.

Movie Nights

On movie nights, participants were given a survey as they entered the theater. Since participants in the control condition had not yet seen the movie's title or plot summary, the survey contained this information. This information was identical to the email summaries in the two experiential preparation conditions. Participants were also asked if they had heard of the film prior to the current week. After the movie, participants completed the second part of the survey in which they were asked to rate how much they liked the movie on an 11-point scale anchored on -5 ("One of the worst movies") and 5 ("One of the best movies") with midpoint 0 ("Average").

Participants also completed three free response questions about the movie. These were: "What did you like about the movie?"; "What did you not like about the movie?" and "If a close friend asked you if they should see the movie, what would you tell him or her?"

Stimuli: Films and Summaries

The table below contains a list of the films and summary information from the movie club study:

Table 5: Films and Summary Information from the Movie Club Study

"Shadow Boxers**,"** 1999, USA. Directed, produced and edited by Katya Bankowsky. 72 min. The flashy, music video style of this documentary belies the affecting story of women's boxing champion Lucia Rijker, which gradually emerges as its centerpiece. A formidable fighter, Rijker is also a strikingly serious and spiritually centered woman; qualities which fly in the face of the boorish and boastful norm established by men's boxing. Woven throughout are the narratives of other women boxers, both amateur and professional. The star, however, is Rijker, and her commitment to becoming a world champion on her own terms.
"Me & Isaac Newton," 1999, USA. Directed by Michael Apted. Produced by Jody Patton and Eileen Gregory. 107 min. This film explores seven brilliant scientists, their childhoods, their developing careers and those particular moments of discovery and breakthrough when serendipity and insight converge to make the world anew. A primatologist studies the lemurs of Madagascar, a physicist rethinks the cosmic order, a neuroscientist explores how the brain makes language, a robotics expert pursues artificial intelligence, a biologist brings pure water to the third world. Triangle resident and Nobel laureate Gertrude Elion, a Burroughs Wellcome researcher, is one of the seven, a late bloomer whose greatest discoveries came after the age of 60. This film is dedicated to her.
"Speaking in Strings," 1999, USA. Directed by Paola di Florio. Produced by Lilibet Foster, Paolo di Florio and Counterpoint Films. 73 min. Speaking in Strings is an intensely intimate profile of violinist Nadja Salemo-Sonnenberg, whose unconventional delivery and bold character has caused enormous controversy in her fifteen year career. Regarded as one of the most accomplished violinists of our time, Nadja exposes her battles with depression and an attempted suicide. She shares with us the process of stardom and the tolls it has taken on her personal life. Filmmaker Paola di Florio's portrait of this "great hope" for music is intense and tender. Nadja contradicts the typical stereotypes of a classical musician. This brash, delicate, chain-smoking, sarcastic genius is amazingly human and always real.

"Driver 23," 1998, USA. Directed and produced by Rolf Belgum. 72 min.
Meet Dan Cleveland, frontman for the heavy metal band, Dark Horse who is also a delivery driver and amateur physicist. Follow Cleveland's quixotic quest for rock stardom as he toils in his basement frantically pursuing his dream with determination and madcap ingenuity. Taped, glued guitars; clumsy, homemade weightlifting machines; cartoonish diagrams; and dangerous loading ramps - Cleveland's house is a combination torture chamber and amusement park. Minneapolis filmmaker Rolf Belgum spent a year and a half inside Dan's world. Shot with a hand-held camera and a budget of $700, this film.

Results

No participant in any week, in any condition, reported previously seeing the movie. Six participants reported hearing about one of the films. None of the results change when these six participants are dropped from analysis.

Because the reported contrasts make use of within-participants comparisons, the fifteen people that attended only one week of the movie club have been dropped from the analysis. As a robustness check, I ran separate analyses that included these fifteen people, withholding the participant control variable. None of the results change under these tests.

Across all four films, when participants were in the experiential preparation conditions, they rated the movies as more enjoyable than when they were in the no-experiential preparation control condition (M's = 2.76, 2.00; $F[1,85] = 8.11$, $p = .0055$). When participants were in the extra experiential preparation condition, they rated the movies as more enjoyable than when they were in the no-experiential preparation control condition (M's = 2.61, 2.00; $F[1,85] = 4.50$, $p = .0368$). Similarly, when participants were in the standard experiential preparation condition, they rated the movies as more

enjoyable than when they were in the no-experiential preparation control condition (M's = 2.89, 2.00; $F[1,85] = 7.66$, $p = .0069$). There were no differences between the two experiential preparation conditions ($F[1,85], = 0.24$, $p = .626$) which suggests that, while some experiential preparation helps one to enjoy the film, extra experiential preparation does not lead to even greater enjoyment of the films.

Free-response questions

Two independent judges coded the responses to each free response question for three distinct constructs. First, responses were coded for the number of positive and negative affect words. Second, responses were coded for the number of self-references. Third, responses were coded for a third category, depth of processing. Within each response, each sentence was coded as "surface level", "deep" or "neither." Surface level comments directly mention an element of the movie and tend to be descriptive. Deep comments convey inferences or elaborations triggered by the movie and tend to be derived from prior knowledge or experiences (Craik and Lockhart 1972). The number of each type of sentence formed the codes for the depth of processing per response. (Examples of each construct and coding instructions can be found in the appendix.) Disagreements between coders were handled by discussion.

As a manipulation check of the validity of the protocol coding, a separate regression model tests whether affect was a valid predictor of participants' ratings using a variable equal to the ratio of positive to negative words. As expected, affect significantly predicted ratings ($F[1,85] = 16.97$, $p < .0001$).

It was predicted that participants in the experiential preparation conditions would use more positive affect words and fewer negative affect words than participants in the no-experiential preparation condition. It was also predicted that participants in the experiential preparation conditions would incorporate the self more than participants in the no-experiential preparation conditions. Finally, it was predicted that participants that had the opportunity to prepare for the films would use deeper processing. The table below summaries the results:

Table 6: Summary of Free Responses in Movie Club (Study One)

Condition	Positive Affect Count of terms (St. Err.)	Negative Affect Count of terms (St. Err.)	Use of Self Count of terms (St. Err.)
No-Experiential Preparation	2.91 (.28)	1.61 (.20)	2.00 (.25)
Standard Experiential Preparation	3.21 (.28)	1.51 (.20)	1.77 (.25)
Extra Experiential Preparation	2.73 (.25)	1.07 (.20)	1.80 (.27)
Key Comparisons	F, p-values	F, p-values	F, p-values
No-Experiential Preparation vs. Standard Experiential Preparation	F[1,85] = 1.41, p = .238	F[1,85] = 0.20, p = .656	F[1,85] = 0.02, p = .896
No-Experiential Preparation vs. Extra Experiential Preparation	F[1,85] = 0.19, p = .664	F[1,85] = 1.58, p =.211	F[1,85] = 0.30, p = .584
Standard Experiential Preparation vs. Extra Experiential Preparation	F[1,85] = 2.38, p = .127	F[1,85] = 0.69, p = .410	F[1,85] = .18, p = .944

Table 7: Summary of Free Responses in Movie Club (Study One) - continued

Condition	Avg. Number of Sentences (St. Err.)	% Deep Sentences (St. Err.)	% Surface Sentences (St. Err.)	% Neither Sentences (St. Err.)
No-Experiential Preparation	6.98 (.31)	3.5% (1.2)	20.9% (2.6)	75.6% (2.7)
Standard Experiential Preparation	6.56 (.31)	2.2% (1.1)	17.8% (2.6)	80.0% (2.7)
Extra Experiential Preparation	6.07 (.33)	3.8% (1.1)	16.1% (2.7)	80.1% (2.8)
Key Comparisons				
No-Experiential Preparation vs. Standard Experiential Preparation	F[1,85] = 0.97, p = .323	F[1,85] = 0.51, p = .476	F[1,85] = 2.02, p = .153	F[1,85] = 5.17, P = .026
No-Experiential Preparation vs. Extra Experiential Preparation	F[1,85] = 4.15, p = .045	F[1,85] = 0.02, p = .875	F[1,85] = .056, p = .458	F[1,85] = 0.60, P = .442
Standard Experiential Preparation vs. Extra Experiential Preparation	F[1,85] = .169, p = .285	F[1,85] = 0.29, p = .592	F[1,85] = 1.67, p = .200	F[1,85] = 2.10, p =.152

Self-selection

Because the manipulations in this experiment took days and participants were not required to attend each movie, self selection is a concern. The most pressing self selection problem is the question of whether participants who received the summary and attended the movie expected to enjoy the movie more than participants who received the summary and did not attend the movie. That is, those that were notified of the movie ahead of time might have self-selected into or out of watching the movie based on their

expected enjoyment. Two analyses provide evidence that self selection may not be a problem. First, recall that participants who prepared for the film were asked for an expected rating of the movie. If participants self-selected out of attending the movie, then these early expected ratings should predict a binary attendance decision variable equal to "1" if a participant attended a movie and a "0" otherwise. It is then possible to test if expected ratings are a valid predictor general selection. This effect was not significant ($F < 1$), suggesting that participants' expectations did not predict their attendance. Second, if self-selection occurred, participants who did not receive the summary ahead of time should have shown up for the movie in different proportions than those who received the summary ahead of time. Self-selection might work in either direction here. Participants that receive the summary may have their curiosity increased or decreased from the summary, causing an increase or decrease in the proportion of participants showing up for the film. Across all four weeks, ninety-eight participants received a summary ahead of time and attended the movie, while one hundred-fourteen participants received the summary and did not attend the movie. Fifty-one participants (34.2%) did not receive the summary ahead of time and showed up for the movie; fifty participants (30.4%) did not receive the summary ahead of time and did not show up for the movie. Such proportions do not differ from what is expected by chance alone ($\chi^2[1] = 0.500$, $p = .48$), suggesting that participants from all conditions tended to show up for the movie in equal proportions.

Discussion

The movie club study presents a first study demonstrating that experiential preparation leads to more enjoyment of experiences. This was demonstrated in a non-traditional setting outside the laboratory using real, meaningful, affectively rich experiences. This allowed for a preparation mechanism for a movie night that mirrored the way people prepare for and watch movies.

3.3 Study Two – Short Films with Plot Summaries as Experiential Preparation

Because of the limitations to the movie club study, study two was conducted to replicate the effects of study one in a controlled laboratory setting where self selection would not be an issue and the order in which movies were presented could be randomized. Instead of full length films, participants watched short films on individual computers.

As in the movie club study, experiential preparation was implemented by allowing participants to read written plot summaries for a film. The table below contains the four films along with their plot summaries used for this study.

Table 8: Films and Summaries (Study Two)

"Milton Rogovin: The Forgotten Ones" This film chronicles the real life story of Milton Rogovin. In this film, Milton Rogovin discusses his triumphant life and career in photography. The film is about how his work portrays people from disadvantaged backgrounds and the impact his work has had on these people throughout the years. Without his photography, these underserved people would probably have never had a venue to show their lives.
"The Chinese Wall" The Chinese Wall is about is a lonely Dutch woman named Aagt. She has been bruised by life. Her marriage and family lives were both failures. During her visit to the Chinese restaurant, at her regular table, we get to know her by her thoughts. She is a straight, even stiff woman, but with a sense of perspective and humor. Aagt reflects her life on that of the other guests and imagines their life stories. But, things aren't always what they seem. The Chinese Wall is a Dutch film features English subtitles.
"Dreamscapes" Dreamscapes is a video collage of various people's dreams, illustrating what happens. Each person's dream varies from falling to saving a deer from a giant robot. The filming technique is as eclectic as the dreams and the voices of the people that describe them. Most of the film features various animation styles while people of all ages narrate their dreams.
"Sleep" Who do you turn do if you find out you are going to die? In this film Arthur, a quiet and stoic, 20-something, man battles with the knowledge that he has a tumor. He struggles to inform his friends. When he does, they only superficially appear to care. At first, Arthur seems equally disinterested and quiet towards his parents, but eventually he realizes they are the only people he can turn to.

Pretest

As a first step to select appropriate films, ten pre-test participants evaluated a larger set of seven films. First, after viewing a film, participants provided ratings using a 9-point scale asking how much they liked the clip anchored on -4 ("Very Bad") and 4 ("Very Good") with a midpoint of 0 ("Average"). (I note here that this scale used for the pre-test differs from the 11-point scale used in all the main studies.) The participants also

rated the films on a variety of dimensions ("Moving," "Engrossing," "Interesting," "Meaningful," "Stimulating," "Time Flew," "Attention Grabbing," "Dull," "Boring," "Irritating," "Thought Provoking," "Serious," "Not Involving," "Worth Remembering," "Difficult to Understand") using a 5-point scale question that asked how well the word or phrase described the clip, anchored on 1 ("Not at All") and 5 ("Very Strongly").

This pretest allowed the selection of films that would be generally liked, but also contained variance in affective responses. Additionally, films were screened for educational value since participants may rate such films as to their educational merit, rather than their enjoyment. Participants were also asked how offensive a film was and how family friendly a film was. These last two measures allowed screening out films that might not be appropriate to the subject population for the main study. As a result of variances in responses to the measures from the pre-test, four films were selected for use in the main study. The table below summaries the results from the pre-test for the four films:

Table 9: Pretest of Short Films – Summary Statistics

Film	Milton Rogovin: The Forgotten Ones	Chinese Wall	Dreamscapes	Sleep
Rating (Mean and St. Dev.)	3.60 (1.26)	2.60 (1.90)	2.10 (2.08)	1.50 (1.58)
<u>Additional Dimensions</u> (Means and Standard Deviations)				
Attention Grabbing	3.4 (1.07)	2.9 (1.52)	3.0 (1.05)	2.6 (0.51)
Boring	1.5 (0.70)	1.8 (1.31)	2.7 (0.82)	2.1 (0.87)
Difficult to Understand	1.1 (0.31)	1.4 (0.51)	1.2 (0.42)	1.4 (0.51)
Dull	1.4 (0.69)	1.7 (1.25)	1.6 (0.69)	2.2 (1.03)

Educational	3.1 (1.10)	2.1 (1.28)	2.2 (0.78)	1.8 (0.78)
Engrossing	3.5 (1.08)	2.8 (1.39)	2.2 (1.03)	2.4 (1.07)
Interesting	3.8 (1.03)	3.0 (1.33)	3.0 (0.94)	2.7 (0.82)
Irritating	1.0 (0)	1.2 (0.63)	1.4 (0.69)	1.5 (0.52)
Meaningful to me	2.6 (1.17)	1.9 (0.73)	2.0 (1.33)	2.1 (1.37)
Moving	3.8 (0.91)	2.5 (1.08)	1.8 (0.63)	3.1 (1.19)
Not Involving	2.0 (1.05)	2.0 (1.05)	2.1 (1.10)	2.2 (1.03)
Serious	3.2 (0.63)	2.6 (0.96)	1.7 (0.67)	4.5 (0.52)
Stimulating	3.1 (1.19)	3 (1.49)	2.5 (1.08)	2.7 (1.33)
Thought Provoking	3.0 (1.33)	2.7 (1.25)	2.5 (1.08)	3.2 (0.91)
Time Flew	3.1 (1.10)	2.8 (1.47)	3.1 (0.99)	2.0 (0.94)
Worth Remembering	3.8 (1.31)	2.9 (1.52)	2.2 (1.03)	2.9 (1.10)

Participants, Methods and Procedure

Sixty-eight undergraduate participants completed this one hour and fifteen minute study in exchange for $20 compensation. The entire experiment took place on a computer. A within-participant design was used where all participants viewed all four films and served in each condition at least once.

Experiential Preparation: As discussed in the previous chapter, it was initially hypothesized that while initial experiential preparation by learning about an upcoming film would increase positive affect, additional experiential preparation by further relating this information to one's self would produce an even greater increase in liking for the film. Therefore, two experiential preparation conditions were used. Participants viewed two films in a self referencing and experiential preparation condition where they first read the film's title and plot summary and then responded to a question asking them to relate the summary to other "movies, books or experiences" they had seen, read or experienced. Participants viewed one film in a separate experiential preparation (other

task) condition after they first read the film's title and plot summary and then responded to a distraction question where they were asked to discuss their walk to the experimental lab. Finally participants viewed a fourth film in a control condition where they immediately viewed a film after only reading its title. The particular experiential preparation level for a film (self referencing experiential preparation, other task experiential preparation, no-experiential preparation control) was randomized within person, such that all four films could be paired with one of the experiential preparation levels. On balance, each film would serve in the self referencing experiential preparation condition one-half the time and in each of the other two conditions one-quarter of the time. The ordinal position in which a particular film was presented was also randomized.

Dependent variables

Enjoyment Ratings: Immediately after viewing a film, participants rated the film using an 11-point scale question: "How much did you enjoy watching the film: In terms of enjoyment the film was…" anchored on -5 ("Very, very bad") and +5 ("Very, very good") with a 0 ("Neutral") midpoint.

Free Response Question: Following the ratings question participants were given the following free response question: "How would you describe the film you just watched to someone who had never seen it before?" Similarly to the movie club study, responses to this question were coded for affect, use of the self and depth of processing.

Choice Task: Following all four films, participants were asked a series of questions designed to serve as a choice task to see which films had the most positive and least negative affective responses on four dimensions. The choice task included four

positive affect questions and four negative affect questions that asked for the highest and lowest performing film with regard to "ease of understanding," "meaningfulness," and "pleasantness" and "favorite." All eight questions were asked in random order. The exact questions used are in the table below:

Table 10: Choice Task Questions (Used in Studies Two Through Ten)

Which film was your MOST FAVORITE?
Which film did you find to be EASIEST to understand?
Which film did you find to be the MOST MEANINGFUL TO YOU?
Which film was MOST PLEASANT for you to watch?
Which film was LEAST PLEASANT for you to watch?
Which film did you find to be HARDEST to understand?
Which film did you find to be the LEAST MEANINGFUL TO YOU?
Which film was LEAST PLEASANT for you to watch?

The choice task allows testing another measure of satisfaction with the experience. Since the choice tasks takes place after all films are complete it serves as a robustness check of the ratings measure where all information about all films are taken into account. Further, since it takes place after a period of time it also allows for a determination if the effect of experiential preparation lasts beyond an immediate time frame. In other words, the choice task asks "are the effects sustainable over time?"

Results

One film observation from each of two participants was eliminated due to computer errors.

Rating: A series of planned contrasts demonstrates the preparation effect. As predicted, when participants prepared for films by responding to the plot summaries, they enjoyed the films more so than when participants were in the title-only control condition (M's = 2.61, 1.88; $F[1,196] = 6.52$, $p = 0.011$). However, the degree of elaboration did not matter. In particular, when participants read plot summaries, there was no significant difference between the films for when they responded to the summaries and when they responded to a distraction task (M's = 2.61, 2.66; $F[1,196] < 0.01$, $p = .972$). When participants read plot summaries and related the summary to their previous experiences, they enjoyed the movies significantly more than when they were in the no-experiential preparation control condition (M's = 2.61, 1.88; $F[1,196] = 6.05$, $p = 0.015$). When participants read plot summaries and completed a distraction task, they enjoyed the movies significantly more than when they were in the no-experiential preparation control condition (M's = 2.66, 1.88; $F[1,196] = 4.41$, $p = 0.037$). Together, these results suggest that there is a net benefit from experiential preparation.

Choice Score: From the eight affect based choice questions, I created a "net positive affect" score by adding 1-point for every time a participant selected a particular film on one of the positive affect dimensions and subtracting 1-point for every time a participant selected a film on one of the negative affect dimensions. A principal components factor analysis (see table below) demonstrates that all eight items load on a single factor.

Table 11: Choice Score Factor Loadings (Study Two)

Item	Component Loading
Liked the Most	.682
Understood the Most	.500
Most Meaningful	.564
Most Pleasant	.577
Liked the Least	-.767
Understood the Least	-.576
Least Meaningful	-.561
Least Pleasant	-.731
Cronbach's α = .773	

Each film has its own choice score; however, these scores are not completely unique since only one film is selected for each of the eight dimensions. Therefore, each film has a potential score of between -4 and +4, but the sum of the film's scores must be zero. (The only exception to this is where observations are dropped in the analysis.)

A similar series of planned contrasts from the ratings question shows the same pattern of results, that experiential preparation leads to greater liking for the film. As predicted, when participants prepared for a film by reading the movie's plot summary and by responding to the relate question, they enjoyed the film more so than when they were not able to prepare (M's = 0.34, -0.99; $F[1,196] = 15.18$, $p < 0.0001$). When participants prepared for a film by reading the plot summary and by responding to the distraction task, they enjoyed the film more than when they were not able to prepare (M's = 0.25, -0.99; $F[1,196] = 9.62$, $p = 0.0021$). Against the initial hypothesis, there were no differences between the two types of experiential preparation in terms of the choice score ($F[1,196] = .09$, $p = .759$).

The table below summarizes the results from the ratings, and choice task.

Table 12: Summary of Results from Study Two - Ratings and Choice Score

Condition	Ratings (Standard Error)	Choice Score (Standard Error)
No-Experiential Preparation	1.88 (.23)	-0.99 (.27)
Experiential Preparation + Other Task	2.66 (.23)	+0.25 (.27)
Experiential Preparation + Relate	2.61 (.16)	+0.34 (.19)
Key Comparisons		
No-Experiential Preparation vs. Experiential Preparation + Other Task	F[1,196] = 4.41, **p = 0.037** Cohen's d = .36	F[1,196] = 15.04, **p = 0.0001**
No-Experiential Preparation vs. Experiential Preparation + Relate	F[1,196] = 6.05, **p = 0.015** Cohen's d = .37	F[1, 196] = 9.62, **p = 0.0022**
Experiential Preparation + Other Task vs. Experiential Preparation + Relate	F[1,196] < 0.01, p = .943	F[1,196] = .09, p = .765

Free Response Question: The free response question following each film was coded for the same constructs as the free response questions in the movie club study. Again these were use of affect, self referencing and depth of processing. Two independent judges coded the responses for the constructs. Disagreements were settled by discussion between the judges. (Due to computer error, one participant's responses to one film were dropped from the protocol coding.)

As a manipulation check of the validity of the protocol coding, a separate regression model tests whether affect was a valid predictor of participants' ratings using a variable equal to the difference of positive and negative words. As expected, affect significantly predicted ratings (F[1,198] = 4.60, p = .033).

The tables below summarize the results of the protocol coding:

Table 13: Summary of Free Responses (Study Two)

Condition	Positive Affect Count of terms (St. Err.)	Negative Affect Count of terms (St. Err.)	Use of Self Count of terms (St. Err.)
No-Experiential Preparation	0.58 (.10)	0.85 (.15)	0.34 (0.09)
Experiential Preparation + Other Task	0.66 (.10)	1.01 (.15)	0.37 (0.09)
Experiential Preparation + Relate	0.56 (.07)	0.81 (.10)	0.32 (0.06)
<u>Key Comparisons</u>			
No-Experiential Preparation vs. Experiential Preparation + Other Task	F[1,195] = 0.28, p = .596	F[1,195] = 0.63, p = .428	F[1,195] = 0.05, p = .820
No-Experiential Preparation vs. Experiential Preparation + Relate	F[1, 195] = 0.36, p = .552	F[1, 195] = 0.11, p = .748	F[1, 195] = 0.29, p = .590
Experiential Preparation + Other Task vs. Experiential Preparation + Relate	F[1, 195] = 1.46, p = .229	F[1, 195] = 1.56, p = .213	F[1, 195] = 0.64, p = .423

Table 14: Summary of Free Responses (Study Two) - continued

Condition	Avg. Number of Sentences (St. Err.)	% Deep Sentences (St. Err.)	% Surface Sentences (St. Err.)	% Neither Sentences (St. Err.)
No-Experiential Preparation	3.8 (.20)	46.1% (3.3%)	53.3% (3.4%)	0.6% (0.9%)
Experiential Preparation + Other Task	3.3 (.20)	50.7% (3.3%)	48.4% (3.3%)	0.9% (0.9%)
Experiential Preparation + Relate	3.8 (.14)	45.5% (2.3%)	52.5% (2.3%)	2.0% (0.6%)
<u>Key Comparisons</u>				
No-Experiential Preparation vs. Experiential Preparation + Other Task	F[1, 195] = 3.60, **p = .060**	F[1,195] = 0.57, p = .451	F[1,195] = 0.61, p = .434	F[1,195] = 0.052 p = .901

No-Experiential Preparation vs. Experiential Preparation + Relate	F[1, 195] = 6.36, **p = .012**	F[1, 195] = 0.10, p = .751	F[1, 195] < 0.01, p = .990	F[1, 195] = 1.28, p = .260
Experiential Preparation + Other Task vs. Experiential Preparation + Relate	F[1, 195] = 0.11, p = .744	F[1, 195] = 1.41, p = .236	F[1, 195] = 0.79, p = .374	F[1, 195] = 0.97, p = .326

Discussion

This experiment provides a second demonstration of experiential preparation increasing liking for a subsequent experience. This was shown by having participants read plot summaries before viewing a film and was demonstrated through both a rating question and a choice task. The two separate measures indicate that the positive effect of experiential preparation seem to be robust and lasting.

3.4 Study Three – Short Films with Video Previews as Experiential Preparation

Study three serves to demonstrate that experiential preparation for events leads to higher satisfaction through a different experiential preparation mechanism than summary information as used in study one and study two. Study three sought to design a way for participants to prepare for upcoming films without providing them with unique information that may drive the effect. Thus, for this experiment, experiential preparation was implemented by providing participants with a 20-second preview of an upcoming film. These 20-second clips were contiguous (i.e. not two ten-second scenes) and were generally the first 20-seconds that followed the film's opening credits. Participants who

did not view the preview would ultimately see this part of the film when they watched the entire movie. Therefore, all participants, including participants that were not able to prepare, were exposed to the same information and no participant had unique information from which they could interpret the film when asked to give their derived pleasure.

Participants

Twenty-eight participants took place in this experiment in exchange for $20 compensation. The entire experiment took place on a computer. One observation from one participant was dropped due to a computer error.

Design

A within-participant design was used where all participants again viewed all four films and served in each condition twice. Participants viewed two films in an experiential preparation condition where they first read an upcoming film's title and then viewed the film's 20-second preview before watching the film. Following the preview, participants were given the "relate" question from the self-referencing experiential preparation condition in the previous study. Participants also viewed two films in a no-experiential preparation control condition were they read a film's title and then immediately watched the film. Unlike study two, the ordinal position of the experiential preparation conditions were not randomized. Participants always viewed the first two films in a no-experiential preparation control condition and the last two films in the experiential preparation condition.

Dependent variables

Ratings, Free Response Question and Choice Score*:* The same ratings question, free response question and choice task from the previous study was used in this study.

Memory Test: After all four films, participants were given a memory test where they were asked a series of six factual questions about each film. As a sample, the set of questions from the film "Sleep" is in the table below.

Table 15: Sample Memory Questions (Factual Recall Task)

What was Arthur doing in the opening scene?
What did Arthur leave behind in the telephone booth?
How many friends took Arthur do the bar?
When Arthur and his friends went to the bar, how many women were at next the table?
What beverage does the woman with the crystal tell Arthur to stay away from?
In Sleep, what was Arthur's dad doing when they met at the water?

Results

Rating: As predicted, when participants prepared for films by viewing video previews, they enjoyed the films more than when they were in a no-experiential-preparation control condition (M's = 3.21, 2.50; $F[1,80] = 5.30$, $p = 0.033$).

Choice Score: Again, a choice score was created from the eight affect based choice questions. A principal components factor analysis (see table below) demonstrates that all eight items load on a single factor.

Table 16: Choice Score Factor Loadings (Study Three)

Item	Component Loading
Liked the Most	.753
Understand the Most	.450
Most Meaningful	.590
Most Pleasant	.558
Liked the Least	-.753
Understood the Least	-.463
Least Meaningful	-.714
Least Pleasant	-.728
Cronbach's α = .764	

Again, when participants prepared for the films by viewing video previews, they had higher satisfaction for the films as reported by the results of their choice task (M's = 0.40, -0.46; F[1,80] = 4.32, p =.0409).

Memory Test: The memory test was scored such that each correct response to a question was given one point and an incorrect response was not given a point. Thus each participant had a score on the memory test (ranging from 0 to 6) for each of the four movies. Participants had an average memory score of 4.27 for prepared films while they had an average memory score of 4.18 for films that did not prepare for. This difference is not significant (F[1,80] = 0.78, p = .379).

The table below summaries the results from the ratings, choice and memory tasks:

Table 17: Summary of Results from Study Three - Ratings and Choice Score

Condition	Ratings (Standard Error)	Choice Score (Standard Error)	Memory Score (Standard Error)
No-Experiential Preparation Control (Twice per participant 58 Observations)	2.50 (.21)	-0.46 (.33)	4.18 (.14)

Prepare and Relate (Twice per participant 58 Observations)	3.21 (.21)	0.40 (.33)	4.27 (.14)
Key Comparisons			
No-Experiential Preparation vs. Prepare and Relate	F[1,80] = 4.69, p = 0.024 Cohen's d = .44	F[1,80] = 4.32, p =.0409	F[1,80] = 0.78, p = .379

Free Response Question: The free response questions following each film were coded by independent judges for the same constructs as the short films with text previews study. Again these constructs are the use of self references, positive and negative affect terms and depth of processing.

As a manipulation check of the validity of the protocol coding, a separate regression model tests whether affect was a valid predictor of participants' ratings using a variable equal to the difference of positive and negative words. As expected, affect significantly predicted ratings ($F[1,80] = 14.46$, $p < .001$).

The tables below summarize the results of the protocol coding:

Table 18: Summary of Free Responses (Study Three)

Condition	Positive Affect Count of terms (St. Err.)	Negative Affect Count of terms (St. Err.)	Use of Self Count of terms (St. Err.)
No-Experiential Preparation	0.54 (.12)	0.82 (.13)	0.18 (.11)
Experiential Preparation + Relate	0.93 (.12)	0.57 (.13)	0.52 (.11)
Key Comparisons			
No-Experiential Preparation vs. Prepare + Relate	F[1,80] = 4.82, **p = .031**	F[1,80] = 1.91, p = 0.171	F[1,80] = 4.99, **p = 0.028**

Table 19: Summary of Free Responses (Study Three) - continued

Condition	Avg. Number of Sentences (St. Err.)	% Deep Sentences (St. Err.)	% Surface Sentences (St. Err.)	% Neither Sentences (St. Err.)
No-experiential preparation	3.2 (.24)	39.5% (4.6%)	60.5% (3.8%)	0.00% (---)
Experiential Preparation + Relate	3.2 (.24)	49.6% (4.5%)	49.3% (3.8%)	0.1% (0.7%)
Key Comparisons				
No-Experiential Preparation vs. Prepare + Relate	$F[1,80] < .01$, $p = 0.931$	$F[1,27] = 3.91$, **$p = 0.051$**	$F[1,80] = 5.05$, **$p = 0.027$**	$F[1,27] = 3.05$, $p = 0.085$

Summary

Through a feature length film study and two laboratory studies, experiential preparation has been shown to lead to an increase for satisfaction for subsequent events. This effect has been examined using different types of films, both of feature length films and short length and several different types of experiential preparation.

3.5 Study Four – Short Films with Video Previews and Expectations

Study four is identical to study three, with one exception (described below) that allows for a test for the combined effect of experiential preparation and stating expectations.

Participants, Methods and Procedure

Thirty one participants took place in this experiment. All methods and procedures in study four are identical to study three with the following exception:

Expectations Question: Immediately after completing the experiential preparation task, participants were asked to state their expectations by responding to the question "How much do you think you will like watching the film?" Participants responded via an 11-point scale question anchored on 1 ("Not at all") and 11 ("Very Much").

Results

Rating: Reversing the effect from the previous study, when participants prepared for the films and stated expectations, they enjoyed the films less than when they did not prepare (M's = 1.89, 2.91; F[1,89] = 7.37, p = 0.008).

Choice Score: A principal components factor analysis (see table below) demonstrates that all eight items load on a single factor and a choice score was again used based on participant's responses to this task.

Table 20: Choice Score Factor Loadings (Study Four)

Item	Component Loading
Liked the Most	.701
Understood the Most	.309
Most Meaningful	.758
Most Pleasant	.561
Liked the Least	-.698
Understood the Least	-.433
Least Meaningful	-.716
Least Pleasant	-.680
Cronbach's α = .764	

When participants prepared for the films and stated expectations they had less satisfaction for the films as reported by the results of their choice task (M's = -0.34, 0.34; F[1,89] = 2.91, p =.0915). This effect is marginally significant.

Memory Score: When participants prepared and stated expectations for films, they had an average memory score of 4.16. When participants did prepare, they had an average memory score of 3.85. This difference is not significant (F[1,89] = 0.84, p = .361).

Table 21: Summary of Results from Study Four - Ratings and Choice Score

Condition	Ratings	Choice Score	Memory Score
No-Experiential Preparation Control (Twice per participant 62 Observations)	1.89 (.21)	-0.34 (.29)	3.85 (.11)
Prepare, Relate & State Expectations (Twice per participant 62 Observations)	2.91 (.21)	0.34 (.29)	4.16 (.11)
Key Comparisons			
No-Experiential Preparation vs. Prepare, Relate & State Expectations	F[1,89] = 7.37, **p = 0.008**	F[1,89] = 2.91, **p =.0915**	F[1,89] = 0.84, p = .361

Free Response Question: The free response question was again coded by two independent judges for the same three constructs as in previous studies. Again these were positive and negative affect, the use of the self and level of processing. As a manipulation check of the validity of the protocol coding, a separate regression model tests whether affect was a valid predictor of participants' ratings using a variable equal to the difference of positive and negative words. As expected, affect significantly predicted ratings (F[1,89] = 8.59, p = .004). As summarized in the table below, there appears to be no meaningful differences between conditions across any of the constructs.

Table 22: Summary of Free Responses (Study Four)

Condition (N = 31, 2 Observations in each condition for each participant)	Positive Affect Count of terms (St. Err.)	Negative Affect Count of terms (St. Err.)	Use of Self Count of terms (St. Err.)
No-Experiential Preparation	0.66 (.11)	0.45 (.11)	0.19 (.06)
Experiential Preparation + Relate + Expectations	0.47 (.11)	0.48 (.11)	0.23 (.06)
Key Comparisons			
No-Experiential Preparation vs. Experiential Preparation + Relate + Expectations	F[1,89] = 1.31, p = 0.254	F[1,89] = 0.04, P = 0.843	F[1,89] = 0.10, p = 0.750

Table 23: Summary of Free Responses (Study Four) - continued

Condition	Avg. Number of Sentences (St. Err.)	% Deep Sentences (St. Err.)	% Surface Sentences (St. Err.)	% Neither Sentences (St. Err.)
No-Experiential Preparation	2.9 (.25)	41.4% (4.1%)	57.7% (4.2%)	0.9% (1.1%)
Experiential Preparation + Relate + Expectations	3.4 (.25)	43.6% (4.1%)	54.7% (4.2%)	1.5% (1.1%)
Key Comparisons				
No-Experiential Preparation vs. Experiential Preparation + Relate + Expectations	F[1,89] = 1.63, p = 0.204	F[1,89] = 1.78, p = 0.785	F[1,89] = 0.15, p = 0.700	F[1,89] = 0.43, p = 0.514

Summary

This experiment provides initial evidence that expectations can weaken, or possibly even reverse, the preparation effect. The next two experiments were designed to test this result further.

3.6 Study Five – Short Films with Two Types of Expectations

As discussed in the previous chapter, expectations can be stated in a several ways. For a service encounter, expectations can be stated based on how much one liked the previous encounter (retrospectively) or based on how much one might expect to enjoy the next service encounter (prospectively). Similarly, after a preview a movie viewer can state how much they enjoyed the preview or they can state how much they expect to enjoy the film based on the preview. In this experiment, the combined effects of preparation with each of these two types of expectations are studied.

Participants, Method and Procedure

Sixty participants took part in this experiment. The design of this experiment is largely similar to previous short film experiments with small modifications. Experiential preparation was again implemented as allowing participants to view a 20-second video preview of the film, but unlike the previous short film experiments, participants were not given a free response question following the preview. All participants viewed four films, one in each of the conditions described below.

Control and Standard Experiential Preparation Conditions: For one of the films, participants served in a no-experiential preparation control condition and did not view a preview. For a second film, participants prepared by viewing the 20-second video preview. The ordinal positions of these two conditions were randomized within the first and second of the four ordinal positions.

Expectations Conditions: Participants watched one film after stating their prospective expectation for the film, which is labeled here as the forward expectation condition. In this condition participants viewed a 20-second video preview and were asked "based on the preview, how much [they] expect to enjoy the film." Participants viewed one film after stating their retrospective expectation for a film, which is labeled here as the backwards expectation condition. To query backward expectations, participants were asked "how much [they] enjoyed the film's preview." Participants responded to both expectations questions using an 11-point scale question anchored on 1 ("Not at all") and 11 ("Very Much"). These two conditions were randomized within the third and fourth ordinal position.

Results

When participants were in the control condition, they reported an average liking rating of 2.35. When participants were in the no expectation with experiential preparation condition, they reported an average rating of 2.75. This difference directionally replicates the preparation effect, but fails to achieve significance ($F[1,165] = 1.60$, $p = .2072$). When participants stated forward expectations, they had an average

rating of 2.06, and when participants stated backward expectations, they had an average rating of 2.03. These numbers are not significantly different from the no-experiential preparation control condition (forward expectation: $F[1,165] < 1$; backward expectation $F[1,165] < 1$) and are significantly lower than the rating from the experiential preparation without expectations condition for both the forward expectation ($F[1,165] = 4.07$, $p = .0454$) and backward expectation ($F[1,165] = 4.14$, $p = .0434$). The table below summaries these results:

Table 24: Summary of Results (Study Five)

Condition	Ratings (Standard Error)
No-Experiential Preparation Control	2.35 (.24)
Prepare and Relate	2.75 (.24)
Prepare, Relate and Forward Expectations	2.06 (.24)
Prepare, Relate and Backward Expectations	2.03 (.24)
Key Comparisons	
Control vs. Prepare and Relate	$F[1,165] = 1.60$, $p = .2072$
Control vs. Forward Expectations	$F[1,165] = 0.56$, $p = .4541$
Control vs. Backward Expectations	$F[1,165] = 0.56$, $p = .4416$
Prepare and Relate vs. Forward Expectations	$F[1,165] = 4.07$, **$p = .0454$**
Prepare and Relate vs. Backward Expectations	$F[1,165] = 4.14$, **$p = .0434$**

Summary

Study five provides more evidence that stating expectations may dampen the preparation effect. Both studies four and five tested the combined effect of experiential preparation and expectations. The next study was designed to test their interactive effect.

3.7 Study Six – Separating Expectations and Experiential Preparation

While studies one through three found that experiential preparation led to greater enjoyment for films, studies four and five found that stating expectations, combined with experiential preparation, causes a decrease in liking for the experiences. A question immediately arises: What are the separate effects of expectations from experiential preparation? To examine this question, study six uses a 2 X 2 design where both expectations and experiential preparation are manipulated. To implement this design four conditions are used where, in each condition, expectations are stated or are not stated, and previews are shown or are not provided. Logistically, this leaves one condition where participants are asked to state expectations without viewing any preview information. Because of this, study six changes the experiential preparation condition so that participants who are not asked to prepare for the film have access to some information on which to base their expectations.

Participants Method and Procedure

Fifty four participants took part in this experiment. Participants viewed the same set of four short films as in the previous short film studies. Two factors were

manipulated: 1), whether or not participants were able to prepare for the film by viewing preview information and 2), whether or not participants stated their expectations for the film. A 2 (Experiential Preparation: Watch entire film after preview vs. Continue after preview; Expectations: Stated vs. Not stated) was used as described in detail below:

Experiential Preparation: Experiential preparation in this study was different from the earlier studies in two ways. First, instead of using 20-second video previews from an early part of the film, this study used approximately the first minute of a film as a preview. Second, all participants watched this first part of the film. In the experiential preparation conditions, participants were told that they would watch a preview of the upcoming film. After watching the first minute, participants in the experiential preparation conditions then began the film from the beginning (repeat preview condition). After viewing the first minute, participants in no-experiential preparation conditions then continued to watch the remaining part of the film (continue preview condition).

Expectations: To query for expectations, participants in the expectations conditions were asked to state their expectations for how much they thought they would enjoy watching the film using the 11-point scale question from the previous two experiments. This question was asked after participants viewed the first minute of the film. For example, participants in an experiential preparation and expectations condition viewed the first minute of the film as a preview, stated expectations and then watched the entire film. Participants in the no-experiential preparation and expectations condition viewed the first minute of the film and then stated their expectations before continuing to watch the rest of the film.

Dependent variables

Rating and Choice Score: The same rating questions and choice task from the previous experiments were used in this experiment.

Memory Tests: This study implemented a new memory task designed to test participants' cognitive ability to recall the temporal order of scenes from the film. At the conclusion of the study, participants were presented with a scene-ordering task for each film. In this task, participants were presented (on one side of the computer screen) with six pictures from different parts of a film in random order. Participants were instructed to rank the pictures by order (on the other side of the screen) so that they appeared, from top to bottom, in the correct temporal order. This task allows for a straightforward memory score using the Spearman-rank correlation coefficient, where the deviation between the actual temporal order of a scene and the stated order serves as the rankings for the calculation.

Results

Rating: The results from this experiment seem to differ from the previous experiments where 20-second video previews were used. First, within the no-expectations conditions, when participant viewed the first minute of the film as a preview, they enjoyed the film almost identically to when they viewed the first minute before continuing on to the entire film (M's = 2.24, 2.35; $F[1, 155] < 0.01$, $p = .974$). The same result occurred when participants were in the expectations condition (M's = 2.07, 2.37; $F[1, 155] = 0.52$, $p = .473$). There were no main effects of experiential preparation

($p > .62$) or stating expectations ($p > .93$) and the interaction of experiential preparation and expectations was not significant ($p > .59$).

Choice Score: The results from the choice task produced a similar pattern of results to the ratings question. When expectations were not stated, participants enjoyed the film almost identically whether they were in the experiential preparation condition (-0.06) or in the no-experiential preparation condition (.105). This difference is not significant ($p = .85$). When stating expectations, there were also no differences in the choice score for participants that were able to prepare (-.19) and participants that were not able to prepare (.15). This difference is not significant ($p = .20$). (See the table below.)

Memory Score: Experiential preparation also failed to produce increases in memory in both the no expectations and in the stated expectations conditions. When participants were in the no stated expectations conditions, they had an average memory score of .59 for the films they prepared for and an average memory score of .55 for the films they did not prepare for ($F[1,155] = 0.03$, $p = .854$). When participants were in the stated expectations conditions, they had an average memory sore of .59 for the films they prepared for an average memory score of .53 for the films they did not prepare for ($F[1,155] = 0.90$, $p = .432$).

The table below summaries the results of experiential preparation and expectations on ratings, the choice score and on memory:

Table 25: Summary of Results from Study Six - Ratings, Choice and Memory

Condition	Ratings (Standard Error)	Choice Score (Standard Error)	Memory Score (Standard Error)
No Expectations & No-Experiential Preparation	2.35 (.18)	0.18 (.19)	.55 (.037)
No Expectations & Experiential Preparation	2.24(.18)	-0.09 (.19)	.59 (.037)
Expectations & No-Experiential Preparation	2.37 (.18)	1.11 (.19)	.53 (.037)
Expectations & Experiential Preparation	2.07 (.18)	-0.20 (.19)	.59 (.037)
Key Comparisons			
No Expectations: Experiential Preparation vs. Control	$F[1, 155] < 0.01$ $p = .9742$	$F[1, 155] = 0.20$ $p = .6653$	$F[1,155] = 0.03$, $p = .8527$
Expectations Stated: Experiential Preparation vs. Control	$F[1, 155] = 0.52$, $p = .4726$	$F[1, 155] = 0.85$, $p = .3580$	$F[1,155] = 0.90$, $p = .4326$

Summary

Study six failed to produce any results, either of the experiential preparation effect or of stating expectations. The failure of the experiential preparation effect to replicate may have arisen from the modified experiential preparation task. I test this hypothesis in the next study.

3.8 Study Seven – Short Films with Continue and Repeat Previews

Introduction

Study seven was designed to further test the use of one minute previews as a way to prepare for an experience. As study six failed to replicate the positive effect of

experiential preparation seen in the earlier experiments, the goal of this study was to examine the main effect of the new previews. This study used a design similar to the first 20-second video preview study (study three) with the changes discussed below.

Participants, Method and Procedure

Thirty-two participants took part in this experiment. At the start of the experiment participants read the following instructions:

> Before viewing some of the films you will be asked to watch a "preview" of the film. This preview will be approximately the first 60 seconds from the film. After viewing this first part of the film, you will complete a task in which you will be asked to describe what you saw and then you will watch the entire film from the start. For other films, you will watch the first 60 seconds of the film and then continue from where the film left off after this task.

Experiential Preparation: Experiential preparation was implemented in this study similarly to the previous expectations and experiential preparation study. Participants viewed two films in an experiential preparation condition where they viewed the first 60 seconds of a film as a preview before viewing the entire film. The following instructions were provided before the start of each preview:

> You are about to watch approximately the first 60 seconds of the next film as a preview. After viewing the preview, you will complete a task and then watch the entire film. Please know that you are watching the first part of the film as a preview and know that afterwards you will watch the entire film. You may find it helpful to imagine that this is similar to starting a DVD before re-starting it from the beginning after having to stop the movie to answer the telephone, or to get a drink.

Participants viewed the other two films in no-experiential preparation control conditions where they watched the first 60 seconds of the film before continuing on to watch the rest of the film. The following instructions were provided before the start of the opening part of the film.

> You are about to watch approximately the first 60 seconds of the next film. After viewing the first part of the film, you will be asked to complete a task and then you will be able to continue to view the entire film from where it stopped.

For all films, after watching the initial 60 seconds as a preview as well as in the no-experiential preparation control conditions, participants responded to the following free response question before they continued to watch the entire film (in the experiential preparation conditions) or balance of the film (in the no preparation control conditions).

> You have just watched the first 60 seconds of the film. Before you continue to watch the entire film from where it stopped, please describe what you saw in the first part of the film. In other words, this task asks, what would you say to a person who asked you what the film seemed to be about?

Dependent variables

Rating and Choice Score: The same rating questions and choice task from the previous experiments were used in this experiment. Participants were not given a memory task.

Results

Ratings: A pattern of results similar to the previous experiment emerged where participants that were given the opportunity to prepare for the films did not benefit from

experiential preparation. The average rating for participants that viewed the first 60 seconds of the film as a preview was 2.62 and the average rating for participants that viewed the first 60 seconds of the film before continuing on with the balance of the film was 2.94. This difference is not significant (F[1,92] =1.46, p = 0.2303).

Choice Score: Just as with ratings, when participants prepared for the film, they did not seem to benefit from experiential preparation. Their average score in the choice task was -0.04 and when participants did not prepare for the film, their average score in the choice task was .04. This difference is not significant (F[1,92] =0.02, p = .8950).

Table 26: Summary of Results from Study Seven - Ratings, Choice Score

Condition	Ratings (Standard Error)	Choice Score (Standard Error)
Control	2.94 (.26)	0.18 (.21)
Preparation	2.62 (.26)	-0.09 (.21)
Key Comparisons		
Continue vs. Repeat Previews	F[1,92] =1.46, P = 0.2303	F[1, 92] =0.02, p = .8950

Summary

The null results from this experiment are consistent with the hypothesis that positive moods are necessary for preparation effects. In this and in the previous experiment, participants may have had their positive moods decreased from the preparation task which may have led to the lack of preparation effects. As discussed in the previous chapter, positive moods moderate the preparation effect because people become more open to interpreting new information. While in the previous study and in this study there are no direct measures of moods, from their responses to debriefing

questions that asked about how they felt in taking part in the experiment, there is some indication that viewing the film from the start did have this negative effect. Here is one illustrating example: **"**The movies where the 60 second preview was repeated again in the full length were irritating because I had to watch the same thing twice in a short interval of time.**"**

3.9 Study Eight – Short Stories and Fluency

Motivation

For the final studies, this dissertation switches stimuli to a different domain – short fictional stories. In all three studies, the preparation effect is examined. In study eight, participants read six short stories and are given the opportunity to prepare for half of the short stories. After each short story, ratings and a measure of fluency are both collected. Study eight finds that fluency mediates the preparation effect. In the final two studies, participants read four short stories and are given the opportunity to prepare for two of them. Study nine attempts (but fails) to manipulate fluency as a moderator of the preparation effect. Study ten examines moods and finds a compelling interaction where participants that are high in positive moods gain from experiential preparation and participants that are not high in positive moods do not gain from experiential preparation.

Overview of Fluency Measure

As mentioned in the previous chapter, subjective feelings of fluency can be difficult to measure directly. If participants become aware of the source of fluency (or

lack of fluency), they may attribute their ratings for an experience based on the fluency itself, rather than their affective response. This issue is even more critical in repeated measure designs where participants read several stories, because any effects of fluency may be diminished after the first measure of fluency. To limit reactive evaluations, measures of fluency were embedded in an adjective check-off task (described below) in which fluency could be assessed with minimal direct attention to the particular construct. In addition, the adjective check off list contained evaluative items related to affect. The factor analysis discussed in this experiment shows that both constructs are indeed present, and in this case relatively orthogonal. The check-off based measure of fluency provides a measure that may be more conservative in that one might expect lower scale reliability and significance values, but which should be less sensitive to presentation order. I validate this by showing no carryover effects of fluency later in this section.

In addition, the check-off procedure provides a measure of affect that is distinct from fluency. It is also demonstrated here that fluency mediates the preparation effect, but this separate measure of affect does not. Thus, it can be said with greater confidence that fluency is a discriminating mediator of the preparation effect.

Participants, Methods and Procedure

Fifty-two participants took place in this experiment in exchange for $20 compensation. The entire experiment took place on a computer. At the beginning of the experiment, participants read the following:

> Past research teaches us that various environmental factors may influence people's evaluation of stories. Therefore we wish to get an idea of

> specific events that people went through today, and will ask you about some of these before or during the stories. For other stories we will simply ask you to reflect about the story instead.

In this experiment, participants read six short stories. These short stories were selected from earlier work by Tal and Huber (2006). The short stories varied in length and took, on average, between three and six minutes to read.

Experiential Preparation

For three of the short stories, participants were presented with the following instructions:

> You will now be given a preview introducing the story. The preview was devised to help you have a sense of what you are about to see so as to allow you to best experience and feel the story. Go over it so as to allow you to approach the story freely and fully absorb it.

After reading the instructions, participants read a short preview of the story. These previews consisted of approximately 1-2 paragraphs from an early part of the text. After reading the preview, participants answered the following free response question: "Please write a brief paragraph depicting what you imagine the full story will be like. What will the story be about? What will take place?" Participants completed their essay response and then began reading the story from the beginning.

For the other three stories, participants simply read the stories without any experiential preparation mechanisms. Across subjects the particular ordinal position of a story was randomized by the computer and the pairing of a story to the experiential

preparation condition or no-experiential preparation control condition was randomized by experimental design.

Dependent variables

Rating: Immediately following the story, participants rated their enjoyment of the experience using the scale question as in the previous short film studies. Again this was an 11-point scale question: "How much did you enjoy reading the story: In terms of enjoyment the story was…" anchored on -5 ("Very, very bad") and +5 ("Very, very good") with a 0 ("Neutral") midpoint.

Adjective List: Following the ratings question, participants took a word selection task designed to test for the role of fluency. Participants responded to a question that asked "below are several words that previous participants have used to describe the film. Please check off the boxes next to the words or phrases that you think describe the film." Participants were then presented with twenty-four words or phrases. The adjective list contained twelve pairs of positive and negative adjectives. The twenty four words (see the table below) in this task were presented in two groups of twelve. The order in which the two groups of twelve were presented was randomized. The two groups were divided so that opposite valence terms (e.g. "Easy to Understand" and "Hard to Understand") did not appear on the same screen.

The table below contains frequency counts and percentages for when each item was selected. It is noteworthy that the positive items tend to be selected far more often than the negative items. In fact, with the exception of "Easy to Read," all of the positive items were selected more often than eleven of the twelve negative items.

Table 27: Adjective Task Descriptive Statistics (Study Eight)

(58 Participants 312 Observations) Words / Phrases	Count Selecting	Count not Selecting	Percent selecting	Percent not selecting
Positive Items				
Interesting	180	132	57.7%	42.3%
Creative	150	162	48.1%	51.9%
Good	149	163	47.8%	52.2%
Absorbing	140	172	44.9%	55.1%
Easy to Understand	111	201	35.6%	64.4%
Exciting	97	215	31.1%	68.9%
Fascinating	81	231	26.0%	74.0%
Flowing	81	231	26.0%	74.0%
Smooth	75	237	24.0%	76.0%
Pleasant	72	240	23.1%	76.9%
Good Writing Quality	64	248	20.5%	79.5%
Easy to Read	10	302	3.2%	96.8%
Negative Items				
Abrupt	80	232	25.6%	74.4%
Rough	40	272	12.8%	87.2%
Bland	38	274	12.2%	87.8%
Hard to Understand	38	274	12.2%	87.8%
Frustrating	35	277	11.2%	88.8%
Boring	32	280	10.3%	89.7%
Dull	32	280	10.3%	89.7%
Difficult To Read	31	281	9.9%	90.1%
Unpleasant	27	285	8.7%	91.3%
Uninspiring	13	299	4.2%	95.8%
Bad Writing Quality	12	300	3.8%	96.2%
So-So	8	304	2.6%	97.4%

Free Response Question: Following the adjective check-off task, participants were given a free response question: “How would you describe the story you just read to someone who had never seen it before?”

Choice Task: Following all six stories, participants were asked the same series of questions designed from the choice task in the short film studies. Again the choice task included four positive affect questions and four negative affect questions that asked for the highest and lowest performing story with regard to "ease of understanding," "meaningfulness," and "pleasantness" and "favorite."

Results

Rating: Replicating the earlier studies that used short films, when participants had the opportunity to prepare for a short story, they enjoyed it more than when they were not given the opportunity to prepare (M's 2.41, 2.13; $F[1,252] = 4.20$, $p = .0413$, $\beta = 1.04$).

Choice Score: Unlike in the first series of short film studies, this short story experiment failed to show an increase in liking for stories through the choice score task. Participants choice scores for prepared films was not higher for films that they did not prepare for (M's = -.03, .03; $F[1,252] = 0.10$, $p = .752$).

Adjective List

Factor Analysis: A principal component factor analysis with varimax rotation was run using all twenty-four words and phrases from the adjective check-off task. The extraction provided four unique factors (values less than .40 were omitted from the results). The table below illustrates that twenty of the twenty-four items load distinctly on the four factors. The four factors are orthogonal and the covariance scores between

the factors are all zero. Factor one contains items that all relate to the presence of fluency and has been labeled "high fluency." Factor two contains items that all relate to the lack of fluency and has been labeled "low fluency." Factor three contains positive evaluative terms and has been labeled "positive evaluation." Factor four, labeled "negative evaluation," contains negative evaluative items, as well as a negative loading of "interesting."

Table 28: Factor Loading from Adjective Task in Fluency Study (Study Eight)

Component	Loading	Component	Loading
1) High Fluency		3) Positive Evaluation	
Easy to Understand	.559	Absorbing	.711
Flowing	.600	Exciting	.666
Pleasant	.607	Fascinating	.633
Smooth	.716	Creative	.629
Good Writing Quality	.436		
Cronbach's α = .626		Cronbach's α = .723	
2) Low Fluency		4) Negative Evaluation	
Difficult to Read	.603	Interesting	-.408
Hard to Understand	.520	Dull	.805
So-So	.563	Bland	.718
Frustrating	.551	Uninspiring	.473
Rough	.612	Boring	.795
Bad Writing Quality	.503		
Cronbach's α = .647		alpha = .715	
Combined Fluency Cronbach's α = .712		Combined Evaluative Cronbach's α = .781	

Indices: Using the four components, two indices are created for each observation of a participant reading and evaluating a story. First, a fluency index is created by adding one point for each term from the high fluency component selected in the adjective list and by adding one point for each low fluency item not selected. Thus, the range of this index

is from zero to eleven. Similarly, an affective evaluation index is created by adding one point for each positive evaluation selected and adding one point for each negative evaluation not selected. ("Interesting" loaded negatively term on the negative evaluation component and was reverse scored for the index.) The possible range of this index is from zero to nine.

The table below illustrates the correlations between the four factors and the two indices. As expected the correlations between the fluency components and the fluency factor is high (both > .77) and the correlations between the evaluative components and evaluative factor is high (both > .80). Also, as expected, the correlations between the two fluency factors and the evaluative index is low (all < .35), as is the correlations between the two evaluative factors and the fluency index (all < .35). The correlation between the two indices is also low (.39).

Table 29: Correlation Matrix of All Factors and Both Indices From Fluency Study (Study Eight)

	High Fluency	Low Fluency	Positive Evaluation	Negative Evaluation	Fluency Index	Evaluation Index
High Fluency	1	-.40	.30	-.31	**.89**	*.35*
Low Fluency	——	1	-.27	.25	**-.78**	*-.30*
Positive Evaluation	——	——	1	-.46	*.34*	**.88**
Negative Evaluation	——	——	——	1	*-.33*	**-.82**
Fluency Index	——	——	——	——	1	*.39*
Evaluation Index	——	——	——	——	——	1

Fluency Index Additional Validation

It was mentioned earlier that in constructing the adjective check-off task it was desired to build a measure of fluency that would not be sensitive to the ordinal position of an observation. A model testing whether the fluency effect is a function of ordinal position (controlling for effects of participant and stories) shows this not to be the case ($F[1,254] = 0.65$, $p = .498$). This null effect shows that there is no consistent impact of checking off fluency related adjectives across the different observations. Additionally the same test using the interaction of experiential preparation and order as the dependent variable shows that this term does not predict fluency index ($F[1,252] = 1.73$, $p = .190$). These results are consistent with the notion that the measure of fluency can be used for the repeated measure design without carryover effects of fluency from one task to another.

Fluency Mediates The Preparation Effect

To show that the fluency index mediates the preparation effect using the Baron and Kenny (1986) method, the following regression models were run.

Model One: Does the independent variable predict the dependent variable? This model asks, "Does experiential preparation lead to increased liking for the stories?" As shown above, (M's 2.41, 2.13; $F[1,252] = 4.20$, $p = .0413$, $\beta = 1.04$) experiential preparation led to higher ratings.

Model Two: Does the independent variable predict the mediator? This model asks, "Does experiential preparation lead to an increase in fluency?" Using the fluency index as the dependent variable, this is the case. When participants prepared for stories, they had an average fluency index of 7.06 (standard error = .14) and when participants did not prepare for the stories, they had an average fluency index of 6.47 (standard error = .14). This difference is significant ($F[1,252] = 5.98$, $p = .0152$, $\beta = 1.23$).

Model Three: Does the mediator predict the dependent variable? This model asks, "Does increasing fluency lead to an increase in enjoyment for the stories?" Using the fluency score as an independent variable and ratings as the dependent variable, this is the case ($F[1,253] = 103.57$, $p < .0001$, $\beta = .533$).

Model Four: Does the effect of the independent variable on the dependent variable diminish to non-significant levels when the mediator is account for in the model? This model asks, "Does experiential preparation have a non-significant effect on ratings when the effect of fluency is taken into account?" When both fluency scores and experiential preparation are used to predict ratings, this is, indeed the case. The effect of experiential preparation becomes non-significant ($F[1,251] = 0.77$, $p = .33$, $\beta = .38$) and the effect of fluency is still significant ($F[1,251] = 97.87$, $p < .0001$, $\beta = .53$). A Sobel test on the strength of the mediation shows that the mediation is significant ($Z = 2.37$, $p = .0178$).

<u>The Evaluation Index Does Not Mediate the Preparation Effect</u>

A similar mediation test on the evaluation index differentiates the fluency index. First, model one from above is unchanged. Second, model two asks: "Does experiential preparation lead to an increase in the evaluation index?" Using the evaluation index as the dependent variable, this model fails to show differences from when participants prepared for stories (M = 5.71, standard error = .14) and when participants did not prepare for the stories (M = 5.71, standard error = .14). Clearly, as the numbers are nearly identical, the difference is not significant ($F[1,252] < 0.01$, $p = .986$, $\beta < 0.01$). For robustness, model three shows that the evaluation index predicts ratings ($F[1,253] = 208.92$, $p < .0001$, $\beta = .644$). When both experiential preparation and the evaluation index are included in the model, both the evaluation term ($F[1,251] = 214.22$, $p < .0001$, $\beta = .644$) and the experiential preparation term ($F[1,251] = 7.68$, $p < .0060$, $\beta = 1.03$) significantly predict enjoyment for the story.

The null results of this mediation test combined with the significant mediation by the fluency index supports the notion that fluency is distinct from the evaluative component.

Summary

This study demonstrated the preparation effect using a different hedonic experience – short stories. In addition, it used an adjective selection task to create a measure of fluency and a distinct evaluative measure. Indices for these measures were validated through factor analysis. The fluency index and not the evaluative index mediated the preparation effect. This supports the hypothesis that fluency, as a distinct construct from evaluations, mediates the preparation effect.

3.10 Study Nine - Short Stories with Cognitive Load

In the first short stories and fluency study, it was found that experiential preparation lead to increased enjoyment of the stories and that this effect was mediated by fluency. While the previous study demonstrated a mediating role of fluency, the current study was designed to test for a moderating role of fluency. One way in which fluency for an experience can be reduced is by use of cognitive load (Sherman et al. 1998). For this study, a cognitive load manipulation was used where participants had to memorize either a long (9 digit) series of numbers or a short (4 digit) series of numbers. A fluency account would predict that preparation should have a positive effect on liking for the stories under low load, but not under high load. This occurs because in the high load condition, the subjective feelings of fluency (ease of reading the story, etc.) should be lost due to the number memorizing task.

Participant, Methods and Procedure

Seventy four participants took part in this experiment. The same four short stories from replicate A of study ten were used for this study. A 2 (Experiential Preparation: preview vs. no preview) X (Load: high vs. low) was used in which every participant served in every condition once. Each story had an equal chance of being in each of the four conditions.

Preparation: The preparation task from the previous study was used in this study. Following the preparation task, participants were presented with the load task. (Participants in the no preparation control conditions did not have a preparation task and immediately were presented with the load task.)

Load Manipulation: Before reading a story, participations were presented with a sequence of numbers that they were told to memorize. In the low-load conditions participants were presented with a four digit sequence of numbers. In the high load conditions participants were presented with a nine digit sequence of numbers. Following the story, participants were asked for this number. Each story used a different set of four and nine digit numbers so each participant would have a new load task for each story.

Dependent variables

Rating: The same rating question from the previous studies was used in this study. Again this was an 11 point scale question, "how much did you enjoy reading the story: In terms of enjoyment the story was…" anchored on -5 ("Very, very bad") and +5 ("Very, very good") with a 0 ("Neutral") midpoint.

Free response question*:* Following each story, participants responded to the same free response question as in the previous studies.

Choice Task: Following all four stories, participants responded to the choice task used in the previous studied.

Results

Load Manipulation Check: The 4-digit numbers were remembered correctly 84.5% of the time. The 9-digit numbers were remembered correctly 67.6% of the time. On average, participants that read a story under low load rated the stories slightly higher than participants that read a story under high load, but these numbers are not significantly different from one another (M's = 2.04, 1.77; F[1,215]=1.42, p = .23).

Ratings: Counter to the fluency hypothesis, the preparation effect did not occur in either the low load or high load conditions. The preparation effect was slightly reversed for the low load conditions. When participants were given the opportunity to prepare, they enjoyed the stories just as much as when they were not able to prepare (M's = 1.94, 2.13; F[1,215] = .35, p = .557. Participants in the high load conditions that prepared enjoyed the same (M = 1.74) as those that did not prepare (M=1.80) (F[1,215] = .03, p = .866).

Choice Score: A similar pattern of flat results occurs through liking as measured by the choice score. In the low load condition, participants enjoyed films directionally less when they prepared for films compared to when they did not prepare (M's = -0.13, 0.23; F[1,215] = 1.40, p = .237). In the high load condition, participants enjoyed the films about the same when they prepared compared to when they did not prepare (M's = -0.04, -0.05; F[1,215] = .35, p = .807).

Table 30: Summary of Results from Study Nine - Ratings, Choice Score

Condition	Ratings (Standard Error)	Choice Score (Standard Error)
Low Load: Control	2.13 (.22)	0.23 (.23)
Low Load: Preparation	1.94 (.22)	-0.13 (.23)
High Load: Control	1.78 (.22)	-0.05 (.23)

High Load: Preparation	1.76 (.22)	-0.04 (.23)
Key Comparisons		
Low Load: Control vs. Prepare	F[1,215] = .35, p = .557	F[1,215] = 1.40, p = .238
High Load: Control vs. Prepare	F[1,215] = .03, p = .863	F[1,215] = .06, p = .807

Summary

The null results in this study may also be consistent with the positive mood hypothesis that a lack of positive mood prohibits gains from experiential preparation. Participants in both conditions may have had their positive moods decreased by the task of memorizing the number and were thus less open to the new experience. Study ten tests this moderating role of positive moods, both with a mood manipulation and with a measure of positive moods.

3.11 Study Ten - Short Stories with Positive Mood Moderation

Introduction

Study ten is a combination of two nearly identical studies, labeled replicate A and replicate B. The two studies were identical except for differences in the "mood manipulation" and in the four short stories used as stimuli. All the reported results hold across the two replicates and the analyses presented here combines the two replicates.

Stimuli and Pre-test

The table below contains a list of the stories used in replicate A and replicate B of the study. The table also includes mean ratings for seven of the eight short stories from a pretest of ten participants. (The eighth short story was not included in the pre-test.) The short stories were rated on a 10 point scale question anchored on 1, ("I didn't like it at all") and 10 ("I really, really liked it").

Table 31: Ratings from Pretest of Short Stories used for Studies Nine and Ten

Story	Mean Rating (St. Dev.)
Replicate A	
Reunion (by John Cheever)	5.9 (2.2)
Sunday in the Park (by Bel Kaufman)	5.4 (1.7)
Chaos Theory (by Jane Ellis)	not included in pre-test
I See you Never (by Ray Bradbury)	6.9 (1.7)
Replicate B	
Dog Life (by Mark Strand)	5.6 (2.6)
A Fable (by Robert Fox)	6.3 (2.8)
The Bridge (by Pamela Painter)	5.9 (2.3)
Turning (by Linda Sexson)	5.9 (2.7)

Participants

Sixty-nine participants took part in replicate A of the study. One-hundred and eight participants took part in replicate B of the study, resulting in one hundred and seventy seven total participants.

Methods and Procedure

Procedure Summary: Both replicates used the same design. Each aspect of the design will be detailed below. At the start of the study, participants were given a mood

manipulation task. Following the mood manipulation task, participants' moods were measured. Then participants completed the focal part of the study in which they read four short stories. Participants were in an experiential preparation condition for two of the stories and in a no-experiential preparation control condition for the other two stories. After each story, participants responded to the ratings question, the adjective check-off task and the free response question. After all four stories, participants completed the mood measure for a second time.

Mood Manipulation: At the start of the study, in an attempt to manipulate moods, participants were given a "tell a story" task. This task was designed to induce happy or less happy moods. In replicate A of the study, participants were randomly assigned to either a "happy story" condition or an "angry story" condition. Replicate A participants responded to the following task: "We would first like you to spend five minutes writing about an event from the recent past that made you very [happy / angry]. Please go in to detail and focus on why you felt [happy / angry] and discuss what these feelings felt like." In replicate B of the study, participants were randomly assigned to either a "very happy" story condition or an "ordinary day" story condition where the goal was to induce a neutral mood. Participants in the "ordinary day" (labeled control) condition responded to the task: "We would first like you to spend five minutes writing about your ordinary day tasks. Think about what an ordinary day is like and write about your ordinary activities."

Mood Measure: Immediately after the "tell a story" manipulations, participants completed the 10-item, modified, PANAS scale discussed in the previous chapter. All ten items were randomly presented. The five positive items were: "Enthusiastic," "Inspired," "Attentive," "Pleased" and "Involved." The five negative items were "Upset," "Hostile," "Irritable," "Distressed," and "Vengeful." Each of the items was presented in random order. For each question, participants responded to the question "Right now, do you feel:" using a 5-point scale question with the following terms: "1) Not At All," 2) "A Little," 3) "Moderately," 4) "Quite a Bit" and 5) "Extremely." Following the PANAS scale, participants read their four short stories and then completed the modified PANAS for a second time at the end of the experiment.

Experiential Preparation

Each participant read two stories in an experiential preparation condition and two stories in a no-experiential preparation control condition. For experiential preparation, participants read 1-2 paragraphs from an early part of the story, and then were asked to "write a brief paragraph depicting what imagining what the full story will be like, what it will be about, and how it will take place."

Dependent Variables

Rating: The same rating question from the previous studies was used in this study. Again this was an 11 point scale question, "how much did you enjoy reading the story: In

terms of enjoyment the story was…" anchored on -5 ("Very, very bad") and +5 ("Very, very good") with a 0 ("Neutral") midpoint.

Free response question: Following each story, participants responded to the same free response question as in the previous studies.

Choice Task: Following all four stories, participants responded to the choice task used in the previous studies.

Results

The tables below provide means of each item in the PANAS scale from after the "tell a story" manipulation, followed by a count and cumulative frequency of the number of participants selecting each response on the 1-5 scale.

Table 32: PANAS Usage Means and Standard Deviation (Study Ten)

Positive Mood Items (N=177)	Mean (St. Dev.)
Involved	2.83 (.94)
Pleased	2.77 (1.02)
Enthusiastic	2.63 (.97)
Inspired	2.37 (1.09)
Attentive	3.25 (.89)
Negative Mood Items	Mean (St. Dev)
Upset	1.66 (.96)
Hostile	1.47 (.89)
Irritable	1.83 (.96)
Vengeful	1.30 (.69)
Distressed	1.84 (1.04)

Table 33: PANAS Usage Histogram (Study Ten)

Response (N= 177)	1	2	3	4	5
Item					
Involved	12	54	68	38	5
Pleased	23	41	74	32	7
Enthusiastic	23	55	63	34	2
Inspired	46	54	47	26	4
Attentive	7	27	62	77	4
Upset	106	42	13	16	0
Hostile	128	27	12	8	2
Irritable	84	54	24	15	0
Vengeful	142	23	6	6	0
Distressed	89	48	21	17	2

Table 34: PANAS Usage Histogram continued (Study Ten)

Response (N= 177)	1	2	3	4	5
Item					
Involved	6.8%	37.3%	75.7%	97.2%	100.0%
Pleased	13.0%	36.2%	78.0%	96.0%	100.0%
Enthusiastic	13.0%	44.1%	79.7%	98.9%	100.0%
Inspired	26.0%	56.5%	83.1%	97.7%	100.0%
Attentive	4.0%	19.2%	54.2%	97.7%	100.0%
Upset	59.9%	83.6%	91.0%	100.0%	100.0%
Hostile	72.3%	87.6%	94.4%	98.9%	100.0%
Irritable	47.5%	78.0%	91.5%	100.0%	100.0%
Vengeful	80.2%	93.2%	96.6%	100.0%	100.0%
Distressed	50.3%	77.4%	89.3%	98.9%	100.0%

A principal components factor analysis using varimax rotation illustrates that the positive and negative items load on separate factors (absolute loadings less than .40 were omitted from the results):

Table 35: PANAS Factor Analysis (Study Ten)

Item	Positivity	Negativity
Involved	.711	
Pleased	.704	
Enthusiastic	.805	
Inspired	.777	
Attentive	.755	
Upset		.870
Hostile		.739
Irritable		.768
Vengeful		.808
Distressed		.698

A positive mood index ("positivity") and a negative mood index ("negativity") were calculated from a sum of the five positive and five negative components in the modified PANAS scale. Two separate principal components factor analyses were run, one on the positive items and one on the negative items. The table below illustrates the results of the separate analysis.

Table 36: PANAS Factor Analyses of Positivity and Negativity Indices (Study Ten)

Positivity		Negativity	
Item	Loading	Item	Loading
Involved	.713	Upset	.876
Pleased	.743	Hostile	.747
Enthusiastic	.808	Irritable	.783
Inspired	.775	Vengeful	.804
Attentive	.738	Distressed	.698
Cronbach's α = .812		Cronbach's α = .833	

Mood Manipulation

The "tell a story" task did not seem to affect positive moods but did induce a change in negative moods in replicate A of the study. The table below summarizes the results of the mood manipulation.

Table 37: Mood Manipulation Produced no Change in Positivity Index (Study Ten)

Tell a Story Manipulation	Positive Mood Score Mean (St. Err.)	Negative Mood Score Mean (St. Err.)
Replicate A		
Happy Story	14.09 (.65)	6.94 (.56)
Angry Story	13.82 (.64)	10.88 (.56)
	$F[1,67] = 0.08$, $p = .777$	$F[1,67] = 19.30$, $p < .0001$
Replicate B		
Very Happy Story	14.03 (.48)	7.78 (.40)
Ordinary Day Story	13.31 (.50)	7.41 (.42)
	$F[1,104] = 1.07$, $p = .303$	$F[1,104] = 0.41$, $p = .525$

Because the tell a story manipulation had no effect on the positive dimension of mood, the analyses in this study use the positivity and negativity scores as measured variables rather than the task as a manipulated variable.

PANAS at two times in study

As mentioned, the PANAS was collected a second time at the end of the study. To examine the interaction of mood and preparation, I chose to use the measure from the earlier stage of the study. The second measure was taken after all four short stories were completed and is thus a more ambiguous measure of overall mood. That is, this measure can heavily influenced by how people feel from reading the stories. However, as noted later in this section, the results look identical if the concluding mood measure is used.

Full PANAS score does not interact with experiential preparation

Before examining the positivity score individually, I examined if the full PANAS interacted significantly with experiential preparation. The interaction term had a non-significant effect on ratings ($F[1,522] = 1.81$, $p = .179$, $\beta=.034$). Because of this low p-value, I decided to examine positive and negative moods as separable constructs.

Negative Mood does not interact with experiential preparation

From the above frequency tables, it seemed that the restricted range on the negative side of the PANAS may have accounted for the low p-value using the entire PANAS scale. This appears to be the case. When the negative component of the PANAS replaces the full PANAS in the above model, the p-value associated with the interaction of mood and experiential preparation drops considerably ($F[1,522] = 0.16$, $p = .688$, $\beta= -0.02$).

Positive Mood Interaction

To examine the moderating result of positive moods, I ran a regression model with the interaction term of positivity and experiential preparation as a predictor of ratings. (Just as in the previous experiments, the effects of a particular participant, story, and a story's ordinal position are also accounted for in the model.) As hypothesized, the interaction term had a significant effect on ratings ($F[1,522] = 6.22$, $p = .0148$) The beta-coefficient associated with the interaction ($\beta = .0957$, standard error of beta = .039) demonstrates that the preparation effect increases with increasing positivity.

To visualize these effects further, I created a median split variable on the positivity score. Participants whose positivity score was higher than the median (above 14) are labeled "high positivity" and participants whose positivity score was not higher than the median (14 and below) are labeled "low positivity."

A new regression model replacing the continuous positivity score with the median split variable also shows the interaction term to be significant ($F[1,522] = 10.19$, $p = .0015$). Two planned contrasts associated with the interaction show compelling results. The preparation effect occurs for high-positivity participants ($F[1,522] = 4.82$, $p = .0286$) but is completely reversed for low-positivity participants ($F[1,522] = 5.63$, $p = .0180$). The table below demonstrates the interaction and the results of the planned contrasts within low-positivity and high-positivity participants.

Table 38: Experiential Preparation Interacts with Positivity

Positivity	Experiential Preparation Condition	Story Ratings Means and (St. Err.)
Low-Positivity (N = 106 * 4 observations per participant)	No Preparation	1.65 (.114)
	Preparation	1.15 (.128)
		$F[1,522] = 5.63$, $p = .0180$
High-Positivity (N = 71 * 4 observations per participant)	No Preparation	1.48 (.137)
	Preparation	2.08 (.119)
		$F[1,522] = 4.82$, $p = .0286$

Additional "Spotlight" Test on Positivity Interaction

To ensure that the reported interaction using the median split of positivity did not produce spurious results and to generate meaningful interpretations of the coefficients of the interaction term, I ran a "spotlight test" using the methods described by Irwin and

McClellan (2001). First, I normalized the positivity scores to create a new variable, labeled "pos-mid" for each participant. Then, I created a variable equal to pos-mid minus 1.0 (labeled "pos-low") and a variable equal to pos-mid plus 1.0 (labeled "pos-high"). I then ran a series of three regression models, all similar to the above model that tests the interaction of experiential preparation and the continuous positivity score. The three models replace the positivity score with pos-low, pos-mid and pos-high respectively and replace the interaction of positivity and experiential preparation with the corresponding interaction of experiential preparation and pos-low, pos-mid or pos-high. The series of models allows for testing the effect of preparation at various points in the continuous positivity variable. The table below summarizes the results, demonstrating a similar pattern in which experiential preparation leads to increases in liking for participants high in positivity, but not for participants low in positivity.

Table 39: Experiential Preparation and Positivity Spotlight Test

Model	Term	β Coefficient	t-value	p-value
1) Pos-Low	Preparation	-0.294	1.43	.154
	Pos-Low	2.645	1.03	.302
	Preparation* Pos-Low	.361	2.45	.015
2) Pos-Mid	Preparation	.068	0.47	.641
	Pos-Low	2.645	1.03	.302
	Preparation* Pos-Low	.361	2.45	.015
3) Pos-High	Preparation	.429	2.06	.040
	Pos-Low	2.645	1.03	.302
	Preparation* Pos-Low	.361	2.45	.015

Demonstrating the interaction occurs through the broaden-and-build theory of positive emotions

In the positive mood section of the theory chapter, I discussed how positive moods lead people to be more open to experiences. The broadening hypothesis suggests that people high in positive moods will use more thoughts in preparation than people low in positive moods. Consistent with this broadening hypothesis, participants high in positive moods spend more time on the free-response task during experiential preparation in which they talk about the story than participants not high in positive moods. I tested this using the positivity score as both a continuous variable and by examining the median split of positivity in the two models that follow.

Model 1) Using the continuous variable to predict the time spent on the preview essay: Since there are only two observations for each participant, this model includes a story's ordinal position as a covariate but does not include the effects of a particular story. To improve the reliability of the estimates, participants' total time during the reading and writing portions of the experiment are included as covariates. As hypothesized, the positivity score is a significant driver of the time spent discussing the preview information ($F[1,350] = 5.88$, $p = .0158$). The beta-coefficient on this model ($\beta = 1.43$, st. err. = .59) suggests that, for every additional one point in the positivity scale (which had a possible range from 5 to 25), participants spent an average of almost 1.5 additional seconds on the free response question.

Model 2) Using the median split variable of positivity to predict time spent on the preview essay: I ran a similar model to Model 1 above, replacing the continuous

positivity score with the median split variable. High positivity participants spent more time (69.4 seconds, on average) writing about the preview than low-positivity participants (61.7 seconds, on average). This difference is significant (F[1,350] = 4.06, p = .0448). The table below summarizes the results of this model.

Table 40: Support for Broadening Hypothesis (Study Ten)

Positivity by Median Split	Time on free response experiential preparation task in seconds, (st. err.)
Low- Positivity (N = 212)	61.7 (2.82)
High-Positivity (N = 142)	69.4 (3.45)
Key Comparison Low-Positivity vs. High Positivity	F[1,350] = 4.06, p = .0448

Adjective List

In the short stories with fluency study (Study Eight), I found that twenty items from the adjective check off task loaded on four separate items related to high and low fluency and high and low positive affect evaluations. A factor analysis using varimax rotation on the adjective list in this study shows that the twenty load nearly identically as in that previous study with two exceptions – "smooth" did not load on either factor and "so-so" loaded on the evaluative factor. This factor analysis shows that the items load on two separate factors, a fluency factor and an evaluative factor.

Table 41: Factor Analysis of Fluency and Evaluation Items (Study Ten)

Item	Evaluative Component	Fluency Component
Easy to Understand		.625
Flowing		.362
Pleasant		.467
Smooth		

Good Writing Quality		.496
Difficult to Read		-.596
Hard to Understand		-.674
So-So	-.454	
Frustrating		-.380
Rough		-.557
Bad Writing Quality		-.487
Absorbing	.550	
Exciting	.478	
Fascinating	.536	
Creative	.537	
Interesting	.606	
Dull	-.656	
Bland	-.649	
Uninspiring	-.479	
Boring	-.639	
(Loadings with absolute values less than .30 are omitted from the results)		

Fluency mediation within high positivity participants

In this study, the preparation effect occurs in high-positivity participants. One question arises, does the mediating effect of fluency replicate for these high-positivity participants? Using the same series of regression models from the short stories and fluency study, again using the methods from Baron and Kenny (1986), it is shown that this is the case. (In these analyses, I used the fluency index developed in Study Eight.)

Model One: Does the independent variable predict the dependent variable? This model asks, "Does experiential preparation lead to increased liking for the stories?" High positivity participants had an average rating of 7.48 for the stories they prepared for and an average rating of 6.89 for the stories they did not prepare for. This difference is significant ($F[1,205] = 4.56$, $p = .0339$, $\beta = .53$). (Note: This test is different from the

planned contrast in the table above as this model only incorporates high-positivity participants.)

Model Two: Does the independent variable predict the mediator? This model asks, "Does experiential preparation lead to an increase in fluency?" Using the fluency score as the dependent variable, this is the case. When participants prepared for stories, they had an average fluency score of 3.80 and when participants did not prepare for the stories, they had an average fluency score of 3.52. This difference is significant ($F[1,205] = 3.76$, $p = .0539$, $\beta = .273$).

Model Three: Does the mediator predict the dependent variable? This model asks, "Does increasing fluency lead to an increase in enjoyment for the stories?" Using the fluency score as an independent variable and ratings as the dependent variable, this is the case. ($F[1,206] = 182.57$, $p < .0001$, $\beta = .645$).

Model Four: Does the effect of the independent variable on the dependent variable diminish to non-significant levels when the mediator is account for in the model? This model asks, "Does experiential preparation have a non-significant effect on ratings when the effect of fluency is taken into account?" When both fluency scores and experiential preparation are used to predict ratings, this is, indeed the case. The effect of experiential preparation becomes non-significant ($F[1,205] = 1.35$, $p = .2475$, $\beta = .201$) and the effect of fluency is still significant ($F[1,205] = 174.63$, $p < .0001$, $\beta = .637$). A Sobel test on the strength of the mediation shows that the mediation is significant ($Z = 9.44$, $p < 0.01$).

The figure below summarizes the mediation analysis.

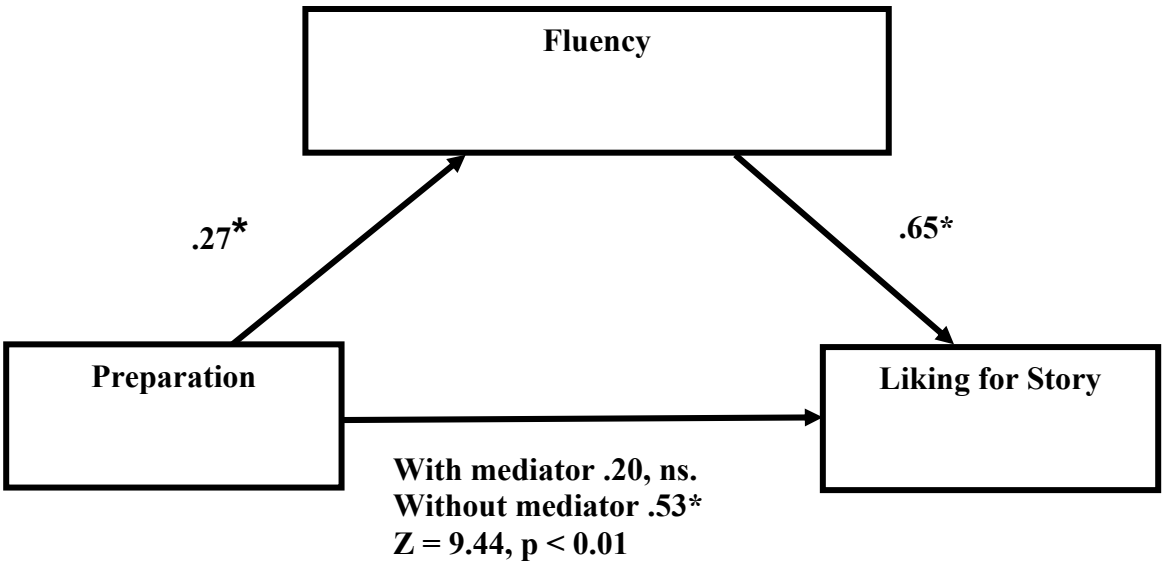

Figure 23: Fluency Mediates Experiential Preparation Effect for High Positivity Participants (Study Ten)
The numbers next to the arrows represent beta-coefficients
(*) refers to significance at $p < .05$

Positivity at end of study

To examine positive mood from both ends of the study, I calculated a new variable equal to the average of the positivity score from the early part of the study and the positivity score from the conclusion of the study. Using this variable to predict ratings, I find an identical pattern of results. That is, I find a interaction of average positivity with experiential preparation as a predictor of ratings ($F[1,520] = 6.22$, $p = .0130$). This result appears consistent with the hypothesis that long term moods moderate the preparation effect.

Validating combing two studies

To validate pooling data across the two studies, I ran a model testing the interactions of study replicate and experiential preparation as well as the third-order interaction of study phase, experiential preparation, and positivity. Neither of these terms approached significance in predicting ratings. (Replicate by experiential preparation interaction: $F[1,524] = 0.55$, $p = .458$; 3-way interaction $F[1,524] = 0.63$, $p = .429$.)

Summary

Study ten finds a compelling interaction where participant high in positivity gain from experiential preparation and participants low in positivity actually enjoy the stories less from experiential preparation. This result is in line with research on positive moods; specifically, support is found that people high in positive think more broadly in their experiential preparation tasks and are thus more open to the benefits of experiential preparation.

Appendices

Appendix A: Sample Coding Instructions

We want to code the written responses for three elements, or constructs. First, we are interested in affect (conscious subjective feeling/emotion) generated by each statement (positive/negative/both/neutral). Second, we wish to code for self references. Third, we are concerned with the "level of processing" that has taken place, which can be characterized as surface level (descriptive elements) versus deep level (embellishments added by the author that go beyond surface description).

Note: The coding of a statement with a construct need not be exclusive. For the Referencing items, a statement can fall into both Self and Other referencing. For Depth of Processing, a statement can be coded as both Surface and Deep level. For Affect, a statement can exhibit both positive and negative affect. This is likely to occur often.

Construct	Independent Variables	Description
A) Affect	Positive Affect <u>Count of occurrences</u>	A word or words that has positive affect (e.g., happy, beautiful, peaceful). **Note:** *circle* the positively laden words.
	Negative Affect <u>Count of occurrences</u>	A word or words that has negative affect (e.g., anger, lonely, undesirable). **Note:** *underline* the negatively laden words.
B) Referencing	Self Reference <u>Count of occurrences</u>	Any of the following qualifies as self-reference: 1. Puts self in movie. 2. Makes a link between self and movie. 3. Use of 1st person pronoun (e.g., I, me, my, we, our, us). Statement contains no self referencing. Code as Self Reference = 0 **Note:** *Place an "X" on self references* *They is not a self reference.*
C) Depth of Processing	Surface comment <u>Count of sentences</u>	Statement directly mentions an element of the movie (e.g., objects, characters, plot, setting, etc.). These statements tend to be descriptive of the movie. **Note:** *Place an 's' next to each sentence that contains a Surface comment.*

	Deep comment Count of sentences	Inferences or elaborations triggered by the movie derived from knowledge and/or experiences. May be about the movie or how it relates to something external to the movie. Generally, these statements are affective or relational in nature. Other triggers: Critical opinions, "probably," "influenced," 'seems," Sentences that convey opinion, watch out for sarcasm or use of quotation marks. Deep trumps surface. (If it is half and half, deep wins) If has nothing to do with the movie, it is not deep. (Code as Neither) The key here is that the thought was "generated" by the author as a result of being exposed to the movie and goes beyond the descriptive. **Note:** *Place a "D" next to each sentence that contains a Surface comment.*
	Neither Count of sentences	Sentence contains neither a surface comment nor a deep comment. I.e. "I like to chew gum while watching movies." **Note:** *Place an "N" next to each sentence that contains a Surface comment.* **Also Note:** S + D + N should equal total sentences.

References

Alba, Joseph W. Susan G. Alexander, Lynn Hasher, and Karen Caniglia (1981), "The Role of Context in the Encoding of Information," *Journal of Experimental Psychology: Human Learning and Memory*, 7(4), 283-292.

Alba, Joseph W. and L. Hasher (1983), "Is Memory Schematic?" *Psychological Bulletin*, 93, 203-231.

Adaval, Rashmi and Robert S. Wyer (1998), "The Role of Narratives in Consumer Information Processing," *Journal of Consumer Psychology*, 7, 207–245.

Baron, Reuben M. and David A. Kenny (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic and Statistical Considerations," *Journal of Personality and Social Psychology*, 51, 1173-1182.

Berlyne, D. E. (1970), "Novelty, Complexity and Hedonic Value," *Perception and Psychophysics*, 8 (November), 279–286.

Becker, Gary S. (1965) "A Theory of the Allocation of Time," *Economic Journal*, 75 (299), 493-517.

Bornstein, Robert F. (1989), "Exposure and Affect: Overview and Meta-analysis of Research," 1968–1987. *Psychological Bulletin*, 106, 265–289.

Boulding, William, Ajay Kalra, Richard Staelin and Valarie A. Zeithaml (1993). "A Dynamic Process a of Service Quality: From Expectations to Behavioral Intentions," *Journal of Marketing Research*, 30 (1), 7-27.

Bransford, John D. and Marcia K. Johnson (1972), "Contextual Prerequisites for Understanding: Some Investigations of Comprehension and Recall," *Journal of Verbal Learning and Verbal Behavior,* 11, 717-726.

Bruner, Jerome S. (1990), *Acts of Meaning.* Cambridge, MA: Harvard University Press

Clore, Gerald L. (1992). "Cognitive Phenomenology: Feelings and the Construction of Judgment," in *The Construction of Social Judgments,* Leonard L. Martin and Abraham Tesser (Eds.), Hillsdale, NJ: Erlbaum, 133-163.

Cohen, Jacob (1988), *Statistical Power Analysis for the Behavioral Sciences* (2nd edition). Hillsdale, NJ: Lawrence Earlbaum Associates.

Craik, Fergus I.M. and Robert S. Lockhart (1972), "Levels of Processing: A Framework for Memory Research," *Journal of Verbal Learning and Verbal Behavior*, 11, 671-684.

d' Astous, Alain and Nadia Touil (1999), "Consumer Evaluations of Movies on the Basis of Critics' Judgments," *Psychology and Marketing*, 16, 677-694

Dhar, Ravi and Klaus Wertenbroch (2000), "Consumer Choice between Hedonic and Utilitarian Goods," *Journal of Marketing Research*, 37 (February), 60-71.

Diener, Ed and Carol Diener, (1996), "Most People are Happy," *Psychological Science*, 7 (May), 181-185.

Diener, Ed and Martin E. P. Seligman, (2004), "Beyond Money: Toward an Economy of Well-Being," *Psychological Science in the Public Interest*, 5 (1), 1-31.

Driskell, James E., Carolyn Cooper, and Aidan Moran (1994), "Does mental practice enhance performance?" *Journal of Applied Psychology*, 79 (August) 481-492.

Dudukovic, Nicole M., Marsh, Elizabeth J., and Barbara Tversky (2004), "Telling a Story or Telling it Straight: The Effects of Entertaining Versus Accurate Retellings on Memory," *Applied Cognitive Psychology*, 18 (March), 125-143.

Escalas, Jennifer E. (1998), "Advertising Narratives: What Are They and How do They Work?" in Representing Consumers: Voices, Views, and Visions, edited by Barbara B. Stern, New York, NY: Routledge Press, pp. 267-289.

—— (2004), "Imagine Yourself in the Product: Mental Simulation, Narrative Transportation, and Persuasion," *Journal of Advertising*, 33 (2), 37–49.

Escalas, Jennifer E. and Mary Frances Luce (2003), "Process vs. Outcome Thought Focus and Advertising" *Journal of Consumer Psychology*, 13(3), 246-254.

—— (2004), "Understanding the Effects of Process-Focused versus Outcome-Focused Thought During Advertising," *Journal of Consumer Research*, 31 (September), 274-286.

Escalas, Jennifer E., Marian Chapman Moore, and Julie Edell Britton (2004), "Fishing for Feelings: A Hook Helps!" *Journal of Consumer Psychology*, 14(1&2), 105-113.

Eliashberg, Jehoshua, Anita Elberse, and Mark Leenders (2006) "The Motion Picture Industry: Critical Issues in Practice, Current Research, and New Research Directions." *Marketing Science*, 25 (November-December), 638-661.

Eliashberg, Jehoshua and Steven M. Shugan (1997), "Film Critics: Influencers or Predictors?" *Journal of Marketing*, 61 (April), 68–78.

Elster, Jon. and George Loewenstein, (1992), "Utility from Memory and Anticipation", in George Loewenstein and Jon Elster, (eds.), *Choice over Time*, New York: Russell Sage, 213 34.

Erez, Amir, and Alice M. Isen (2002), "The Influence of Positive Affect on the Components of Expectancy Motivation," Journal of Applied Psychology, 87, 1055-1067.

Frost, Michael B. (2006) "Liking and exposure: First, Second and Tenth Time Around," *Physiology and Behavior,* Volume 89, Issue 1, 30 (August), 47-52.

Fredrickson, Barbara L. (2001), "The Role of Positive Emotions in Positive Psychology: The Broaden-and-Build theory of Positive Emotions," *American Psychologist*, 56, 218-226.

Gershoff, Andrew D., Ashesh Mukherjee, and Anirban Mukhopadhyay (2003), "Consumer Acceptance of Online Agent Advice: Extremity and Positivity Effects," *Journal of Consumer Psychology*, 13 (1–2), 161–70.

Green, Melanie C. and Timothy C. Brock (2000), "The Role of Transportation in the Persuasiveness of Public Narratives," *Journal of Personality and Social Psychology,* 79(5), 701-721.

—— (2002), "Transportation-imagery Model of Narrative Persuasion," In M. C. Green, J. J. Strange, and Timothy C. Brock (Eds.) *Narrative Impact*, Mahwah, NJ: Lawrence Erlbaum Associates, 315-341.

Green, Melanie C., Jeffery J. Strange and Timothy C. Brock (Eds.), (2002). *Narrative Impact: Social and Cognitive Foundations*. Mahwah, NJ: Lawrence Erlbaum Associates.

Harrison, A. A. (1977), "Mere Exposure," In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 10) New York: academic press, 39-83.

Hirschman, Elizabeth C. and Morris B. Holbrook, (1982), "The Experiential Aspects of Consumption: Consumer Fantasies, Feelings and Fun," *Journal of Consumer Research*, 9 (September), 132-40.

Holbrook, Morris B. (1999), "Popular Appeal Versus Expert Judgments of Motion Pictures," *The Journal of Consumer Research*, 26 (September), 144-155.

Hsee, Christopher K. and Clair I. Tsai (2006), "Hedonomics in Consumer Behavior" to appear in *Handbook of Consumer Psychology*, eds. Curtis P. Haugtvedt, Paul M. Herr, and Frank R. Kardes, Mahwah, NJ: Erlbaum (forthcoming)

Irwin, Julie, Gary McClelland (2001), "Misleading Heuristics and Moderated Multiple Regression Models," *Journal of Marketing Research*, 38(1), 100-109.

Isen, Alice M. (2001), "An influence of positive affect on decision making in complex situations: Theoretical issues with practical implications*," Journal of Consumer Psychology*, 11, 75–85.

Isen, Alice M., Mitzi M. S. Johnson, Elizabeth Mertz, and Gregory F. Robinson (1985), "The Influence of Positive Affect on the Unusualness of Word Associations," *Journal of Personality and Social Psychology*, 48 1413–1426.

Isen, Alice M. and Paula F. Levin (1975), "Further Studies on the Effect of Feeling Good on Helping," *Sociometry*, 38(1), 141-147.

Isen, Alice M. and Paula F. Levin (1972), "The Effect of Feeling Good on Helping: Cookies and Kindness," *Journal of Personality and Social Psychology*, 21, 384-388.

Isen, Alice M. and Stanley F. Simmonds (1978), "The Effect of Feeling Good on a Helping Task that is Incompatible with Good Mood," *Social Psychology*, 41(4), 346-349.

Jacoby, L. L., Kelley, C. M., and Dywan, J. (1989). "Memory Attributions." In Henry L. Roediger, and Fergus I.M. Craik (Eds.), *Varieties of Memory and Consciousness: Essays in Honour of Endel Tulving*, Hillsdale, NJ: Erlbaum, 391-422.

Janiszewski, Chris (1993), " Preattentive Mere Exposure Effects," *Journal of Consumer Research*, 20 (3), 376-392

Kahn, Barbara E. and Alice M. Isen (1993), "The Influence of Positive Affect on Variety Seeking among Safe, Enjoyable Products," *Journal of Consumer Research*, 20 (September), 257–70.

Kahneman, Danny, Ed Diener, and Norbert Schwarz (1999), "Well-being: The Foundations of Hedonic Psychology," New York: Russell-Sage.

Kamakura, Wagner A., Suman Basuroy, and Peter Boatright (2006), "Is Silence Golden? An Inquiry into the Meaning of Silence in Professional Product Evaluations," *Quantitative Marketing and Economics,* 4 (June), 119-141.

Kim, J. and E. Hatfield (2004) "Love Types and Subjective Well-Being: A Cross-Cultural Study," *Social Behavior and Personality*, 32:2, 173-182.

Kirmani, Amna (1997), "Advertising Repetition as a Signal of Quality: If It's Advertised So Often, Something Must Be Wrong," *Journal of Advertising*, 26 (3), 77-86.

Klein, Stanley B. and Judith Loftus (1988), "The Nature of Self-Referent Encoding: The Contributions of Elaborative and Organizational Processes." *Journal of Personality and Social Psychology*, 55(1), 5–11.

Krugman, Herbert E. (1962), "An Application of Learning Theory to TV Copy Testing," *Public Opinion Quarterly*, 26 (Winter), 626-634.

Larsen, Randy J. and Ed Diener (1992) "Promises and Problems with the Circumplex Model of Emotion," In M. S. Clark (Ed.), *Review of personality and social psychology: Emotion* (Vol. 13, pp. 25-59). Newbury Park, CA: Sage.

Larsen, Randy J., Peter A. McGraw, and John T. Cacioppo, (2001), "Can People Feel Happy and Sad at the Same Time?" *Journal of Personality and Social Psychology*, 81, 684–696.

Lee, Angela Y. (2001), "The Mere Exposure Effect: An Uncertainty Reduction Explanation Revisited," *Personality and Social Psychology Bulletin*, 27 (October), 1255 - 1266.

—— (2002), "Effects of Implicit Memory on Memory-Based Versus Stimulus-Based Brand Choice," *Journal of Marketing Research*, 39 (November), 440-454

Lee, Angela Y. and Aparna A. Labroo (2004), "The Effect of Conceptual and Perceptual Fluency on Brand Evaluation," *Journal of Marketing Research*, 41 (2), 151–65.

Lee, Michelle, Carolyn Yoon and Andrew Mitchell, (2007) "Perceptual and Conceptual Fluency as Antecedents of the Mere Exposure Effect." *Working Paper*

Loewenstein, George F. (1987), "Anticipation and the Valuation of Delayed Consumption," *The Economic Journal*, 97(387), 666-684.

Loewenstein, George F. and Drazen Prelec (1993), "Preferences for Sequences of Outcomes." *Psychological Review*, 100(1): 91–108.

Liu, Yong (2006), "Word-of-Mouth for Movies: Its Dynamics and Impact on Box Office Revenue," *Journal of Marketing*, 70(3): 74-89.

Nowlis, Stephen M., Naomi Mandel, and Deborah Brown McCabe (2004), "The Effect of a Delay between Choice and Consumption on Consumption Enjoyment," *Journal of Consumer Research*, 31, 502–510.

Novemsky, Nathan, Ravi Dhar, Norbert Schwarz, and Itamar Simonson (2007), "Preference Fluency in Consumer Choice," *Journal of Marketing Research*, 44(3)

Oettingen, Gabriele, and Dorris Mayer, (2002), "The Motivating Function of Thinking About the Future: Expectations Versus Fantasies," *Journal of Personality and Social Psychology*, 83(5), 1198-1212.

Ofir, Chezy and Itamar Simonson (2001), "In Search Of Negative Customer Feedback: The Effect Of Expecting To Evaluate On Satisfaction Evaluations," *Journal Of Marketing Research*, 38 (2), 170-182.

—— (2007), "The Effect of Stating Expectations on Customer Satisfaction and Shopping Experience," *Journal of Marketing Research*, 64 (February), 164-174.

Pham, Lien B. and Shelley E. Taylor (1999), "From Thought to Action: Effects of Process- Versus Outcome-Based Mental Simulations on Performance," *Personality and Social Psychology Bulletin*, 25(2), 250-260.

Posavac, Steven S., David M. Sanbonmatsu, Frank R. Kardes, and Gavan J. Fitzsimons (2004), "The Brand Positivity Effect: When Evaluation Confers Preference," *Journal of Consumer Research*, 31 (December), 643–651.

Puto, Christopher P. and William D. Wells (1984), "Informational and Transformational Advertising: The Differential Effects of Time," in *Advances in Consumer Research*, Vol. 11, Thomas C. Kinner, ed. Provo, Utah, Association of Consumer Research, 638-643.

Reber, Rolf, Tedra A. Fazendeiro and Piotr Winkielman (2002), "Processing Fluency as the Source of Experiences at the Fringe of Consciousness," *Psyche*, 8(10), October 2002.

Reber, Rolf, Norbert Schwarz and Piotr Winkielman (2004), "Processing Fluency and Aesthetic Pleasure: Is Beauty in the Perceiver's Processing Experience?" *Personality and Social Psychology Review*, 8, 364-382

Reder, Lynne.M. (1980), "The role of elaboration in the comprehension and retention of prose: A Critical Review," *Review of Educational Research*, 50, 5-53.

—— (1982), "Elaborations: When do they Help and When do they Hurt?" *Text*, 2, 211-224.

Rivkin, I., and Shelley E. Taylor (1999), "The Effects of Mental Simulation on Coping with Controllable Stressful Events," *Personality and Social Psychology Bulletin*, 25, 1451-1462.

Rogers, T. B., Kuiper, N. A., and Kirker, W. S. (1977), "Self-Reference and the Encoding of Personal Information," *Journal of Personality and Social Psychology*, 35, 677–688.

Sanbonmatsu, David M., Steven S. Posavac, Frank R. Kardes, and Susan P. Mantel (1998), "Selective Hypothesis Testing," *Psychonomic Bulletin and Review*, 5 (June), 197-20.

Sarbin, Theodore R. (1986), *Narrative Psychology: The Storied Nature of Human Conduct,* New York: Praeger

Schank, Roger C., and Robert P. Abelson (1977), Scripts, plans, goals, and understanding: An inquiry into human knowledge structures. Hillsdale, NJ: Lawrence Erlbaum.

—— (1995), "Knowledge and Memory: The Real Story." In: Robert S. Wyer, Jr., Ed. *Knowledge and Memory: The Real Story*. Hillsdale, NJ. Lawrence Erlbaum Associates, 1-85.

Schwarz, Norbert (1998), "Accessible Content and Accessibility Experiences: The interplay of declarative and experiential information in judgment," *Personality and Social Psychology Review*, 2, 87-99.

—— (2005), "When Thinking Feels Difficult: Meta-Cognitive Experiences in Judgment and Decision Making," *Medical Decision Making*, 25, 105-112.

Schwarz, Norbert and Gerald L. Clore (1996). "Feelings and Phenomenal Experiences," In E. T. Higgins and A.Kruglanski (Eds.), *Social Psychology: Handbook of Basic Principles,* New York: Guilford, 433-465.

Sherman, Jeffrey W., Angela Y. Lee, Gayle R. Bessenoff, and Leigh A. Frost (1998), "Stereotype Efficiency Reconsidered: Encoding Flexibility Under Cognitive Load," *Journal of Personality and Social Psychology*, 75 (September), 589-606.

Soman, Dilip (2003), "Prospective and Retrospective Evaluations of Experiences: How You Evaluate an Experience Depends on When You Evaluate It," *Journal of Behavioral Decision Making*, 16 (January), 35-52.

Soman, Dilip and Mengze Shi (2003), "Virtual Progress: The Effect of Path Characteristics on Perceptions of Progress and Choice Behavior," *Management Science*, 49 (September), 1229-1250.

Tal, Aner and Joel C. Huber (2006), "Mental Mode of Preparation and Aesthetic Experience," Working paper.

Taylor, Shelley E. and Sherry K. Schneider (1989), "Coping and the Simulation of Events," *Social Cognition*, 7:2, 174-194.

Tesser, Abraham (1978), "Self-Generated Attitude Change," in *Advances in Experimental Social Psychology*, ed. Leonard Berkowitz, New York: Academic Press, Vol. 11, 289-338.

Tesser, Abraham and Mary C. Conlee (1975), "Some Effects of Time and Thought on Attitude Polarization," *Journal of Personality and Social Psychology*, 31, 262-270.

Tesser, Abraham and Claudia L. Cowan (1975), "Some Effects of Thought and Number of Cognitions on Attitude Change," *Journal of Social Behavior and Personality*, 3, 165-173.

Tesser, Abraham and Christopher Leone (1977), "Cognitive Schemas and Thought as Determinants of Attitude Polarization", *Journal of Experimental Social Psychology*," 13, 340-356.

Thaler, Richard H. (1985), "Mental Accounting and Consumer Choice," *Marketing Science*, 4 (1985), 199-214.

"Transformational Advertising," American Marketing Association Online Dictionary of Marketing Terms. 2007. http://www.marketingpower.com/mg-dictionary.php (5 March, 2007).

Tversky, Barbara, and Elizabeth J. Marsh (2000), "Biased Retellings of Events Yield Biased Memories," *Cognitive Psychology*, 40 (February), 1-38.

Whittlesea, Bruce W.A. (1993), "Illusions of familiarity," *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 19, 1235 – 1253.

Whittlesea, Bruce W.A. and Lisa D. Williams (2001), "The Discrepancy-Attribution Hypothesis: I. The Heuristic Basis of Feelings and Familiarity," *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 27 (2001), 3–13.

Winkielman, Piotr, Norbert Schwarz, Fazendeiro, Tedra A., and Rolf Reber (2003), "The Hedonic Marking of Processing Fluency: Implications for Evaluative Judgment." In J. Musch and K. C. Klauer (Eds.), *The Psychology of Evaluation: Affective Processes in Cognition and Emotion,* Mahwah, NJ: Lawrence Erlbaum, 189-217.

Wright, Thomas A. and Barry M. Straw (1999), "Affect and Favorable Work Outcomes: Two Longitudinal Tests of the Happy-Productive Worker Thesis" *Journal of Organizational Behavior,* 20, 1-23.

Zajonc, Robert B. (1968), "Attitudinal Effects of Mere Exposure," *Journal of Personality and Social Psychology,* 9, Monongraph supplement No. 2, Part 2.

Zufryden, Fred S. (1996), "Linking Advertising to Box Office Performance of New Film Releases - A Marketing Planning Model," *Journal of Advertising Research*, 36 (July-August), 29-41.

—— (2000), "Relating Web Site Promotion to the Box Office Performance of New Film Releases," *Journal of Advertising Research*, 40 (January-April), 55-64.

Biography

Daniel Stephen Lieb was born in Livingston, NJ on February 18, 1975. He received a B.A. in Mathematics and Computer Science from Wesleyan University in May 1997 and an M.S. in Engineering Economics Systems and Operations Research from Stanford University in 1998. Daniel has published articles and book chapters with various coauthors: "How Subjective Grouping of Options Influences Choice and Allocation: Diversification Bias and the Phenomenon of Partition Dependence" with Craig Fox and Rebecca Ratner in The Journal of Experimental Psychology: General and "Partition Dependence in Decision Analysis, Managerial Decision Making, and Consumer Choice" with Craig Fox and David Bardolet in Experimental Business Research, Volume III. Prior to pursuing his Ph.D., Daniel was employed in the semiconductor and software industries for three years.