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# Cognitive Determinants of Product Placement Consequences submitted by

Tamara L. Ansons

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Department of Psychology
University of Manitoba
Winnipeg, Manitoba

#### Abstract

Recently, consumers have witnessed a dramatic increase in the number of product placements that occur across all forms of media. Despite this enthusiastic use of product placements, researchers have not determined whether or not this form of advertising produces profitable outcomes for featured brands. In the framework presented here, I have sought to outline how basic cognitive processes may be used to account for some of the divergent consequences that occur for product placements. Unlike other frameworks that treat memory as a separate outcome of product placements, I conceptualize memory as nonanalytically influencing other more critical outcomes such as brand evaluation and selection. The nonanalytic influence of memory is hypothesized as occurring via an attribution that is made about the ease experienced when processing a brand that has been previously encountered. To examine whether this nonanalytic framework, or an alternative framework that rests on more deliberate, analytic processing, can be used to account for the various consequences that arise after a product placement, four studies were conducted. In each of these studies, participants were presented with a narrative containing a number of brand presentations. Later, participants completed tasks that assessed memory and brand preferences across the various studies. In the first two studies, the impact of the presentation of a brand within a narrative was examined. These studies revealed that a nonanalytic influence of memory was observed, but only when there was a match in modalities across the product placement event and the manner in which more critical outcomes are obtained. Thus, fluency-based perceptual processing was found to nonanalytically influenced participants' brand preferences. Extending these findings, Experiments 3 and 4 examined whether this nonanalytic influence of memory would still

exert its effect on brand preferences when deliberate influences, which were guided by immersion and persuasion knowledge, were manipulated. Rather than brand preferences being guided by a deliberate and analytic assessment of the brand, brand ratings were guided by nonanalytic memory influences. However, this influence only emerged when fluent processing of the brand was not attributed to the prior presentation of the brand during the narrative.

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Cognitive Determinants of Product Placement Consequences

## **Chapter I: Introduction**

Carrie: Well, aside from the space issue, why'd you move to New York?

Louise: To fall in love.

Carrie: What?

Louise: That's corny, right?

*Carrie:* No. No, no, it's... It's just very honest. I don't think that I've heard anybody say that in a very long time. Well...So, Louise from St. Louis, I just have one more question. How does an unemployed girl with three roommates...afford the patchwork, denim, *Bowley, Louis Vuitton* bag?

Louise: It's rented. Bag, Borrow, or Steal. It's like Netflix for purses.

Carrie: How can I not know about this?

Louise: Girl, stick with me. I'll hook you up.

Sex and the City: The Movie (2008)

The prevalence of product or brand placements (henceforth to be referred to as product placements) in the entertainment media has increased dramatically over recent years. According to PQ Media's (2005, 2010) reports, product placement spending was \$3.46 billion in 2004 and \$3.61 billion in 2009. One source of the substantially increased spending on product placements, compared to other forms of marketing, is technological advances in entertainment media. For instance, digital video recorders, such as *TiVo*, give viewers the option to avoid traditional forms of television advertisements. Watching programs on the internet also enables viewers to avoid exposure to conventional television advertising (PQ Media, 2005). Although television and film represent the main source of product placement expenditures, PQ Media (2005) forecasts that the usage of

product placements in other media, such as in books, magazines and on the internet, will increase at a proportionally higher rate over the next few years.

Not surprisingly, as the enthusiastic use of product placements in the media has increased, researchers have become progressively more interested in determining the outcomes of these placements for consumer attitudes, brand preferences and brand choices (Balasubramanian, Karrh, & Patwardhan, 2006). In their comprehensive review, Balasubramanian et al. (2006) proposed that outcomes of product placements fall into three broad categories: cognitive, affective and conative/choice effects. Cognitive outcomes, or memory effects, such as product recognition and recall, have received the most attention from consumer researchers, yet outcomes that indicate affective (e.g., brand attitudes) and choice (e.g., brand purchase intentions) effects are rarely the focus of investigation (Balasubramanian et al., 2006). Hence, accompanying the pervasive use of product placement across many forms of media is the lack of an exhaustive understanding of its effectiveness. Indeed, a growing body of literature illustrates that a complex combination of factors determine the nature of the relationship between various outcome measures and whether or not a product placement will be effective for featured brands. In some studies, enhanced memory for embedded brand-related information was found to have a positive relationship with brand attitude (Russell, 2002; Vollmers & Mizerski, 1994). In other studies, enhanced memory for embedded brand-related information was found to have a negative or no relationship with brand attitude (Cowley & Barron, 2008; Law & Braun, 2000; Matthes, Schemer, & Wirth, 2007). That is, previous research suggests that in some instances the occurrence of a brand in a film may result in more favorable attitudes towards the brand and increased sales; however, in

other cases, the occurrence of a brand in a film may actually result in less favorable attitudes towards the brand and decreased sales.

Despite these conflicting, and risky, outcomes of utilizing product placement as a form of advertising, over the past several years, the number of brand placements per film has remained around 20 (Sauer, 2008). However, it is not clear whether the sales that are thought to be generated by these product placements justify their cost. The excerpt above provides an example of a blatant product placement used in the recently released *Sex and the City: The Movie* (2008). Although the film was criticized as being a shameful commercial, one of the brands mentioned in the film, *Bag, Borrow, and Steal*, experienced a 400% increase in consumer usage. Furthermore, despite being viewed as a movie that "sold out" for product placement, two of the brand placements that occurred in the film, *Louis Vuitton* and *Manolo Blahnik*, were judged by visitors of *brandchannel.com* as most likely to prompt an immediate purchase and the best product placement fit, respectively, compared to other brands that appeared in top US box office films between August 2007 and July 2008 (Sauer, 2008).

The complicated findings from research and industry suggest that enhancing memory for an embedded brand may sometimes, but does not necessarily, translate into positive brand evaluations and increased brand choice. Therefore, it is inadequate to rely solely on memory measures as a basis for establishing the effectiveness of product placements (Babin & Carder, 1996; Gupta & Lord, 1998). Instead, more rigorous examinations beyond memory measures are needed to evaluate product placement effectiveness (Law & Braun-La Tour, 2004). The overriding goal of the current dissertation is to come to a better understanding of the fundamental cognitive processes

that alter the consequences of product placements. To achieve this goal, a conceptual model, which differs in its characterization of product placement outcomes, is outlined below.

In developing this conceptual model, I advocate the importance examining the underlying memory processes that alter the consequences of product placement. Although recent research has examined the different roles that implicit and explicit memory influences play in altering the consequences of product placement (Law & Braun, 2000; Yang & Roskos-Ewoldsen, 2007; Yang, Roskos-Ewoldsen, Dinu, & Arpan, 2006), I argue processes that guide memory judgments also give rise to other subjective judgments and behaviours (Whittlesea, 1997; Whittlesea & Leboe, 2000). In this way, memory for a product placement event is not treated as a subsidiary and isolated outcome of a product placement; instead, memory processes fundamentally alter the consequences of a product placement. To provide a detailed rationale of these propositions, I provide an outline of the conceptual model in the next section. The conceptual model that is described has been inspired by work from psychology, consumer research, advertising and communications. As such, I incorporate many ideas from these fields in an attempt to address practical questions related to the use of product placements. More broadly, however, I utilize these streams of research in order to come to a better understanding of the memory processes that guide subjective attitudes and behaviours. After outlining the conceptual framework, four studies that were designed to test this framework are discussed. Finally, the theoretical and practical implications of the results are discussed in the final section of this dissertation.

**Chapter II: Overview of the Conceptual Model** 

In this conceptual model, I outline three outcomes of product placement: cognitive effects (memory for the brand), affective effects (attitude towards the brand) and conative effects (brand choice; Balasubramanian et al., 2006). Typically, research has studied each of these effects in isolation, with few studies examining the associations that may exist between the different effects. The few studies that have examined these consequences of product placement in combination have revealed a complicated set of results indicating a mixed (Russell, 2002; Yang & Roskos-Ewoldsen, 2007), positive (Weaver & Oliver, 2000), negative (Cowley & Barron, 2008; Law & Braun, 2000; Matthes et al., 2007) or no association (van Reijmersdal, Neijens, & Smit, 2007) between memory effects and evaluative and choice measures. Perhaps most consistent (and surprising) is the finding of a negative association between memory effects and evaluative and choice measures. That is, although brand memory measures may indicate that the product was remembered after a product placement event, a number of studies have revealed that perceptions of the brand became more negative and viewers express a lowered intention to select the featured brand over its competitors (e.g., Cowley & Barron, 2008; Law & Braun, 2000; Matthes et al., 2007). To accommodate the complex associations that have been found in previous studies, the current framework emphasizes the cognitive processes that give rise to measurable outcomes of product placement. Before detailing the propositions of the conceptual model proposed here, a thorough review of the past literature that examines the relationship between memory, evaluative and choice effects will be provided.

The Relationship between Memory, Evaluation and Choice Effects

As mentioned, previous research on product placement effectiveness suggests that an inconsistent association exists between memory effects and evaluation and choice effects. Some studies have shown that product placements result in positive outcomes for brand memory (e.g., Russell 2002; Vollmers & Mizerski, 1994). Nevertheless, other studies reveal that enhancing subsequent recall and recognition of a brand used in a product placement episode can result in either negative or null effects on brand attitude and brand choice measures (Cowley & Barron, 2008; Law & Braun, 2000; Matthes et al., 2007).

Indeed, research by Law and Braun (2000) convincingly demonstrated the deficiencies of using memory measures as a gauge of the effectiveness of product placements. In their study, participants were presented with short video clips that contained products that were seen-only, heard-only or were both seen and heard (audiovisual presentations). Their results revealed that audiovisual product placements led to the best performance on subsequent memory measures (recall and recognition measures). However, on a brand choice task, the audiovisual products were least likely to be chosen by the participants. In contrast, the presentation of seen-only products led to the poorest performance on the recognition task, but the most favorable choice outcomes: they were most likely to be chosen, compared to heard-only products and products that were audiovisually presented. These results clearly demonstrate a dissociation between memory and choice measures as gauges of product placement effectiveness. Mainly, products that are more prominent within a product placement episode may promote heightened memory for a brand, but this positive consequence for brand memory may actually discourage consumers from choosing the brand among alternatives. The

implication of these findings is that product placements that are more peripheral can simultaneously produce no change in explicit memory for a brand and increase consumers' tendency to select that brand from among a set of competing products.

Supporting Law and Braun's (2000) initial findings, other researchers have confirmed that enhancing memory for a product produces unfavorable outcomes on attitude and choice measures for the brand (e.g., Auty & Lewis, 2004; Matthes et al., 2007). In fact, recent research by Cowley and Barron (2008) suggests that the negative relationship found between memory and attitude measures may be enhanced for individuals who like the program in which the product placement occurs. Consistent with Law and Braun's findings, Cowley and Barron's results indicated that the more prominent the placement, the more memorable the product, but the less favorable the attitude ratings, especially for individuals who expressed much fondness for the program. Based on these results, it is quite surprising that prominent placements are the most expensive for a marketer to secure for their brand, given that they often can produce less favorable attitude outcomes compared to more subtle placements (Bhatnagar, Aksoy, & Malkoc, 2004; Cowley & Barron, 2008). Together, the research discussed above clearly indicates that care must be taken when discussing whether product placements are effective. Mainly, outcomes that provide a gauge of memory for a brand from a product placement do not necessarily translate to positive outcomes on the dimensions of attitude towards the brand and brand choice. Therefore, in order to determine the effectiveness of product placements, it is important to first determine the marketing objectives of embedding products and product references within entertainment media.

Although there is an extensive amount of product placement research that demonstrates a negative association between memory for a brand and brand attitude/choice effects, this result is not always replicated in other studies. Instead, some research investigations indicate that the association between product placement memory and attitude effects are either mixed (Russell 2002; Yang & Roskos-Ewoldsen, 2007), positive (Weaver & Oliver, 2000) or absent (van Reijmersdal et al., 2007). For example, Russell (2002) expanded upon Law and Braun's (2000) examination of the impact of centrality and modality on product placement. However, Russell did not confound the two factors; instead, she manipulating centrality and modality separately. To examine these factors, Russell explored the impact of modality through auditory or visual presentation of the brand placement and centrality by having the product either play a crucial or tangential part within the story's plot. Russell found that memory for placements were not directly related to improved attitude ratings for the product. Instead, the association between memory and attitude ratings depended on the modality of the presentation. For the auditory placements, the product placement was remembered, regardless of its connection with the plot. However, auditory placements generated more favorable evaluations when the product was highly connected with the plot. In contrast, for the visual placements, when the product placement was highly connected with the plot, the placement was more likely to be remembered; however, attitude ratings were found to be less favorable, compared to when the product placement was less connected to the plot and not remembered.

Russell (2002) accounted for these findings by theorizing that the viewer perceives auditory placements as more meaningful, encouraging more elaborate

processing. The viewer perceives visual information, by contrast, as more peripheral, thereby discouraging elaborate processing. Thus, an auditory placement that is highly integrated with the plot is consistent with the viewers' perception of the centrality of auditory input, and a visual placement that is less integrated with the plot is consistent with the viewers' perception of visual input. However, when the perceived importance of a product placement based on sensory modality and the placement's centrality to the plot are inconsistent, Russell proposes that participant will overly reflect on the product placement, resulting in negative effects on the viewers' attitude toward the brand.

Russell's explanation for her complex set of results relies heavily on other research suggesting that encouraging the viewer to attend too directly to a product placement, separate from its relevance to a story's plot, often lowers viewers' attitude toward a brand. Stated another way, when participants become aware that they are being persuaded to use a brand through its placement within entertainment media (typically referred to as the activation of persuasion knowledge), viewers will often react against these attempts to influence them (Campbell & Kirmani, 2000; Friestad & Wright, 1994; Russell, 2002). Although this reaction to persuasion tactics may occur, I argue that an alternative framework might be useful in understanding the complex outcomes that arise from product placements.

## A New Conceptual Model: The Nonanalytic Influence of Memory

In the framework proposed here, I have sought to outline how basic cognitive processes may be used to account for some of the divergent consequences that occur for product placements. Unlike other frameworks that treat memory as a separate outcome of product placements, I conceptualize memory as a system that acts as a liaison between a

product placement event and its consequences by providing a platform from which other outcomes are determined. Thus, to determine the consequences of a product placement event, factors that influence how information is stored in memory and how information from memory is used to guide performance on a certain tasks must be considered. The studies reported here examine how memory nonanalytically influences more critical brand consequences (evaluations and selections). In past frameworks, memory has been treated as being used more analytically to guide brand preferences. Mainly, if viewers remember a brand being featured during a product placement event, this is thought to instigate a negative response toward the brand through the activation of persuasion knowledge (Campbell & Kirmani, 2000; Friestad & Wright, 1994).

Contrasting this analytic use of memory, I examine how nonanalytic influences, meaning processes that are irrelevant to the current task (Jacoby & Brooks, 1984), contribute to consequences observed for brands that are featured during a product placement event. As has been emphasized in other studies (e.g., Whittlesea & Price, 2001), the nonanalytic influence on subjective judgments is expected to arise out of perceptual fluency that occurs for brands that are presented during a product placement event. The studies reported here examine how a nonanalytic influence of memory may be used to account for some of the complex findings reported in the current literature. In exploring this nonanalytic influence of memory, the nonanalytic framework discussed her offers a broader perspective on how product placements are determined. That is, rather than identifying the moderators of product placement outcomes as has been done in other frameworks (see Balasubramanian et al., 2006 for a review), the underlying cognitive processes that guide product placement outcomes are examined in the studies reported

here. Before discussing the studies that tested this nonanalytic framework, two features of the framework must be emphasized.

The role of memory. The most dramatic difference in the current framework, compared to frameworks described previously (Balasubramanian et al., 2006; Law & Braun, 2000; Matthes et al., 2007; Russell, 2002), is the treatment of memory. Past research has conceptualized memory simply as an outcome that arises from a product placement (e.g., Balasubramanian et al., 2006). Moreover, this research has identified how different memory measures, meaning those that are implicit or more unconsciously based and those that are explicit or more consciously based, can indicate differences in product placement outcomes (Law & Braun, 2000; Yang & Roskos-Ewoldsen, 2007; Yang et al., 2006). Furthermore, measures of implicit and explicit memory have been found to be not related to each other (Law & Braun, 2000; Yang & Roskos-Ewoldsen, 2007; Yang et al., 2006), suggesting that assessing memory through explicit and implicit measures is accessing distinct memory systems (Schacter, 1987).

In contrast, rather than memory being thought of as an outcome of product placements that is dissociated from or unrelated to brand choice, or as different systems that, when accessed, produce dissociations in performance, I adopt a framework that conceptualizes memory as a single system that simply stores experiences and utilizes these experiences to guide current attitudes and behaviours (Whittlesea, 1997; Whittlesea & Leboe, 2000). When presented with a brand that occurs within a product placement, information about the brand, development of the story, characters in the story, and so forth, get stored in memory. Later, when presented with a task, specific features of the task draw upon information that has been stored in memory to guide performance on the

task. When a memory task (e.g., recall or recognition test) is the task that is being completed, using the prior experience to guide performance on a task is an appropriate use of memory. However, when the task is something other than a memory task (e.g., an evaluative or choice task), using a prior experience to guide performance may not be as appropriate.

Indeed, extensive research on the mere exposure effect (Zajonc, 1968, see Bornstein, 1989, for a review) has nicely illustrated how performance on a task can be biased by the prior presentation of items. With the mere exposure effect, the prior presentation of an item results more efficient or fluent processing that item when it is presented at some later time (e.g., Lee & Labroo 2004; Winkielman, Schwarz, Fazendeiro, & Reber, 2003). This fluent processing produces an affectively positive state (Winkielman & Cacioppo, 2001; Winkielman et al., 2003), which, in the context of an evaluation task, can be attributed to the pleasantness of the item (Whittlesea & Price, 2001). Thus, memory is not merely a separate consequence that can be examined separately from other consequences that arise from product placements. Instead, memory interacts with the task being completed to guide performance. Although the influence of memory on performance may not be appropriate if the task is not a memory test, memory can alter the processing of an item, which, ultimately, produces a change in task performance.

The role of task features. Critically, features of the task will play a role in how memory contributes to performance on a task. With the mere exposure effect, information stored in memory interacts with the task being completed by altering how the item is processed. When this processing change is attributed to the task being completed, and not

to its true source, memory guides performance (see Bornstein & D'Agostino, 1992; Seamon, Brody, & Kauf, 1983; Whittlesea & Price, 2001). When certain judgments need little thought or evaluation, then the altered processing that occurs for items that were previously seen can be attributed to dimension being rated. If, however, the task is altered, by either requiring more deliberate evaluation of the item (Whittlesea & Price, 2001) or by providing an alternative source for the processing (Jacoby, Kelley, Brown, & Jasechko, 1989), memory may not exert its influence on task performance.

In fact, the interplay between task features and attributions made about current processing experiences has been well documented with tasks and judgments that go beyond the mere exposure effect (e.g., Schwarz et al. 1991; Wänke, Bohner, & Jurkowitsch, 1997; Winkielman & Schwarz, 2001). With these studies, changes in the task demands or descriptions have been found to alter the attributions made about the experienced processing. For example, in Schwarz et al.'s (1991) study, participants were asked to judge their assertiveness after recalling either 6 or 12 examples of when they acted assertively or unassertively. Surprisingly, participants did not simply use what they remembered to guide their judgments of their assertiveness. Instead, participants also used their subjective experience while completing the recall task to guide their assertiveness judgments. When the assertiveness recall task was relatively easy (i.e., when they recalled 6 assertive behaviours), participants judged themselves as being more assertive compared to when the recall task was more difficult (i.e., when they recalled 12 assertive behaviours). However, the opposite pattern of assertiveness ratings emerged after the unassertiveness recall task: participants reported lower assertiveness ratings when the unassertiveness recall task was easy (i.e., when they recalled 6 unassertive

behaviours) and higher assertiveness ratings when the unassertiveness recall task was difficult (i.e., when they recalled 12 unassertive behaviours). However, when participants were able to attribute their subjective experience during the recall to another source—the music being played during the recall task in this situation—the processing ease or difficulty no longer guided judgments of assertiveness. Thus, when current processing can be attributed to some other source, performance changes that are derived form processing experiences are diminished.

**An application.** Notably, the framework described here outlines very basic processes compared to the complex set of factors that have been discussed by other researchers (e.g., Balasubramanian et al., 2006; Law & Braun, 2000; Matthes et al., 2007; Russell, 2002). Nevertheless, despite the simplicity of these processes, there is complexity that arises from their interaction. Take, for example, the finding that recall and recognition of a brand from a product placement is not related to brand choice (Law & Braun, 2000). Although this finding has been used to argue for a dissociation in the systems that guide these consequences—recall and recognition is guided by an explicit memory system, and choice is guided by an implicit memory system—the nonanalytic framework described here can be used to offer a more parsimonious explanation. That is, perhaps the same memory system is responsible for performance on both tasks. To illustrate, suppose that when faced with each task the same processing experience occurs. In this situation, an item might be processed fluently. When completing a recall or recognition task, an evaluation of and attribution of the processing must occur. Mainly, can the processing that I am experiencing be attributed to a specific context? When an item is processed fluently, this type of processing may produce a feeling of familiarity;

however, this vague feeling of familiarity might not be sufficient evidence to judge that item as having been presented in some prior context. Nevertheless, when completing a choice task the same evaluation of the current processing is not necessary. Instead, a brand may be selected without much thought or deliberation (Bargh, 2002; Friese, Wänke, & Plessner, 2006). In this situation, the experienced fluency might be attributed to the dimension being judged, resulting in higher choice judgments for previously seen brands.

Likewise, the opposite pattern might be also accounted for by the same nonanalytic process. Suppose that instead of merely experiencing processing fluency when encountering an item, details of having seen the brand during a product placement come to mind. When completing a recall or recognition task, this information can be used to judge that the brand was presented during the prior product placement event. However, recollecting these details might not be beneficial for a choice task. That is, being able to attribute the current processing of an item to the past would attenuate the influence of the experienced processing on the choice judgment. As a result, no benefit of prior presentation of a brand would be observed.

To examine whether this nonanalytic framework, or an alternative framework that rests on more deliberate, analytic processing, can be used to account for the various consequences that arise after a product placement, four studies were conducted. In the first two studies, the impact of the presentation of a brand within a narrative was examined. If the mere presentation of a brand within a narrative influences later brand ratings, then brand ratings should be found to be more positive when a brand has been presented in the narrative. If, however, changes in brand ratings are dependant on an attribution made about the perceptual fluency experienced when processing a brand, then

a perceptual match in how information is stored in and accessed from memory should play a critical role in determining consequences for participant's brand preferences.

Building upon the findings of Experiments 1 and 2, Experiments 3 and 4 examine whether the manipulation of other psychological factors modulates the consequences found after a product placement. Recent research suggests that the level of immersion experienced while processing a product placement may protect featured brands from the activation of persuasion knowledge that may occur (e.g., Matthes et al., 2007). Experiments 3 and 4 examined whether immersion and persuasion knowledge play an essential role in determining product placement outcomes. If brand ratings are based on a more conscious and deliberate process, altering immersion and the activation of persuasion knowledge should alter participants' brand ratings. In contrast, if brand ratings originate from nonanalytic influences that are based on an attribution made about the fluent processing of a brand, then altering immersion and the activation of persuasion knowledge should not produce differences in participants' brand ratings.

#### **Chapter III: Brand Presentation and Product Placement Consequences**

In Experiments 1 and 2, the impact of the presentation of brands within a product placement on later brand ratings was examined. The goal of Experiments 1 and 2 was to establish that differences in subtle memory processes gives rise to different consequences observed for featured brands. However, to first examine whether other factors may influence the consequences that arise for featured brands, Experiment 1 tested how the valence of the brand portrayal alters later brand ratings. Recently, Russell and Stern (2006) found that viewers tended adopt the attitude that characters displayed toward brands that were presented during a product placement. Experiment 1 attempted to

illustrate a similar pattern. If participants were deliberately using the presentation of the brand within the narrative to guide their brand ratings, then the valence in which the brand is portrayed should produce different outcomes on the brand rating tasks.

Furthermore, to examine if this pattern would occur only when the product placement event is highly accessible, some of the participants completed the brand rating tasks after a short delay and other participants completed these tasks after a long delay after hearing the narrative. If participants' brand ratings were guided by a deliberate use of the prior presentation of the brand within the narrative, then brand ratings should reveal different patterns after the long and short delays. Mainly, participants' brand ratings should be influenced by the valence of the brand portrayal after a short delay, but not influenced by these presentations after a long delay. Despite these expectations, the results of Experiment 1 did not provide evidence of the predicted relationship.

Although a number of factors may have contributed to the unsuccessful use of product placements in Experiment 1, I argue that it is necessary to consider how memory processes may determine the consequences arising from product placements. Experiment 2 provided a more basic approach to examining how the presentation of a brand during a narrative alters later brand ratings. In this study, the presentation of the product placement was altered so that there was a match between the modality that the product placement was presented in and the modality in which brand ratings were provided. By altering the modality in which brands were presented and rated, this experiment allowed me to examine how the influence of nonanalytic memory processes, mainly fluency derived from the prior presentation of the brand, influences brand ratings. To foreshadow, the results of Experiment 2 provided a more coherent set of findings that could be

accounted for by the nonanalytic framework outlined earlier. The remaining studies tested the robustness of this nonanalytic influence by examining its resilience to factors that have been discussed as altering the more deliberate and analytic route by which product placement outcomes occur.

#### **Experiment 1**

The goal of Experiment 1 was to provide an initial examination of how the basic presentation of a brand during a product placement produces differences in later brand ratings. Brands were portrayed either positively or negatively within an auditory narrative that was an excerpt of a murder-mystery novel. An auditory presentation of the narrative was selected because auditory information is thought to convey important information (Rolandelli, Wright, Huston, & Eakins, 1991; Russell, 2002), and thus would be more elaborately processed and remembered at some later time (Craik & Lockhart, 1972).

After either a short or long delay, participants provided evaluative ratings and implicit choice ratings for the brands that were presented, which were intermixed with new brands. If prior presentation influences brand ratings, then changes in brand ratings should be observed when participants provide their brand ratings shortly after being presented with the narrative.

#### **Participants**

A total of 62 participants (40 female, 22 male,  $M_{\rm age} = 19.02$  years) were recruited from the Introduction to Psychology Participant Pool system at the University of Manitoba. Participants received partial course credit in exchange for their voluntary participation in the study. All participants were required to be native English speakers and to be under the age of 30.

#### **Apparatus and Stimuli**

Computer. The experiment was conducted on Dell OptiPlex GX620 and Performance Design desktop computers connected to a keyboard and a 17-inch colour monitor. Window Media Player 11 (Microsoft Corporation, 2007) or the E-Prime suite (Psychology Software Tools Inc., 2002) was used to present experimental stimuli and the E-Prime suite was used to record participants' responses.

**Stimuli development.** Thirteen short passages were created for use in the first experiment. The passages were created by modifying the first few chapters of a mystery novel. Embedded within the narrative of the passage were 20 brands mentioned that varied across a number of different product categories (e.g., bottled water, food, electronics, clothing, etc.). Of the 20 brand presentations contained within the passages, 10 were positive portrayals of the brand mentioned (e.g., "...A white satin gown like a bride's, with Gucci accessories that were covered in the most spectacular diamonds..."), and 10 were negative portrayals of the brand mentioned (e.g., "...Debra, Mrs. Wilson's own maid, was lingering over her Folgers coffee in the servants hall. She cringed as she took a sip of her bitter coffee..."). Four versions of the passage were created. Across each of these versions, one of the two brands from a product category appeared within two of the narratives, whereas the other brand appeared within the remaining two narratives. Crossed with this manipulation, the brand selected from each category was portrayed positively in two narratives and negatively in the remaining two narratives. A voice actor was hired to record the transcripts of the narrative. The narrative was recorded in a soundproof booth using Adobe Audition 3.0 (Adobe Systems, 2007). Participants were randomly assigned to receive one of the passages upon arrival to the study.

Alternative brands. For each of the brands that occurred in the passage, two additional alternative brands were selected. The presentation of two of the brands during the passages was counterbalanced across participants so that each participant received only one brand from each product category. The brand that was not presented during the set of passages was presented during the brand choice task. The third brand within each product category was presented during the evaluative task.

#### Procedure

Through the online participant recruitment system, participants signed-up for either the immediate (n = 31) or delayed (n = 31) condition of the study. Participants contributed their data individually or in groups of up to 10 and were informed that the experimental session would involve their participation in a number of phases of a study. Prior to beginning the study, participants read and signed a consent form (see Appendix A) and were informed that they would be participating in a study investigating how narrative information is processed and how details from the narrative are remembered and alter individuals' perceptions of information from the narrative. They were then told that they would be presented with a narrative though headsets that were attached to the computer. Participants in the delayed condition listened to the narrative, which was presented using Window Media Player 11 (Microsoft Corporation, 2007), and were dismissed until 24 hours after their session began. Participants in the immediate condition listened to the narrative and the completed a set of simple math problems for approximately 5 minutes before continuing on to the next part of the study.

After completing the math problems, or when participants in the delayed condition returned the next day, participants completed the evaluation task. Finally,

participants completed the implicit choice task during the fourth phase of the study. However, to reduce the likelihood that participants would become suspicious as to the true purposes of the study and strategically select brands that appeared during previous parts of the study, participants were lead to believe that their responses during the choice task would be used for a future study. After the completion of the study, participants were thanked for their time, provided with the debriefing sheet, and told that they could leave their contact information if they wished to receive the results of the study.

**Narrative phase.** During the initial phase, participants were presented with all the passages from the narrative. Before they began, participants were asked to try to imagine themselves in the scenarios being described as they listened to the narrative. They then listened to the entire set of passages.

Unrelated filler phase. Participants in the immediate condition were presented with a set of math problems before they continued to the next part of the study. They completed a series of simple math problems (e.g., 6 + 17 - 15 = ?) and responded by entering the solution using the computer keyboard.

**Evaluation task.** For the evaluation task, participant were randomly presented with brands that were presented during the narrative and new brands and asked to rate them along a 9-point scale ranging from 1 (*dislike*) to 9 (*like*) according to their personal preference.

**Implicit choice task.** For the last phase, participants were told that the information provided for the final study was being collected for a future study on consumers' brand preferences. For this task, participants were presented with two brands from a particular product category on each trial. One of the brands was a brand that

appeared during the narrative phrase, and the other brand was the second alternative brand that had not appeared during any of the previous parts of the study. Participants were asked to rate the likelihood that they would select each of the brands for a close friend. By making the choice task ostensibly unrelated to the previous sections of the study, the selections reported by the participants are thought to reflect their implicit choice behaviour. Participants were asked to provide their ratings by selecting a number from 1 (*Definitely would not select*) to 9 (*Definitely would select*). After completing the implicit choice task, participants were informed that the experimental session was complete.

#### **Results and Discussion**

**Evaluation ratings.** Participants' evaluation ratings were submitted to a mixed-design ANOVA treating brand presentation (new vs. old/negative vs. old/positive) as the within-participant factor and delay condition (immediate vs. 24 hr delay) as the between-participants factor. This analysis did not reveal main effects of brand presentation or of delay condition, nor did it reveal an interaction between brand presentation and delay condition, ps > .05. Despite the fact that brands were portrayed either positively or negatively, these presentations did not result in any differences in brand evaluation ratings, compared to brands that were new (see Table 1). To examine whether the different portrayals produced different outcomes on brand selections, the implicit choice ratings were examined.

Table 1

Brand Evaluations Across Brand Presentation and Delay Condition in Experiment 1

	Brand Presentation		
Delay Condition	New	Old/Negative	Old/Positive
Immediate	6.09 (0.18)	6.06 (0.23)	6.15 (0.20)
24 hr delay	5.99 (0.12)	6.02 (0.15)	6.25 (0.21)
Combined	6.04 (0.11)	6.04 (0.14)	6.20 (0.14)

*Note.* The standard error of the mean is presented in parentheses.

**Implicit choice ratings.** As with the evaluation ratings, the implicit choice ratings were submitted to a mixed-design ANOVA treating brand presentation (new vs. old/negative vs. old/positive) as the within-participant factor and delay condition (immediate vs. 24 hr delay) as the between-participant factor. Again, this analysis did not reveal main effects of brand presentation or of delay condition, nor did it reveal an interaction between brand presentation and delay condition, ps > .05. Thus, presenting a narrative containing various product placements did not produce any changes in the implicit choice ratings for the featured brands (see Table 2).

Table 2

Implicit Brand Choice Ratings Across Brand Presentation and Delay Condition in

Experiment 1

	Brand Presentation		
Delay Condition	New	Old/Negative	Old/Positive
Immediate	5.98 (0.18)	6.03 (0.26)	5.93 (0.19)
24 hr delay	5.96 (0.15)	5.85 (0.19)	6.16 (0.21)
Combined	5.97 (0.12)	5.94 (0.16)	6.05 (0.14)

*Note.* The standard error of the mean is presented in parentheses.

Although presenting brands that were positively and negatively portrayed in the narrative was expected to produce differences in brand ratings, the results of Experiment 1 did not support this prediction. There are a number of possible reasons for why these results were not obtained. For example, perhaps participants did not become attached with the characters that were presented in the narrative, which appears to be an important determinant of whether character attitudes alter viewers' perceptions of featured brands (Russell & Stern, 2006). Moreover, obtaining evaluations of the brands prior to the implicit choice task may have interrupted the attribution process that is speculated to underlie the consequences that arise from the prior presentation of a brand. That is, providing deliberate evaluations prior to the implicit rating task, could have made participants more analytical when forming their implicit choice ratings (Whittlesea &

Price, 2001), reducing their reliance on a more nonanalytic fluency attribution process. As a result, the subtle processing changes that may have occurred for previously presented brands may have been overridden by the more deliberate, consciously controlled evaluation process (Posner & Snyder, 1975).

Despite these potential issues, and probably others, if the nonanalytic framework outlined earlier is applied here, I argue that presenting the narrative as auditory information in Experiment 1 may have ultimately produced non-significant results. In Experiment 1, the modality in which participants experienced the narrative was different from the modality in which participants provided their ratings. Given that Experiment 1 revealed that there was no impact of prior brand presentation on evaluative and choice ratings, these findings suggest that match in modality between the product placement event and the manner in which more critical outcomes are obtained is important. Indeed, studies examining how cross-modal presentations alter processing of items indicate that a prior presentation of an item makes the later processing of that item more efficient or fluent if it is presented in the same modality, but produces little or no processing change when the modality changes (Jacoby & Dallas, 1981). Moreover, when a modality switch occurred between a study and test phase, participants were found to discount the influence of perceptual fluency on recognition judgments (Miller, Lloyd, & Westerman, 2008; Westerman, Lloyd, & Miller, 2002). Thus, even if there were a slight processing advantage for brands that were presented during the narrative, participants may have been inclined to dismiss the influence of fluency when providing their evaluative and choice ratings.

#### **Experiment 2**

Experiment 2 was conducted to test whether the beneficial effects of product placement on brand preferences would depend on a match between the modality of the initial product placement event and the modality of the brand name during the implicit choice task. That is, a match between a prior experience with a stimulus and the manner in which an item is presented in the present context is known to make the current processing of the item more fluent (Jacoby & Dallas, 1981; Mandler, 1980). In turn, this enhanced fluency of processing has been shown to contribute to a number of subjective judgments. In the context of a recognition task, a number of studies reveal that the fluent processing will be attributed to the "oldness" or prior presentation of the item (e.g., Leboe & Whittlesea, 2002; Whittlesea, 1993; Whittlesea & Williams, 2001). Similarly, when presented with the implicit choice task used in the current study, the fluent processing might contribute to judgments about how likely one would be to select a particular product over another. Research on the mere exposure effect (Zajonc, 1968) suggests that these brand preferences can derive from a nonanalytic basis of decisionmaking, unconsciously guided by attributions about the source of fluency stimulus processing (Whittlesea, 1993; Whittlesea & Price, 2001).

According to the framework outlined earlier, it is memory's influence on the type of processing experienced for an item and the task features that produce different consequences after a product placement. Therefore, the objective of Experiment 2 was to provide a more basic examination of the relationship between memory-guided processing and task performance. As described earlier, previous studies have found dissociations between implicit and explicit memory outcomes (Law & Braun, 2000; Yang & Roskos-Ewoldsen, 2007; Yang et al., 2006), suggesting the influence of different memory

systems (Schacter, 1987). However, differences in task performance do not necessarily mean that the different memory systems have produced these dissociations (Nosofsky & Zaki, 1998; Zaki & Nosofsky, 2001). Instead, differences in task requirements may alter how attributions are made about the processing of items (Whittlesea, Brooks, & Westcott, 1994; Whittlesea & Price, 2001). Moreover, results from earlier studies of product placement effects cannot be used to argue for the unique contribution of different memory systems because the methods used in these studies do not separately test for the influences of implicit and explicit memory. Mainly, the measure of implicit memory typically takes the form of a word-fragment-completion task, which may be influenced by both implicit and explicit contributions of memory (Jacoby, 1991, 1998).

To rectify these issues and examine how task features that reflect either more implicit influences of memory or more explicit influences of memory can be related to the more critical brand choice outcomes, the independent-scales methodology (Higham & Vokey, 2004) from cognitive psychology was utilized. In this methodology, rather than obtaining a simple *old-new* recognition judgment for each item, which reflects the contribution of both implicit and explicit memory processes, participants are asked to provide two ratings: one for familiarity and one for recollection. The distinguishing feature between the two rating scales is that the familiarity ratings allows for the influence of more unconscious or implicit processes of memory, whereas the recollection ratings requires the use of more conscious or explicit process of memory. When presented with an item during a recognition task, the vague sense that one has experienced the item before would constitute the feeling of familiarity. This influence of memory does not provide any definitive information about the context in which an item

was experienced; instead, one would merely experience the sense that the item was previously encountered. In contrast, if one were able to determine the context in which a recognition item was encountered, this influence of memory would reflect recollection. By using this methodology, different memory profiles are expected to emerge for brands that were presented within the narrative. By examining how different brand presentations alter the memory and choice ratings, the interaction that memory-guided processing and task features has on product placement consequences was examined in Experiment 2.

#### **Participants**

A total of 91 participants (60 female, 31 male,  $M_{\text{age}} = 19.9 \text{ years}$ ) were recruited from the same participant pool as was used in Experiment 1.

#### **Apparatus and Stimuli**

**Computer.** The same computer equipment as was in Experiment 1 was used again in Experiment 2. The E-Prime suite (Psychology Software Tools Inc., 2002) was used to present experimental stimuli and to record participants' responses.

Stimuli development. The thirteen short passages that were used in Experiment 1 were used again in Experiment 2. However, rather than presenting brands in a positive or negative light, brands were presented either once or five times within the narrative (see Appendix B for an example of the narrative). Embedded within the narrative of the passage were 20 brands mentioned that varied across a number of different product categories (e.g., bottled water, food, electronics, clothing, etc.). Four versions of the passage was created so that, one of two brands from a certain product category appeared during the narrative and the brand appeared either once or five times. Two other brands within each product category served as the alternative brands (see below); one of which

was selected to appear in the other versions of the passage. For example, for the product category bottled water, the brand *Dasani* was presented once in Version A and the other brand, *Aquafina*, was presented once in Version B. In Version C *Dasani* appeared five times and in Version D *Aquafina* appeared five times. Participants were randomly assigned to receive one set of the passages upon arrival to the study.

Alternative brands. For each of the brands that occurred in the passage, two additional alternative brands were selected as alternatives. The presentation of two of the brands during the passages was counterbalanced across participants so that each participant received only one brand from each product category. The second brand that was not presented during the set of passages was presented during the brand choice task. The third brand within each product category was used during the recognition task as a foil. Appendix C contains the full set of brands along with brand evaluation ratings that were provided by a group of participants that did not participate in any of the studies.

#### Procedure

Prior to beginning the study, participants were informed that they would be participating in a study investigating how narrative information is processed and how details from the narrative are remembered and alter individuals' perceptions of information from the narrative. Participants contributed their data individually or in groups of up to 20 and were informed that the experimental session would involve their participation in a number of phases of a study. They were told that all instructions and material would be presented on the computer screen, and that they would be first receiving a narrative, which was an excerpt from a murder-mystery novel. During the experiment, participants were exposed to three phases that were described by the

experimenter as being part of a single study, and a fourth phase that was described as a pretest for a future study. In the first phase, participants were presented with the text passages from the narrative. They then completed the unrelated filler task during the second phase and the recognition task during the third phase. Finally, participants completed the implicit choice task during the fourth phase of the study. However, to reduce the likelihood that participants would become suspicious of the true purposes of the study and strategically select brands that appeared during previous parts of the study, participants were lead to believe that their responses during the choice task would be used for a future study. After completion of the study, participants were thanked for their time, provided with the debriefing sheet, and told that they could leave their contact information if they wished to receive the results of the study.

Narrative phase. During the initial phase, participants were presented with all the passages from the narrative. Participants were told to attend to the emotions and other details presented in narrative. They were also told they would be asked some questions about the information that they read during another part of the study. They then read through the entire set of passages before completing the second phase of the study.

**Unrelated filler phase.** The filler task was identical to the one used in Experiment 1.

**Recognition phase.** Rather than receiving a standard recognition task where participants respond "old" or "new" to recognition items, participants were presented with the instructions for the independent-scales methodology (Higham & Vokey, 2004) prior to completing the recognition task. The instructions for the independent-scales methodology outline the difference between recognition judgments that are based on

recollection and familiarity (see Appendix D). Recollection is described as involving consciously remembering some aspect about an item; whereas, familiarity is described as a feeling evoked by an item, which may occur without any conscious recollection of having seen the item before. By being described this way, recollection reflects a more conscious or explicit route by which an item can be recognized, and familiarity reflects a more nonconscious or implicit route by which an item can be recognized (Jacoby, 1991). With the presentation of each recognition item, participants are asked to provide two ratings along a 4-point scale with 1 = low and 4 = high; one rating was provided for familiarity and one rating was provided for recollection.

For the current study, participants were presented with a total of 80 phrases. Forty of these phrases appeared during the narrative passages and 40 of the phrases were novel. Within the old and novel phrases were 20 phrases that did not contain brands and 20 phrases that contained a brand. Finally, ten of the old phrases that contained brands were further classified as brands that were presented once during the narrative or as brands that were presented five times during the narrative. Although the phrase itself appeared only once, higher familiarity and recollection ratings were expected for the phrases that contained brands that were presented five times throughout the narrative. After receiving the 80 phrases, participants were informed that the experimental session was complete. However, they were asked to complete a final phase that was presented as being not related to the previous phases that they completed.

**Implicit choice task.** For the last phase, participants were told that the information provided for the final study was being collected for a future study on consumers' brand preferences. For this task, participants were presented with two brands

from a particular product category on each trial. One of the brands was a brand that appeared during the narrative phrase, and the other brand was the second alternative brand that had not appeared during any of the previous parts of the study. Participants were asked to rate the likelihood that they would select each of the brands for a close friend. By making the choice task ostensibly unrelated to the previous sections of the study, the selections reported by the participants is thought to reflect their implicit choice behaviour. Participants were asked to provide their ratings by selecting a number from 1 (*Definitely would not select*) to 9 (*Definitely would select*). After completing the implicit choice task, participants were informed that the experimental session was complete.

#### **Results and Discussion**

**Recognition judgments.** First, to ensure that participants were able to discriminate old from new phrases, participants' familiarity and recollection ratings for the phrases that contained only narrative information were analyzed by conducting two one-way repeated-measures analysis of variances (ANOVA), treating presentation (old vs. new) as the within-participant factor. A significant effect of presentation was observed for both the familiarity, F(1, 90) = 204.91, MSE = 0.17, p < .001, and recollection, F(1, 90) = 267.31, MSE = 0.16, p < .001, judgments. Participants gave old phrases significantly higher familiarity (3.03 vs. 2.15) and recollection (2.91 vs. 1.94) ratings, compared to new phrases. Based on these differences, participants appeared to be able to discriminate old from new phrases.

Next, participants' familiarity and recollection ratings for phrases that contained brands were analyzed by conducting two one-way repeated-measures ANOVAs, treating brand presentation number (not presented vs. once vs. five times) as the within-

participant factor. Presentation number was found to have a significant effect on both familiarity, F(2, 180) = 293.60, MSE = 0.20, p < .001, and recollection, F(2, 180) =463.56, MSE = 0.17, p < .001, ratings (see Table 3). For the familiarity ratings, participant reported lower familiarity ratings for the phrases that contained brands that were not presented, compared to phrases that contained brands that were presented once (1.90 vs. 3.03), F(1, 90) = 236.51, MSE = 0.25, p < .001, and to phrases that containedbrands that were presented five times (1.90 vs. 3.44), F(1, 90) = 458.20, MSE = 0.24, p < .001. Furthermore, participants reported higher familiarity ratings for the phrases that contained brands that were presented five times compared to brands that were presented once (3.44 vs. 3.03), F(1, 90) = 68.53, MSE = 0.11, p < .001. Similarly, for the recollection ratings, participant reported lower recollection ratings for the phrases that contained brands that were not presented, compared to phrases that contained brands that were presented once (1.59 vs. 2.95), F(1, 90) = 399.72, MSE = 0.21, p < .001, and to phrases that contained brands that were presented five times (1.59 vs. 3.36), F(1, 90) =770.13, MSE = 0.19, p < .001. Furthermore, participants reported higher recollection ratings for the phrases that contained brands that were presented five times compared to brands that were presented once (3.36 vs. 2.95), F(1, 90) = 70.98, MSE = 0.11, p < .001.

Table 3

Familiarity and Recollection Ratings for Phrases that Contained Brands Across Brand

Presentation Number in Experiment 2

Rating	Brand Presentation Number			
	New	Old/Once	Old/Five Times	
Familiarity	1.90 (0.06)	3.03 (0.06)	3.44 (0.04)	
Recollection	1.59 (0.04)	2.95 (0.05)	3.36 (0.04)	

*Note.* The standard error of the mean is presented in parentheses.

As reported above, the familiarity and recollection ratings revealed similar patterns: higher ratings for phrases that contained brands that were presented five times compared to phrases that contained brands that were presented once. Although the familiarity and recollection ratings were meant to be treated independently, the ratings for phrases that contained brands that were presented once (r(91) = .71, p < .001) and five times (r(91) = .65, p < .001) were highly correlated, suggesting two possibilities: either participants did not treat familiarity and recollection as distinct, independent ratings, or the presentation frequency may have resulted in a similar increase in both processes that are thought to underlie recognition judgments. In the subsequent experiments, I obtained familiarity and recollection ratings from separate groups of participants to avoid this potential source of contamination on participants' ratings. Nevertheless, these data reveal that the frequency of presentation of brand names determined the subsequent memorability of those brand names, whether the source was via heightened familiarity,

heightened recollection, or both. This outcome allowed for an evaluation as to how greater ease of remembering a brand name contributed to participants' implicit brand choice decisions.

For example, based on previous literature (e.g., Law & Braun, 2000; Russell, 2002) high recollection ratings would be expected to produce detrimental outcomes on brand choice measures, compared to brands that were associated with lower recollection ratings; thus, brands that were presented five times ought to be rated less favorably during the implicit choice task, compared to brands that were presented only once. However, if implicit choice ratings are based mainly on a nonanalytic, unconcious attribution based on the ease of processing the brand name, then higher implicit choice ratings would be expected for brands that were associated with higher familiarity, regardless as to whether five times presented brands sponsored a greater likelihood of recollecting details about having encountered brand names within the narrative.

**Implicit choice ratings.** Participants' implicit choice ratings were submitted to a one-way repeated-measures ANOVA treating brand presentation number (not presented vs. once vs. five times) as the within-participant factor. This analysis revealed a significant effect of brand presentation number on the implicit choice rating, F(2, 180) = 10.66, MSE = 0.90, p < .001 (see Table 4).

Table 4

Implicit Brand Choice Ratings Across Brand Presentation Number in Experiment 2

	Brand Presentation Number		
Rating	New	Old/Once	Old/Five Times
Implicit Brand Choice	5.70 (0.13)	6.20 (0.14)	6.31 (0.15)

*Note.* The standard error of the mean is presented in parentheses.

Participants reported lower implicit choice ratings for brands that were not presented, compared to brands that were presented once (5.70 vs. 6.20), F(1, 90) = 11.83, MSE = 0.96, p = .001, and brands that were presented five times (5.70 vs. 6.31), F(1, 90)= 14.16, MSE = 1.18, p < .001. However, there was no difference in participants' implicit choice ratings for brands that were presented once versus five times, p > .05. These finding indicate that the presentation of a brand during the narrative elevated the implicit choice rating that participants gave particular brands. Moreover, the increased implicit choice ratings were found despite the fact that participants were better able to remember brands that were presented five times, compared to brands that were presented once throughout the narrative. Thus, remembering the brand did not appear to produce the detrimental impact on choice outcomes that has been reported in past research (e.g., Law & Braun, 2000; Russell, 2002). Nevertheless, consistent with other research (Yang & Roskos-Ewoldsen, 2007), brands that were previously presented, regardless of the recognition ratings associated with those brands, were more likely to be selected, compared to new brands.

Given that the prior presentation of a brand produced similar, albeit not identical, increases in recognition ratings and brand choice ratings, this study provides evidence supporting the idea that factors that enhance the perceptual fluency when processing a brand (i.e., prior presentation of a brand) enhances implicit choice ratings for those brands. Indeed, literature on the mere exposure effect indicates that exposure to stimuli, such as brands during a product placement event, produce positive evaluative outcomes for those items (e.g., Matthes et al., 2007; Zajonc, 1968). Expanding these findings, the current study provides evidence that perceptual fluency also alters participants' responses during an implicit choice task. Moreover, the current findings indicate that the increased implicit choice ratings occurred, despite the fact that recollection ratings were higher for featured brands. Thus, although mere exposure effects tend to be reliant on participant not being able to remember their prior experience with an item, an analogous positive outcome was observed for implicit choice ratings in Experiment 2. Considering both the recognition and the implicit choice ratings, it appears that both tasks are driven by an attribution that is made about the current processing of the item. When the item is processed more fluently, a positive affect state occurs (Winkielman & Cacioppo, 2001; Winkielman et al., 2003), which gets attributed to a source that is the most relevant given the current task (Whittlesea & Price, 2001).

Despite the findings from Experiment 2 that provide support for the nonanalytic framework outlined earlier, there are alternative explanations that should be addressed. It is possible that higher implicit choice ratings occurred because participants became immersed into the narrative. If participants were immersed into the narrative, they may have experienced narrative transportation, which could have produce beneficial outcomes

on the featured brands (e.g., Escalas, 2004, 2007). In fact, narrative transportation is thought to be a direct route through which individuals can be persuaded (Green & Brock, 2000).

Furthermore, a separate line of research demonstrates that the ease of generating details about an event can bias evaluative outcomes (e.g., Menon & Raghubir, 2003; Schwarz et al., 1991; Tormala, Petty, & Briñol, 2002; Wänke et al., 1997; Winkielman & Schwarz, 2001). Moreover, recent research suggests that recollection, much like familiarity, can produce positive affect (Leboe & Ansons, 2006). Thus, when participants are more immersed into a narrative, they would be expected to be able to remember more information about the content of the narrative at some later time. If the recollection of these details can bias brand ratings, then the ease of recollecting content related to the narrative could produce positive outcomes for the featured brands.

Before describing the next experiments, I discuss the various factors that could be used to account for the results of Experiment 2, based on the notion that product placement outcomes depend on higher-level, conscious, and deliberate decision-making processes. After outlining these factors, I describe two experiments designed to test whether these factors contributed to participants' brand choice judgments in Experiment 2 or whether those judgments can be more parsimoniously explained with reference to a more nonanalytic fluency attribution process.

## **Chapter IV: Factors that Influence Product Placement Consequences**

Compared to other frameworks that have been used to explain the divergent outcomes that occur after a product placement, the current framework offers a simpler approach to studying these outcomes. Nevertheless, to test whether the nonanalytic

framework is a tenable account, even with the addition of immersion and the activation of persuasion knowledge, Experiments 3 and 4 were conducted. In these experiments, factors that have been found to moderate the consequences of product placements were considered. Some of these factors that produce negative and positive consequences for the featured brand are outlined below. Although a number of factors (e.g., product placement level, modality, and brand-medium fit) may influence the consequences of a product placement event, the resulting impact ultimately guides how cognitive resources are allocated during a product placement event. For example, the presentation of a prominent product placement may disrupt the viewers' processing of narrative information. This disruption may, in turn, orient viewers to the deliberate attempt to advertise the brand, focusing their attention to brand-related information, making the brand-related information more likely to be remembered and producing a negative outcome for the featured brand. Therefore, rather than focusing on the impact of these primary factors that feed into influencing the information processing that occurs during a product placement event, the focus of the next sections will be to highlight how differences in the information processing of the product placement event has been used to account for the consequences that arise for brands that are featured during a product placement.

# Conditions Promoting Negative Consequences for Brands Featured during a Product Placement Event

The finding that product placements have been shown to produce mixed consequences, and even negative consequences, for featured brands, is disconcerting for marketers who wish to use this venue to showcase their brand. One reason for the

problematic outcomes for featured brands may reside in the activation of persuasion knowledge as a consumer views a product placement event. According to the Persuasion Knowledge Model (PKM; Friestad & Wright, 1994), an event is perceived as being a persuasion attempt if the target (i.e., viewer or consumer) has accumulated sufficient persuasion knowledge to classify a strategy used by an agent (i.e., marketer or salesperson) as being a persuasion tactic. As the use of product placements becomes more common, it is likely that viewers are becoming more aware of product placements as a deliberate persuasion attempt. Viewers' awareness of this persuasion attempt, may, in turn, activate their persuasion knowledge, meaning that they may discount the use of the brand or discount the character that is using the product and/or may become disengaged or frustrated with the media in which the placement occurs (Friestad & Wright, 1994). Recent research provides evidence for the negative impact that persuasion knowledge has on the effectiveness of product placements (Cowley & Barron, 2008; Matthes et al., 2007; Russell, 2002). In these studies, activating persuasion knowledge was suspected to arise from processing of the brand, which induced the generation of counterarguments against the brand and interfered with processing entertainment-related information.

Indeed, previous research has found that focal product placements, which would receive more extensive processing, compared to peripheral placements, result in negative consequences for the featured brand (e.g., Cowley & Barron, 2008; Law & Braun, 2000; Matthes et al., 2007). Furthermore, brands that do not fit naturally into the narrative of the product placement event receive additional processing, which also is detrimental to the featured brand (e.g., Auty & Lewis, 2004; Russell, 2002). Nevertheless, these negative outcomes for featured brands are not inevitable. Instead, a number of other

factors may be utilized by marketers to ensure that product placements result in profitable outcomes for their brand.

Conditions Promoting Positive Consequences for Brands Featured during a Product

Placement Event

Reducing the activation of persuasion knowledge. Despite the negative outcomes that arise from activating persuasion knowledge, recent research by Wei, Fischer, and Main (2008) found that this negative impact could be attenuated by the familiarity and appropriateness of the featured brand. Specifically, when the brands were perceived as being familiar or appropriate in the media in which they appeared, the featured brands were no longer negatively affected by the activation of persuasion knowledge. Furthermore, Wei et al. found that when the activation of persuasion knowledge was overly explicit, brand evaluations for featured brands were found to be more favorable. Given these recent findings, it appears that presentation of a product placement within certain conditions may interrupt and attenuate the negative consequences that arise from activating persuasion knowledge.

Supporting this notion, previous research suggests that the activation of persuasion knowledge is a cognitively demanding task that utilizes cognitive resources (Campbell & Kirmani, 2000). Therefore, inducing a processing strategy that is highly cognitively demanding should interfere with the activation of persuasion knowledge and, hence, insulate featured brands from the negative outcomes of activating persuasion knowledge. One context that might be particularity apt for reducing cognitive resources available for the activation of persuasion knowledge is during a product placement event. While viewing a product placement event, viewers may allocate cognitive resources

toward information that is related to enhancing the media experience. By viewers' attention being allocated in this way, the viewers' cognitive resources should be limited, resulting in restricted and possibly eliminating the activation of persuasion knowledge. Consequently, consumers will pay less attention to information related to the embedded brand and will be less likely to elaborate on brand-related information. As a result, viewers will not generate negative thoughts about the featured brand and their memory for the featured brand will be reduced. However, this memorial outcome for the featured brand will be associated with favorable evaluation and choice outcomes of the brand.

Immersion. One means by which cognitive resources can be allocated away from the featured brand is by enhancing the level of immersion experienced by the viewer. Given that product placements occur within a form of entertainment, this marketing strategy is closely related to transformational advertisements that focus on the consumption or use of the featured brand (Balasubramanian et al., 2006; Russell, 1998). Advertisements that utilize narrative consumption scenarios have been found to incorporate mental simulation involving the self and/or retrieval of autobiographical memories (Escalas, 2007; Green & Brock, 2000), which has been found to produce positive effects on subsequent consumer judgments (e.g., evaluations of the brand and ad; Escalas, 2004). In this way, product placements are a more immersive format that can be used to feature a brand, compared to other advertising methods.

Immersion produces positive outcomes for featured brands by focusing viewers' cognitive resources away from the featured brand and onto the narrative information of the product placement event. Given that the activation of persuasion knowledge has been found to be cognitively demanding (Campbell & Kirmani, 2000), the activation of

persuasion knowledge is expected to be inversely related to the level of immersion experienced while viewing a product placement event. Specifically, when viewers' immersion is high they will be focused on processing details that enhance the media experience (i.e., narrative information), which will not activate their persuasion knowledge. In contrast, when viewers' immersion is low they will be likely to process details about the featured brands, which will lead to the activation of persuasion knowledge and a more critical evaluation of these occurrences. In support of these predictions, Matthes et al. (2007) recently examined how immersion into the media and persuasion knowledge activation influenced the effectiveness of viewing a product placement event that occurred in a video. Matthes et al. found that viewers reported the most favorable brand evaluations after viewing the product placement under highinvolvement and low persuasion knowledge. Matthes et al. suspected that the cognitive resources that were being utilized to process the video were not available to process the brand. As a result, these brands were less likely to be recalled; however, participants reported more favorable evaluations of the products. Thus, high immersion into a product placement event can product positive outcomes for the featured brand by diverting cognitive resources away from processing the featured brand. Despite the importance of not extensively processing brand-related information to obtain positive outcomes for the featured brand, this process is not expected to be the only means by which immersion produces positive outcomes for featured brands.

**Presence.** Research investigating immersion in the realm of digital media reveals the mechanism by which immersion may produce positive outcomes for featured brands. Compared to non-digital media, digital media typically provides viewers with an

opportunity to interact with the media (i.e., actively search the internet for particular websites) and incorporates a number of senses (i.e., visual, auditory and kinesthetic sensations may be involved when playing an online game; Wirth et al., 2007). The immersive quality of this form of media has been found to induce a sense of presence, which is defined as the psychological feeling of being located and acting within a mediated environment, rather than the true environment in which an individual is located (Grigorovici & Constantin, 2004; Li, Daugherty, & Biocca, 2001, 2002, 2003; Nicovich, 2005; Wirth et al., 2007). In other words, presence is loosely defined as the perception of being in the media in which an individual is viewing. Although the feeling of presence may not occur as intensely with non-digital media as it does with digital media, presence is, nevertheless, expected to occur when viewers become highly immersed with a product placement event.

Research that has examined the impact of immersion has revealed that presence plays a role in influencing brand evaluative and choice outcomes. Li et al. (2002) found favorable outcomes for products that were advertised using immersive digital 3D advertising. These favorable brand outcomes were found to be driven by the increased sense of presence that occurred for products that were presented using 3D advertising. Furthermore, the highly immersive nature of digital media environments has been found to impact the outcomes of product placements. Grigorivici and Constantin (2004) examined the consequences of product placements that occurred within a 3D world that induced a feeling of presence in the viewer. Although Grigorivici and Constantin found that viewers performed poorly on recognition and recall tasks, they did show favorable preference ratings after brand exposure. Similarly, research by Nicovich (2005) found the

participants who were involved with an interactive computerized video game reported positive ratings for advertisements that occurred during the video game. Together, these findings provide evidence that an immersive media experience, which induces the feeling of presence in the viewer, can produce positive outcomes for the featured brand.

The aim of Experiments 3 and 4 was to examine whether these factors play a role in determining the consequences of product placements. In Experiment 3, the level of immersion was manipulated to examine whether this factor modulates the product placement consequences. Finally, Experiment 4 attempted to examine how the interaction between immersion and the activation of persuasion knowledge produces different product placement outcomes. If a model that relies on an analytic assessment of persuasion knowledge is better suited to explain product placement consequences, then immersion and the activation of persuasion knowledge should interact with the presentation of the brand and produce measurable effects on participants' brand preferences. That is, if immersion can protect brands from negative outcomes arising from persuasion knowledge activation, then positive brand ratings should be observed only when the narrative is presented in a format that is immersive and gives rise to the feeling of presence. Conversely, factors that heighten the activation of persuasion knowledge should produce more negative choice outcomes for the featured brand. However, if immersion and the activation of persuasion knowledge do not affect implicit brand choice, but basic cognitive processes do, then the nonanalytic framework presented earlier might provide a more useful account of product placement effects.

#### **Experiment 3a**

To investigate whether the level of immersion, or the extent to which participants become transported into the narrative, can be used to explain the positive outcomes that arise for brands featured during the narrative, Experiment 3a was conducted. In Experiment 3a the presentation of the narrative was modified so that some participants would become more immersed into the narrative than others. To accomplish this, the narrative that was used in Experiment 2 was divided into a number of short passages. Participants received the narrative either in sequential order or as a random sequence of passages. Immersion was expected to be higher during the sequential presentation of the narrative, compared to when the narrative is presented as a random set of passages. Additionally, details from the narrative will be more easily remembered after the sequential presentation of the narrative, compared to after the random presentation of the narrative. Ultimately, the high level of immersion and the ease with which details from the narrative are remembered, which are expected to occur after the sequential presentation of the narrative, are expected to translate into positive outcomes for brands that were featured in the narrative. In contrast, the low level of immersion and relative difficultly experienced when remembering narrative information after being presented with the random set of passages is expected to produce more negative outcomes for featured brands.

#### **Participants**

A total of 63 participants (38 female, 25 male,  $M_{\rm age} = 21.24$  years) were recruited from the Introduction to Psychology Participant Pool system and through posting advertisements at the University of Manitoba. Participants enrolled in the Introduction to Psychology course received partial course credit in exchange for their voluntary

participation and participants recruited through campus advertisements received \$10 in exchange for their participation. All participants were required to be native English speakers and to be under the age of 30.

## **Apparatus and Stimuli**

The same computers and stimuli that were used in Experiment 2 were used in Experiment 3a. The only slight change was that the presentation of the narrative was divided into 84 screen presentations so that the passages could be presented as a sequential narrative or as a randomized set of passages.

#### Procedure

Participants contributed their data individually or in groups of up to 30. The procedure used in Experiment 3a closely followed the procedure used in Experiment 2. As with Experiment 2, participants first read through the narrative. However, different from Experiment 2, some participants (n = 32) received the narrative as a series of sequentially presented short passages, and other participants (n = 31) received the narrative as a series of randomly presented short passages. After reading the narrative, participants completed the Engagement subscale from the Independent Television Commission - Sense of Presence Inventory (ITC-SOPI $^{\odot}$ ; Lessiter, Freeman, Keogh, & Davidoff, 2001; Appendix E). Next, participants completed a series of simple math problems before completing the recognition task. Also different from the recognition task used in Experiment 2, in which participants provided familiarity and recollection ratings for old and new phrases during the recognition phase, one group of participants (n = 31) provided familiarity ratings and another group of participants (n = 32) provided recollection ratings for the phrases. The independent- scales methodology (Higham &

Vokey, 2004) was modified in this way to reduce the high correlation between familiarity and recollection ratings that was obtained in Experiment 2. Lastly, participants completed the implicit choice task that was identical to the task used in Experiment 2.

#### **Results and Discussion**

**Presence.** First, to ensure that the presentation of the narrative altered the extent to which participants were immersed into the narrative, participants' responses to the Engagement subscale of the ITC-SOPI<sup>©</sup> (Lessiter et al., 2001) were analyzed. Participants' responses to the individual items showed high reliability ( $\alpha$  = .92), so participants' responses were averaged across the individual items to create a single engagement score. Participants' engagement scores did not meet the homogeneity of variances assumption F(1, 61) = 5.06, p = .028; nevertheless, the engagement scores were found to be significantly higher after participants read the sequentially presented narrative, compared to after participants read the randomly presented narrative (3.54 vs. 2.80), t(53.38) = 3.91, p < .001.

Thus, the presentation manipulation had the intended effect on the extent to which participants were immersed into the narrative. Based on the level of immersion experienced by participants, different memory outcomes would be expected across the sequential and random narrative presentation conditions. Because of the low engagement experienced by participants who received the randomly presented narrative, their memory for the narrative would be expected to be gist-based rather than a precise representation of the narrative. In contrast, the high engagement experienced by participants who received the sequentially presented narrative would be expected to produce a more detailed and vivid representation of the narrative. Consequentially, participants who

received the randomly presented narrative would be expected to be more susceptible to making incorrect recognition judgments, compared to the participants who received the sequentially presented narrative. Furthermore, participants who received the sequentially presented narrative ought to be more accurate when making recognition judgments, compared to those participants who received the randomly presented narrative.

**Recognition judgments.** Participants' recognition judgments for the phrases that contained only narrative information were analyzed by submitting familiarity and recollection ratings to separate mixed-design ANOVAs (see Table 5). Phrase presentation (old vs. new) was the within-participant factor and narrative condition (sequential vs. random) was the between-participant factor for both ANOVAs. For familiarity ratings, this analysis revealed a significant main effect of phrase presentation, F(1, 29) = 84.00, MSE = 0.19, p < .001, and an interaction between phrase presentation and narrative condition, F(1, 29) = 8.28, MSE = 0.19, p = .007. Overall, participants reported higher familiarity ratings for phrases that were old, compared to phrases that were new (2.89 vs. 1.86). The interaction was driven by participants' lower familiarity ratings for new phrases after receiving the sequentially presented narrative, compared to after receiving the randomly presented narrative (1.62 vs. 2.11), t(29) = -3.28, p = .003. Participants' familiarity ratings for old phrases did not differ across narrative conditions (2.97 vs. 2.81), p > .05.

For recollection ratings, the analysis revealed a significant main effect of phrase presentation, F(1, 30) = 88.71, MSE = 0.18, p < .001, and an interaction between phrase presentation and narrative condition, F(1, 30) = 7.87, MSE = 0.18, p = .009. Participants reported higher recollection ratings for old phrases, compared to new phrases (2.80 vs.

1.80). Furthermore, participants who read the sequentially presented narrative reported higher recollection ratings for old phrases, compared to participants who read the randomly presented narrative (2.98 vs. 2.62), t(30) = 2.27, p = .031. There was no difference in recollection ratings across the sequential and randomized narrative conditions for new phrases (1.68 vs. 1.92), p > .05.

Table 5

Familiarity and Recollection Ratings for Phrases that Contained Only Narrative

Information Across Phrase Presentation and Narrative Condition in Experiment 3a

	Phrase Presentation		
Rating/Narrative Condition	New	Old	
Familiarity			
Sequential	1.62 (0.08)	2.97 (0.12)	
Random	2.11 (0.13)	2.81 (0.12)	
Combined	1.86 (0.09)	2.89 (0.09)	
Recollection			
Sequential	1.68 (0.09)	2.98 (0.11)	
Random	1.92 (0.08)	2.62 (0.12)	
Combined	1.80 (0.06)	2.80 (0.09)	

*Note.* The standard error of the mean is presented in parentheses.

Together, these ratings indicate that the different presentation of the narrative produced distinct familiarity and recollection ratings for phrases that contained only narrative information.

Although participants did not differ in their familiarity ratings for old phrases or in their recollection ratings for new phrases, the random presentation of the narrative produced higher familiarity ratings for new phrases. The finding that the different narrative presentations did not alter familiarity ratings for old phrases is consistent with the notion that familiarity is a result of the fluent processing of an item (e.g., Jacoby, 1991; Jacoby & Dallas, 1981; Whittlesea, 1993). The sequential versus narrative manipulation was meant to influence the degree of detail that would come to mind upon encountering a phrase and should not impact the processing of the phrase itself. Thus, across both narrative presentation conditions, the old phrases would have been perceived fluently, resulting in similar familiarity ratings across the two narrative conditions.

In contrast, the lowered familiarity ratings for new phrases after participants received the sequentially presented narrative could have been a result of the better recollection found in this condition. Indeed, participants who received the sequentially presented narrative reported higher recollection ratings for old phrases. Thus, the enhanced recollection found in this condition could have been used to judge the new phrases as being less familiar; when recollection did not occur for new phrases, this could have been used as a basis for reducing the phrase's subjective familiarity. The finding that recollection ratings for old phrases were influenced by the presentation of the narrative is consistent with my expectation that recollection is based on the generation of contextual information about an item (e.g., Jacoby, 1991; Leboe & Whittlesea, 2002).

That is, when the processing and integration of contextual information was more easily accomplished by presenting the narrative sequentially, participants reported higher recollection ratings for old phrases, compared to when the contextual information was more difficult to process and integrate with the random presentation of the narrative.

Together, these different memory profiles are consistent with the predictions made based on the level of immersion experienced during the reading of the narrative. Participants who were more highly immersed into the narrative were more easily able to remember details of the narrative. First, they were less likely to make incorrect recognition judgments, based on their lower familiarity ratings for new phrases, compared to participants who were not as highly immersed into the narrative. Furthermore, they displayed more detailed and specific recall of the narrative in that they reported higher recollection ratings for old phrases compared to the participants who received the randomly presented narrative.

Next, the recognition judgments for phrases that contained brand-related information were analyzed (see Table 6). Familiarity and recollection ratings were analyzed using separate ANOVAs, treating brand presentation number (not presented vs. once vs. five times) as the within-participant factor and narrative condition (sequential vs. random) as the between-participant factor. The analyses revealed a main effect of brand presentation number on familiarity ratings, F(2, 58) = 220.23, MSE = 0.18, p < .001, and on recollection ratings, F(2, 60) = 176.59, MSE = 0.18, p < .001. For familiarity ratings, participants reported lower familiarity ratings for the phrases that contained brands that were not presented, compared to phrases that contained brands that were presented once (1.40 vs. 3.20), F(1, 30) = 186.17, MSE = 0.27, p < .001, and to phrases that contained

brands that were presented five times, (1.40 vs. 3.45), F(1, 30) = 414.24, MSE = 0.16, p < .001. Additionally, participants reported higher familiarity ratings for the phrases that contained brands that were presented five times compared to phrases that contained brands that were presented once (3.45 vs. 3.20), F(1, 30) = 9.11, MSE = 0.10, p = .005. For recollection ratings, participants reported lower recollection ratings for brands that were not presented, compared to phrases that contained brands that were presented once (1.49 vs. 3.13), F(1, 31) = 239.24, MSE = 0.18, p < .001, and to phrases that contained brands that were presented five times, (1.49 vs. 3.27), F(1, 30) = 202.36, MSE = 0.25, p < .001. However, in contrast with participants' familiarity ratings, the recollection ratings for phrases that contained brands that were presented once and for phrases that contained brands that were presented five times did not differ (3.13 vs. 3.27), p > .05.

Table 6

Familiarity and Recollection Ratings for Phrases that Contained Brands Across Brand

Presentation Number and Narrative Condition in Experiment 3a

	Bra	Brand Presentation Number		
Rating/Narrative Condition	New	Old/Once	Old/Five Times	
Familiarity				
Sequential	1.36 (0.06)	3.33 (0.11)	3.49 (0.10)	
Random	1.44 (0.11)	3.07 (0.14)	3.41 (0.07)	
Combined	1.40 (0.06)	3.20 (0.09)	3.45 (0.06)	
Recollection				
Sequential	1.48 (0.10)	3.19 (0.12)	3.38 (0.13)	
Random	1.50 (0.08)	3.06 (0.08)	3.16 (0.14)	
Combined	1.49 (0.06)	3.13 (0.07)	3.27 (0.10)	

*Note.* The standard error of the mean is presented in parentheses.

Thus, unlike the familiarity and recollection ratings for phrases that contained only narrative information, the familiarity and recollection ratings for phrases that contained brand-related information were not affected by the manner in which the narrative was presented. Instead, the recognition ratings were affected by the number of times the brand was presented. Familiarity ratings were highest for phrases that contained brands that were presented five times, followed by phrases that contained brands that were presented once and then by phrases that contained brands that were not presented

during the narrative. In contrast, recollection ratings were not significantly different for phrases that contained brands that were presented five times or once; nevertheless, recollection ratings for these phrases were significantly higher than the recollection ratings for phrases that contained brands that were not presented during the narrative.

Importantly, the recognition results for Experiment 3a differ from the recognition results of Experiment 2 in that the brand presentation number produced different outcomes for familiarity and recollection ratings. Thus, obtaining separate familiarity and recollection ratings from different groups of participants was effective in reducing the high correlation between these ratings that was found in Experiment 2 (a problem with the independent-scales methodology also identified by Brown & Bodner, 2010).

Moreover, obtaining independent measures of familiarity and recollection ratings allows one to examine how measures of memory that reflect a more implicit influence of memory and measures of memory that reflect a more explicit use of memory are associated with brand selection. Since old brands that were presented once and five times only differed in familiarity, and if the implicit influence of memory produces the most positive outcomes on brand choice measures, then brands that were presented five times would be expected to be rated most favorably in the brand choice task.

**Implicit choice ratings.** Submitting participants choice ratings to a mixed-design ANOVA, treating brand presentation number (not presented vs. once vs. five times) as the within-participant factor and narrative condition (sequential vs. random) and recognition task condition (familiarity vs. recollection) as the between-participant factors, did not reveal any main effects nor interactions among the factors, ps > .05 (see Table 7).

Table 7

Implicit Brand Choice Ratings Across Brand Presentation Number, Narrative Condition, and Recognition Task in Experiment 3a

Narrative Condition/		Brand Presentation Number			
Recognition Task		New	Old/Once	Old/Five Times	
Sequential					
	Familiarity	5.74 (0.20)	5.80 (0.22)	5.84 (0.31)	
	Recollection	4.84 (0.25)	5.22 (0.30)	5.07 (0.27)	
Both		5.29 (0.18)	5.51 (0.19)	5.45 (0.22)	
Random					
	Familiarity	5.69 (0.29)	5.90 (0.37)	5.83 (0.31)	
	Recollection	5.53 (0.22)	5.60 (0.29)	5.83 (0.31)	
Both		5.60 (0.18)	5.74 (0.23)	5.83 (0.22)	
Combined					
	Familiarity	5.72 (0.17)	5.85 (0.21)	5.83 (0.22)	
	Recollection	5.19 (0.17)	5.41 (0.21)	5.45 (0.22)	
Overall		5.45 (0.13)	5.63 (0.15)	5.64 (0.15)	

*Note.* The standard error of the mean is presented in parentheses.

Although this finding is not consistent with the results of Experiment 2, the lack of any significant effects in Experiment 3a may have occurred because of a confound that

occurred with the inclusion of the presence measures and recognition task before the implicit choice rating task. The combination of orienting participants to their different experiences while reading the narrative and having participants rate their familiarity or recollection for particular items, may have provided participants with an attribution for their reaction to the brands during the implicit choice rating task. Indeed, previous research has documented that providing attributions for the current processing of an item eliminates the influence that the fluent processing of an item has on other subjective judgments (e.g., Higham & Vokey, 2004; Jacoby et al., 1989; Whittlesea, Jacoby, & Girard, 1990). For example, Jacoby et al. (1989) found that nonfamous names that were seen during a previous phase were more likely to be judged as famous compared to new nonfamous names; however, when participants were asked to make a recognition judgment prior to making their fame judgment for the name, old nonfamous names were no longer more likely to be judged as being famous. Similarly, because participants were asked to complete the recognition task prior to the implicit choice task in the current experiment, this task could have interfered with positive choice outcomes that could have been established by the prior presentation of the brand during the narrative. Thus, to investigate whether a positive choice effect would occur without the recognition task, Experiment 3b was conducted.

## **Experiment 3b**

#### **Participants**

A total of 82 participants (58 female, 24 male,  $M_{\rm age}$  = 21.24 years) were recruited from the Introduction to Psychology Participant Pool system. Participants enrolled in the Introduction to Psychology course received partial course credit in exchange for their

voluntary participation. All participants were required to be native English speakers and to be under the age of 30.

#### **Apparatus and Stimuli**

The same computers and stimuli that were used in Experiment 3a were used in Experiment 3b.

#### Procedure

The procedure of Experiment 3b was identical to the procedure used in Experiment 3a except that participants did not complete the recognition phase. Instead, participants completed the implicit choice task immediately after receiving the set of simple math problems.

#### **Results and Discussion**

**Presence.** As with Experiment 3a, participants' responses to the individual items of the ITC-SOPI<sup>©</sup> (Lessiter et al., 2001) showed high reliability ( $\alpha$  = .88); therefore, the responses were averaged to create a single engagement score. Participants reported higher levels of engagement after reading the sequentially presented narrative, compared to after reading the randomly presented narrative (3.23 vs. 2.71), t(80) = 3.51, p = .001. Thus, as with Experiment 3a, the different narrative presentations had the intended effect on the extent to which participants were immersed into the narrative.

**Implicit choice ratings.** Participants' choice ratings were submitted to a mixed-design ANOVA, treating brand presentation number (not presented vs. once vs. five times) as the within-participant factor and narrative condition (sequential vs. random) as the between-participant factor. This analysis revealed a significant main effect of brand presentation number, F(2, 160) = 7.75, MSE = 0.59, p = .001 (see Table 8). The main

effect of narrative condition and the interaction between brand presentation number and narrative condition were not significant, ps > .05. Subsequent analyses revealed that participants reported higher brand choice ratings for brands that were presented once, compared to brands that were new (6.30 vs. 5.84), F(1, 81) = 17.28, MSE = 0.50, p < .001, and to brands that were presented five times (6.30 vs. 5.99), F(1, 81) = 6.06, MSE = 0.67, p = .016. Participants' choice ratings for new brands and for brands that were presented five times did not differ significantly from each other (5.84 vs. 5.99), p > .05. Thus, overall, participants reported higher implicit choice ratings for brands that were presented once in the narrative, compared to brands that were new or brands that appeared five times during the narrative.

Table 8

Implicit Brand Choice Ratings Across Brand Presentation Number and Narrative

Condition in Experiment 3b

Narrative Condition	Brand Presentation Number		
	New	Old/Once	Old/Five Times
Sequential	5.73 (0.16)	6.18 (0.18)	6.03 (0.16)
Random	5.96 (0.17)	6.43 (0.16)	5.95 (0.20)
Combined	5.84 (0.11)	6.30 (0.12)	5.99 (0.13)

*Note.* The standard error of the mean is presented in parentheses.

Although an interaction between brand presentation and narrative condition was predicted, the results of Experiment 3b revealed similar implicit choice ratings across the two conditions. Nevertheless, combining the results of Experiments 3a and 3b provide an intriguing set of results. First, the finding that participants' brand selections were not influenced by the presentation of the brand in the narrative in Experiment 3a, but were in Experiment 3b, suggests that an unconscious attribution process underlies the enhanced brand choice ratings found in Experiment 3b. That is, when participants completed the recognition task prior to completing the implicit brand choice task in Experiment 3a, they were able to attribute their current processing of a brand to the prior presentation of the brand during the narrative. As a result, participants did not experience an unexpected ease of processing when presented with the brand during the brand choice task. Instead, the ease of processing could have been attributed to the prior presentation of the brand, which, ultimately, did not result in a change in participants' implicit brand choice ratings for brands that were presented in the narrative. However, when participants completed only the implicit choice task in Experiment 3b, they were not provided with the opportunity to attribute their current processing of the brand to the prior presentation of the brand during the narrative. As a result, when participants experienced fluent processing of the brands that were presented once during the narrative, this experienced ease of processing was used as a basis for forming their choice rating for the brand.

As for the lowered choice ratings for brands that were presented five times throughout the narrative, it is possible that the brand contained within the phrases generated more recollections compared to brands that were presented once in the narrative. Recall that participants reported recollection ratings for *phrases* that contained

brands in Experiment 3a, and not recollection ratings for the brands themselves. Since participants were not providing recollection ratings for the brands apart from the narrative information, it is possible that the recollection ratings reported in Experiment 3a are attenuated estimates of the recollection ratings for the brands themselves. Moreover, participants were judging the extent to which they recollected a particular phrase, and not the number of recollections that were triggered by the presentation of the brand. Therefore, although the recollections for particular phrases did not differ across the once and five time brand presentation conditions, the brands that were presented five times could have prompted the recollection of many prior instances of having seen the brand during the narrative. When multiple recollections of previously seeing the brand in the narrative are remembered, viewers might become aware of the blatant persuasion attempt being made by marketers. That is, the viewers' persuasion knowledge (Friestad & Wright, 1994) would be activated, resulting in the generation of counterarguments or a critical response against the presentation of the brand during the narrative.

The goal of Experiment 4 was to examine the relationship between memory outcomes for brand-related information, implicit brand choice and the activation of persuasion knowledge. To enhance the likelihood that participants would recollect the brand from the narrative, some participants received passages wherein the brands were blatantly presented by displaying them in boldface font and flanking them by three asterisks. By making the brand presentation unique compared to the rest of the text of the narrative, it is expected that those items will be more extensively processed (Schmidt, 1991), resulting in better recollection of those brands (Hunt, 1995; von Restorff, 1933). However, the increased processing is expected to occur for blatantly presented brands is

expected to also result in a higher activation of persuasion knowledge (Russell, 2002), which will reduce ratings for those brands during the implicit brand choice task.

Nevertheless, as outlined earlier, negative outcomes that may arise from viewers recollecting a brand during a product placement event may be attenuated, or reversed, if viewers are highly immersed into the narrative or the story in which the product placements occur (Matthes et al., 2007). Although the results of Experiment 3a and 3b did not provide evidence supporting this idea, the influence of immersion was reexamined in Experiment 4. As with Experiment 3a and 3b, brands were presented within a narrative that was presented either sequentially or as a randomized set of passages. When a viewer is highly immersed into the narrative, they are expected to experience narrative transportation (Escalas, 2007) and are expected to easily recollect a number of details from the narrative. When presented with a brand during an implicit brand choice task at some later time, participants processing of the brand might be accompanied by a great deal of information from the narrative. In the context of an implicit brand choice task, the generation of these details might be used as a basis of forming their choice ratings (Leboe & Ansons, 2006). That is, participants may misattribute their successful and detailed remembering of narrative to something positive about the brand, thereby increasing choice ratings for brands that were featured during the sequentially presented narrative. Therefore, although brands that are presented blatantly during the narrative will be more likely to be remembered, when presented within a sequentially presented narrative, the brand ought to bring to mind information about a coherent story. As a result, brand choice ratings for those brands would be expected to benefit from the blatant presentation within the narrative. In contrast, when

blatantly presented brands occur within a randomly presented set of passages, the brand would not bring to mind information about a coherent story. Consequently, those brands would be associated with heightened persuasion knowledge activation, because the brands did not appear to fit naturally into a coherent story, resulting in a detrimental outcome on brand choice ratings. That is, a framework that emphasizes a more analytic decision-making process would predict higher brand choice ratings for blatantly featured brands within a sequential narrative than within a random narrative.

Finally, given that the results of Experiment 3a and b suggest that presenting the recognition task prior to the implicit brand task eliminates the positive choice outcomes that occur for brands that were presented in the narrative, Experiment 4 was divided into Experiments 4a and 4b. During Experiment 4a, participants completed the recognition task and in Experiment 4b participants completed the implicit brand choice task.

#### **Experiment 4a**

#### **Participants**

A total of 73 participants (48 female, 25 male,  $M_{\rm age} = 19.09$  years) were recruited from the same participant pool as was used in Experiment 3a.

#### **Apparatus and Stimuli**

The same computers that were used in Experiment 3b were used in Experiment 4a. The same set of stimuli that was used in the previous experiments was used in Experiment 4a, except for the following change: A new set of passages were created that contained brands that were bolded and flanked by three asterisks. For example, the phrase "A white satin gown like a bride's, with Gucci accessories" was modified to be presented as follows "A white satin gown like a bride's, with \*\*\*Gucci\*\*\* accessories."

#### **Procedure**

The procedure of Experiment 4a followed closely the procedure used in Experiment 3a. As with Experiment 3a, participants first read through the sequential narrative or the randomized set of passages. Different from Experiment 3a, however, participants were provided with only 15 seconds (s) when reading each screen presentation of the narrative to reduce the likelihood of participants who received the randomly presented narrative devoting more reading time to processing the narrative. This change was implemented in an attempt to maximize the difference in immersion across the two narrative conditions.

Of the participants who received the sequentially presented narrative (n = 35), some participants (n = 19) received a narrative that contained brand names that were bolded and flanked by asterisks, and the other participants (n = 16) received a narrative that contained brand names that were presented in regular unbolded font and without asterisks. Similarly, of the participants who received the randomly presented narrative (n = 38), some participants (n = 21) received a narrative that contained brand names that were bolded and flanked by asterisks, and the other participants (n = 17) received a narrative that contained brand names that were presented in their regular font. After reading the narrative, participants completed the Engagement subscale of the ITC-SOPI<sup>©</sup> (Lessiter et al., 2001) and the math problems before completing the recognition task. As with Experiment 3a, one group of participants (n = 36) provided familiarity ratings for the phrases, and another group of participants (n = 37) provided recollection ratings for the phrases. Participants did not complete the implicit brand choice task; instead, they rated every brand according to two measures of persuasion knowledge that were adapted

from Wei et al. (2008). They were provided with two statements: "While I read the narrative, I thought it was pretty obvious that {Brand Name} was included to try to persuade the viewer" and "While I read the narrative, I thought that {Brand Name} was mentioned because it paid to be mentioned" and rated them along a 9-point scale from 1 (Strongly disagree) to 9 (Strongly agree) or they selected 0 if they did not remember the brand from the narrative.

### **Results and Discussion**

**Presence.** Participants' responses to the individual items of the Engagement subscale showed high reliability ( $\alpha$  = .90), so participants' responses were averaged to create a single engagement score. Participants' engagement scores were submitted to a 2 x 2 ANOVA, treating narrative condition (sequential vs. random) and brand prominence (subtle vs. blatant) as the between-participant factors. This analysis revealed a main effect of narrative condition, F(1, 69) = 7.95, MSE = 0.52, p = .006. Consistent with the previous studies, participants reported higher engagement scores after reading the sequential narrative, compared to after reading the randomly presented narrative (2.93 vs. 2.45). Neither brand prominence, nor the interaction between narrative condition and brand prominence were significant, ps > .05.

**Recognition judgments.** Participants' recognition judgments for the phrases that contained only narrative information were analyzed by submitting the familiarity and recollection ratings to separate mixed-design ANOVAs. Phrase presentation (old vs. new) was the within-participant factor, and narrative condition (sequential vs. random) and brand prominence (subtle vs. blatant) were the between-participant factors. For familiarity ratings, this analysis revealed a significant main effect of phrase presentation,

F(1, 32) = 29.83, MSE = 0.09, p < .001, and narrative condition F(1, 32) = 4.421, MSE = 0.29, p = .043 (see Table 9). Participants reported higher familiarity ratings for phrases that were old, compared to phrases that were new (2.53 vs. 2.15). Also, participants that received the sequentially presented narrative reported lower overall familiarity ratings, compared to participants who received the randomly presented narrative (2.21 vs. 2.46).

Table 9

Familiarity Ratings for Phrases that Contained Only Narrative Information Across

Phrase Presentation, Narrative Condition, and Brand Prominence in Experiment 4a

	Phrase Presentation	
Narrative Condition/Brand Prominence	New	Old
Sequential		
Subtle	1.95 (0.13)	2.45 (0.20)
Blatant	2.07 (0.10)	2.36 (0.21)
Both	2.01 (0.08)	2.40 (0.14)
Random		
Subtle	2.36 (0.19)	2.73 (0.08)
Blatant	2.21 (0.13)	2.60 (0.09)
Both	2.27 (0.11)	2.65 (0.06)
Combined		
Subtle	2.15 (0.12)	2.59 (0.11)
Blatant	2.15 (0.08)	2.49 (0.11)
Overall	2.15 (0.07)	2.53 (0.08)

*Note.* The standard error of the mean is presented in parentheses.

For recollection ratings, there was a significant main effect of phrase presentation, F(1, 33) = 27.70, MSE = 0.06, p < .001, and a significant interaction between phrase presentation and brand prominence, F(1, 33) = 4.81, MSE = 0.06, p = .036 (see Table 10).

Participants reported higher recollection ratings for old phrases, compared to new phrases (2.36 vs. 2.04). However, this main effect was qualified by the interaction between phrase presentation and brand prominence, which revealed that participants reported significantly higher recollection ratings for old phrases compared to new phrases when they were presented with brands that were blatantly presented (2.47 vs. 2.03), F(1, 19) = 53.00, MSE = 0.04, p < .001, but not when they were presented with brands that were subtly presented (2.24 vs. 2.06), p > .05.

Table 10

Recollection Ratings for Phrases that Contained Only Narrative Information Across

Phrase Presentation, Narrative Condition, and Brand Prominence in Experiment 4a

	Phrase Presentation	
Narrative Condition/Brand Prominence	New	Old
Sequential		
Subtle	2.18 (0.22)	2.39 (0.13)
Blatant	2.20 (0.15)	2.70 (0.12)
Both	2.19 (0.13)	2.56 (0.09)
Random		
Subtle	1.95 (0.24)	2.10 (0.22)
Blatant	1.86 (0.14)	2.24 (0.16)
Both	1.90 (0.13)	2.17 (0.13)
Combined		
Subtle	2.06 (0.16)	2.24 (0.13)
Blatant	2.03 (0.11)	2.47 (0.11)
All Combined	2.04 (0.09)	2.36 (0.09)

*Note*. The standard error of the mean is presented in parentheses.

Consistent with Experiment 3a, the recognition ratings of Experiment 4a provide evidence that the narrative condition generated different familiarity and recollection outcomes for phrases containing only narrative information. Overall, familiarity ratings

were lower after participants received the sequentially presented narrative than after they received the randomly presented narrative. Because participants were restricted in their processing of the narrative (i.e., they were provided with only 15 s to read each screen presentation of the narrative), this processing restriction may have interfered with participants' ability to encode the narrative, particularly when participants received the randomly presented narrative. As a result, participants who received the randomly presented narrative may have been more likely to rely on the ease experienced while processing the phrase when making recognition judgments. In contrast, participants who received the sequentially presented narrative would have been better able to encode the narrative, despite the fact that the screen presentations were presented for only 15 s. As a result, they would have been able to rely more on the recollection of specific details when making their recognition judgments. Indeed, although the recollection ratings were not significantly impacted by the presentation of the narrative, the main effect was close to significance (p = .058), indicating that participants reported higher recollection ratings after reading the sequentially presented narrative than after reading the randomly presented narrative (2.37 vs. 2.04).

As for the recollection ratings, the prominence of the brands that were presented within the narrative was found to influence recollection ratings for phrases that contained only narrative information. Participants who received the blatantly presented brands reported higher recollection ratings, despite the fact that the phrases contained only narrative information. Nevertheless, it is possible that the bolding of the brands influenced the overall encoding of the narrative, making the passages of the narrative more distinct when bolded brands were presented. As a result of the narrative being more

distinct when bolded brands were presented, recollection ratings would be higher during the recognition task. Furthermore, phrases that contained only narrative information and phrases that contained both narrative information and brands were randomly presented during the recognition task. If participants experienced greater recollection for phrases that contained brands (see below), the enhanced recollection experienced for these phrases may have also contributed to enhancing recollection ratings for phrases that contained only narrative information.

Next, the recognition judgments for phrases that contained brand-related information were analyzed. Familiarity and recollection ratings were analyzed using separate ANOVAs, treating brand presentation number (not presented vs. once vs. five times) as the within-participant factor and narrative condition (sequential vs. random) and brand prominence (subtle vs. blatant) as the between-participant factors. For familiarity ratings (see Table 11), this analysis revealed a significant main effect of brand presentation, F(2, 64) = 75.46, MSE = 0.26, p < .001. All other main effects and interactions were not significant, ps > .05. Participants reported lower familiarity ratings for phrases that contained brands that were not presented, compared to phrases that contained brands that were presented once (1.66 vs. 2.70), F(1, 35) = 55.64, MSE = 0.35, p < .001, and to phrases that contained brands that were presented five times (1.66 vs. 3.11), F(1, 35) = 123.54, MSE = 0.31, p < .001. Additionally, participants reported higher familiarity ratings for the phrases that contained brands that were presented five times compared to phrases that contained brands that were presented once (3.11 vs. 2.70), F(1,35) = 21.45, MSE = 0.14, p < .001.

Table 11

Familiarity Ratings for Phrases that Contained Brands Across Brand Presentation

Number, Narrative Condition, and Brand Prominence in Experiment 4a

Narrative Co	ondition/	Bran	Brand Presentation Number			
Brand Prominence		New	New Old/Once			
Seque	ntial					
	Subtle	1.61 (0.14)	2.48 (0.20)	3.05 (0.21)		
	Blatant	1.43 (0.11)	3.01 (0.21)	3.17 (0.21)		
Во	th	1.51 (0.09)	2.76 (0.16)	3.11 (0.14)		
Rando	om					
	Subtle	1.84 (0.17)	2.64 (0.11)	3.03 (0.13)		
	Blatant	1.76 (0.14)	2.65 (0.20)	3.17 (0.22)		
Во	th	1.79 (0.11)	2.64 (0.12)	3.11 (0.14)		
Comb	ined					
	Subtle	1.73 (0.11)	2.56 (0.11)	3.04 (0.12)		
	Blatant	1.61 (0.10)	2.81 (0.15)	3.17 (0.15)		
Overall		1.66 (0.07)	2.70 (0.10)	3.11 (0.10)		

*Note*. The standard error of the mean is presented in parentheses.

For recollection ratings (see Table 12), there was a main effect of narrative condition, F(1, 33) = 4.45, MSE = 0.39, p = .043. Overall, participants reported higher recollection ratings for phrases that contained brands after receiving the sequentially

presented narrative, compared to after receiving the randomly presented narrative (2.68 vs. 2.43). Because participants were rating phrases that contained both brand-related and narrative information, it is likely that participants reported higher recollection ratings after receiving the sequentially presented narrative because they were able to encode and remember more information about the narrative that they received. Although the phrasing of the narrative information was changed for phrases that contained new brands, the meaning of the phrase remained the same, which could account for why higher recollection ratings were reported even for phrases that contained brands that were new.

Table 12

Recollection Ratings for Phrases that Contained Brands Across Brand Presentation

Number, Narrative Condition, and Brand Prominence in Experiment 4a

Narrative Condition/	Bran	Brand Presentation Number			
Brand Prominence	New	Old/Once	Old/Five Times		
Sequential					
Subtle	1.88 (0.15)	2.76 (0.19)	3.04 (0.18)		
Blatant	1.68 (0.11)	3.14 (0.16)	3.53 (0.10)		
Both	1.77 (0.09)	2.97 (0.13)	3.31 (0.11)		
Random					
Subtle	1.51 (0.11)	2.18 (0.18)	2.82 (0.28)		
Blatant	1.63 (0.13)	3.06 (0.18)	3.32 (0.15)		
Both	1.57 (0.08)	2.64 (0.16)	3.08 (0.16)		
Combined					
Subtle	1.68 (0.10)	2.45 (0.15)	2.92 (0.17)		
Blatant	1.65 (0.08)	3.10 (0.12)	3.43 (0.09)		
Overall	1.66 (0.06)	2.80 (0.11)	3.19 (0.10)		

*Note.* The standard error of the mean is presented in parentheses.

In addition to the main effect of narrative condition, there were main effects of brand prominence, F(1, 33) = 9.07, MSE = 0.39, p = .005, and brand presentation, F(2, 66) = 127.29, MSE = 0.18, p < .001, which were qualified by an interaction between

brand presentation and brand prominence, F(2, 66) = 6.62, MSE = 0.18, p = .002. Overall, participants reported higher recollection ratings after reading a narrative that contained brands that were blatantly presented, compared to after reading a narrative that contained brands that were subtly presented (2.73 vs. 2.35). Also, participants reported higher overall recollection ratings for phrases that contained brands that were presented five times, compared to phrases that contained brands that were presented once (3.19 vs. 2.80), F(1, 36) = 29.79, MSE = 0.10, p < .001, and compared to phrases that contained brands that were new (3.19 vs. 1.66), F(1, 36) = 184.41, MSE = 0.24, p < .001. Additionally, participants reported higher recollection ratings for phrases that contained brands that were presented once, compared to phrases that contained brands that were new (2.80 vs. 1.66), F(1, 36) = 89.86, MSE = 0.27, p < .001.

To examine the interaction, planned comparisons were conducted to examine participants' recollection ratings for phrases that contained brands across the three brand presentation conditions. For the phrases that contained brands that were new, there was no difference in participants' recollection ratings across the blatant and subtle brand prominence conditions (1.65 vs. 1.68), p > .05. However, participants were found to report higher recollection ratings for phrases that contained brands that appeared once in the narrative when they received brands that were blatantly presented, compared to when brands were subtly presented (3.10 vs. 2.45), t(35) = -3.48, p = .001. Similarly, participants reported higher recollection ratings for phrases that contained brands that appeared five times in the narrative when brands were blatantly presented, compared to when brands were subtly presented (3.43 vs. 2.92), t(25.05) = -2.64, p = .014.

The familiarity and recollection ratings observed in Experiment 4a provide evidence that the different brand presentations resulted in different memory outcomes for the featured brands. Consistent with the previous studies, familiarity ratings were influenced by the prior presentation of the brand; brands that appeared five times in the narrative were rated as being more familiar, compared to brands that appeared once in the narrative, which were rated as being more familiar compared to brands that were new. In contrast, recollection ratings were influenced by not only the prior presentation of the brand, but also by the prominence of the presentation of the brand. Overall, recollection ratings were highest for phrases that contained brands that were presented five times, followed by phrases that contained brands that were presented once and then by phrases that contained new brands. Moreover, highest recollection ratings were reported for brands that were presented once and five times when they were presented blatantly in the narrative; thus, the blatant presentation of the brand had the intended effect on brand recollection. Presumably, the heightened recollection for brands that were presented blatantly arose because brands that were presented in that format would receive more extensive processing, compared to brands that were presented subtly. If the additional processing that resulted in higher recollection for brands that were presented blatantly, it is possible that viewers would become more suspicious of the presentation of these brands. To examine if the presentation and prominence of the brand altered how participants viewed the presentation of the brand, participants' persuasion knowledge ratings were examined.

**Persuasion knowledge.** The brands were classified according to four categories (new vs. recognition vs. once vs. five times) that were based on their presentation during

the previous phases of the study. To examine persuasion knowledge, participants' ratings for the two persuasion knowledge statements were combined to form an overall measure of the activation of persuasion knowledge. The ratings for the brands that were new or appeared during only the recognition phase showed high reliability across the two items  $(\alpha_{\text{New}} = .92 \text{ and } \alpha_{\text{Recognition}} = .87)$ , and the ratings for the brands that were presented once or five times during the narrative showed moderate reliability  $(\alpha_{\text{Once}} = .66 \text{ and } \alpha_{\text{Five times}} = .63)$  across the two items.

The overall persuasion knowledge ratings (see Table 13) were submitted to a repeated-measures ANOVA treating brand presentation (new vs. recognition vs. once vs. five times) as the within-participant factor and narrative condition (sequential vs. random), recognition condition (familiarity vs. recollection) and brand prominence (subtle vs. blatant) as the between-participant factors. This analysis revealed a significant main effect of brand presentation, F(3, 195) = 127.17, MSE = 1.45, p < .001, which was qualified by an interaction between brand presentation and brand prominence, F(3, 193) = 7.45, MSE = 1.45, p < .001. All other main effects and interactions did not reach significance, ps > .05.

Table 13

Persuasion Knowledge Ratings Across Brand Presentation, Narrative Condition, and

Brand Prominence in Experiment 4a

Narrative Condition/	Brand Presentation			
Brand Prominence	New	Recognition	Old/Once	Old/Five Times
Sequential				
Subtle	1.52 (0.41)	1.80 (0.37)	3.51 (0.45)	4.11 (0.49)
Blatant	1.00 (0.28)	1.41 (0.27)	4.65 (0.44)	5.30 (0.42)
Both	1.24 (0.24)	1.59 (0.22)	4.13 (0.33)	4.76 (0.33)
Random				
Subtle	1.15 (0.27)	1.70 (0.27)	2.85 (0.36)	3.69 (0.35)
Blatant	1.22 (0.29)	1.71 (0.29)	3.60 (0.39)	5.10 (0.52)
Both	1.19 (0.20)	1.70 (0.20)	3.27 (0.27)	4.47 (0.34)
Combined				
Subtle	1.33 (0.24)	1.75 (0.22)	3.17 (0.29)	3.90 (0.30)
Blatant	1.12 (0.20)	1.57 (0.20)	4.10 (0.30)	5.20 (0.33)
Overall	1.21 (0.15)	1.65 (0.15)	3.68 (0.22)	4.61 (0.24)

*Note*. The standard error of the mean is presented in parentheses.

Examining participants' persuasion knowledge ratings across the four brand presentation conditions revealed that participants reported higher persuasion knowledge ratings for brands that were presented five times during the narrative, compared to the

new brands (4.61 vs. 1.21), F(1, 72) = 160.32, MSE = 2.62, p < .001, brands that were presented during the recognition task, (4.61 vs. 1.65), F(1, 72) = 140.42, MSE = 2.28, p < .001, and brands that appeared once during the narrative, (4.61 vs. 3.68), F(1, 72) =38.05, MSE = 0.83, p < .001. Additionally, participants reported higher persuasion knowledge ratings for brands that were presented once during the narrative, compared to the new brands, (3.68 vs. 1.21), F(1, 72) = 108.79, MSE = 2.04, p < .001, and compared to brands that were presented during the recognition task, (3.68 vs. 1.65), F(1, 72) =86.84, MSE = 1.73, p < .001. Finally, participants also reported higher persuasion knowledge ratings for brands that appeared during the recognition task, compared to brands that were new (1.65 vs. 1.21), F(1, 72) = 34.26, MSE = 0.20, p < .001. To examine the interaction, participants' persuasion knowledge ratings were compared across the two brand prominence conditions for each of the brand presentation conditions. This analysis revealed that persuasion knowledge ratings were higher when participants were presented with blatantly presented brands for brands that were presented five times, (5.20 vs. 3.90), t(71) = -2.87, p = .005, and once, (4.10 vs. 3.17), t(71) = -2.19, p = .032, in the narrative. Brand prominence did not affect persuasion knowledge ratings in the other two brand presentation conditions, ps > .05.

Thus, consistent with the predictions that were made based on the recollection ratings, participants reported higher persuasion knowledge activation for brands that were more blatantly presented. If participants' implicit choice ratings are based on the extent to which the presentation of the brand activated persuasion knowledge, then brands that are more blatantly presented, and result in higher activation of persuasion knowledge, would be expected to be more poorly rated during the implicit brand choice task compared to

brands that were not blatantly presented. However, if viewers becoming immersed into the narrative can protect the blatant presentation of a brand from a negative response from viewers, then blatantly presented brands might be more favorably rated during an implicit choice task even with the activation of persuasion knowledge. Of course, a third possibility is that immersion and the activation of persuasion knowledge do not strongly contribute to product placement outcomes and that, instead, those outcomes are mainly based on a nonanalytic assessment of brand fluency. To investigate this possibility, Experiment 4b was conducted.

## **Experiment 4b**

# **Participants**

A total of 123 participants (82 female, 41 male,  $M_{\text{age}} = 18.85$  years) were recruited from the same participant pool as was used in the previous experiments.

### **Apparatus and Stimuli**

The same computers and stimuli that were used in Experiment 4a were used in Experiment 4b.

#### Procedure

The procedure of Experiment 4b was identical to the procedure used in Experiment 4a except that participants did not complete the recognition phase. Instead, after completing the set of math problems, participants completed the implicit choice task. Finally, participants rated every brand according to the two measures of persuasion knowledge that were used in Experiment 4a.

### **Results and Discussion**

Presence. Participants responses to the individual items of the ITC-SOPI<sup>©</sup> (Lessiter et al., 2001) showed high reliability ( $\alpha$  = .89); therefore, the responses were averaged to create a single engagement score. Submitting participants' engagement scores into an ANOVA, treating narrative condition (sequential vs. random) and brand prominence (subtle vs. random) as the between-participant factors, revealed a significant main effect of narrative condition, F(1, 119) = 8.44, MSE = 0.47, p = .004. Participants reported higher levels of engagement after reading the sequentially presented narrative, compared to after reading the randomly presented narrative (2.85 vs. 2.49). Consistent with previous studies, the different presentations of the narrative produced the indented effect on the level of immersion experienced while reading the narrative.

Implicit choice ratings. Participants' implicit choice ratings (see Table 14) were submitted to a mixed-design ANOVA, treating brand presentation number (not presented vs. once vs. five times) as the within-participant factor and narrative condition (sequential vs. random) and brand prominence (subtle vs. blatant) as the between-participant factors. This analysis revealed a significant main effect of brand presentation number, F(2, 238) = 3.92, MSE = 0.72, p = .02. All other main effects and interactions were not significant, ps > .05. Additional analyses revealed that participants reported significantly higher implicit choice ratings for brands that were presented five times in the narrative, compared to brands that were new (6.11 vs. 5.81), F(1, 122) = 6.03, MSE = 0.91, p = .015, and compared to brands that were presented once during the narrative (6.11 vs. 5.92), F(1, 122) = 4.23, MSE = 0.52, p = .042. Participants did not differ in their implicit choice ratings for brands that were presented once during the narrative and brands that were new (5.92 vs. 5.81), p > .05.

Table 14

Implicit Brand Choice Ratings Across Brand Presentation Number, Narrative Condition,
and Brand Prominence in Experiment 4b

Narrative C	ondition/	Bran	Brand Presentation Number			
Brand Prominence		New	Old/Once	Old/Five Times		
Seque	ential					
	Subtle	5.81 (0.19)	5.63 (0.20)	5.87 (0.20)		
	Blatant	5.77 (0.21)	5.82 (0.20)	6.30 (0.20)		
Во	oth	5.79 (0.14)	5.72 (0.14)	6.08 (0.14)		
Rando	om					
	Subtle	5.64 (0.26)	6.01 (0.25)	5.99 (0.23)		
	Blatant	6.03 (0.17)	6.25 (0.20)	6.30 (0.20)		
Во	oth	5.84 (0.15)	6.14 (0.16)	6.15 (0.15)		
Comb	oined					
	Subtle	5.73 (0.16)	5.81 (0.16)	5.92 (0.15)		
	Blatant	5.90 (0.13)	6.04 (0.14)	6.30 (0.14)		
Overall		5.81 (0.10)	5.92 (0.11)	6.11 (0.10)		

*Note*. The standard error of the mean is presented in parentheses.

Brands that were presented five times were rated as being more likely to be selected, compared to new brands and to brands that were presented once during the narrative. This linear association between frequency of brand presentation and brand

choice ratings did not consistently occur across the previous studies. However, the general pattern replicates my previous findings in that exposure to brand names within a narrative typically has a positive effect on brand choice ratings. A simple explanation of this result stems from the considerable prior research on fluency attribution effects and the mere exposure effect (Bornstein & D'Agostino, 1992; Lee & Labroo 2004; Seamon et al., 1983; Whittlesea & Price, 2001; Winkielman et al., 2003; Zajonc, 1968); prior exposure to a stimulus (a brand name, in this case) enhances subsequent perception of that stimulus, which, in the context of a choice rating task, is unconsciously attributed to the brand's favorability over an alternative. Based on the preceding experiments, it appears that this nonanalytic influence on brand choice ratings can be observed to the extent that two conditions are met. First, this influence on brand ratings will be easiest to observe when participants are not given an alternative source for which they can attribute fluent perception of a brand name. For example, the requirement to make a remembering judgment prior to making brand choice ratings can eliminate the positive effect of prior brand exposure on brand choice ratings (Experiment 3a). Second, this influence on brand ratings depends on whether the presentation of a brand name within the narrative facilitates the perception of that brand name when it appears in the brand choice task. Accordingly, auditory presentation of a brand name within a narrative will tend not to influence choice ratings when brand names are presented visually during the brand choice task (Experiment 1).

Moreover, when the current results are considered alongside those of Experiment 4a, it appears that higher recollection of a brand presented within a narrative and of narrative details surrounding presentation of a brand name do not necessarily generate

negative outcomes for brand choice ratings, whether or not the narrative encourages high versus low immersion. This outcome is surprising from theoretical frameworks that emphasize persuasion knowledge activation as a major limitation on the effectiveness of product placements in guiding consumers' preference for featured brands (e.g., Cowley & Barron, 2008; Matthes et al., 2007; Russell, 2002). Indeed, it appears that considerable differences in persuasion knowledge itself can be observed without observing corresponding negative effects on participants' brand choice ratings. The persuasion knowledge measures obtained in the current experiment further highlight the absence of a contribution of this factor to participants' brand choice ratings.

Persuasion knowledge. Brands were classified according to their presentation during the previous phases of the study (new vs. choice vs. once vs. five times). Participants' ratings for the two items were combined to form an overall measure of the activation of persuasion knowledge. The ratings for the brands that were new or appeared during only the choice phase showed high reliability across the two items ( $\alpha_{\text{New}} = .89$  and  $\alpha_{\text{Choice}} = .87$ ), and the ratings for the brands that were presented once or five times during the narrative showed moderate reliability ( $\alpha_{\text{Once}} = .76$  and  $\alpha_{\text{Five times}} = .66$ ) across the two items.

The overall persuasion knowledge ratings (see Table 15) were submitted to a repeated-measures ANOVA, treating brand presentation (new vs. choice vs. once vs. five times) as the within-participant factor and narrative condition (sequential vs. random) and brand prominence (subtle vs. blatant) as the between-participant factors. This analysis revealed a significant main effect of brand presentation, F(3, 357) = 188.24, MSE = 1.66, p < .001, which was qualified by an interaction between brand presentation and brand

prominence, F(3, 357) = 9.41, MSE = 1.66, p < .001. All other main effects and interactions did not reach significance, ps > .05.

Table 15

Persuasion Knowledge Ratings Across Brand Presentation, Narrative Condition, and
Brand Prominence in Experiment 4b

Narrative Condition/	Brand Presentation			
Brand Prominence	New	Choice	Old/Once	Old/Five Times
Sequential				
Subtle	1.39 (0.25)	2.36 (0.36)	3.05 (0.34)	4.45 (0.37)
Blatant	1.47 (0.33)	2.08 (0.35)	4.30 (0.29)	5.73 (0.25)
Both	1.43 (0.21)	2.22 (0.25)	3.67 (0.23)	5.08 (0.24)
Random				
Subtle	2.00 (0.39)	2.48 (0.39)	3.55 (0.43)	4.80 (0.44)
Blatant	1.41 (0.26)	2.26 (0.32)	4.10 (0.31)	5.63 (0.34)
Both	1.69 (0.23)	2.37 (0.25)	3.84 (0.26)	5.23 (0.28)
Combined				
Subtle	1.68 (0.23)	2.42 (0.26)	3.29 (0.27)	4.62 (0.28)
Blatant	1.44 (0.21)	2.17 (0.24)	4.20 (0.21)	5.68 (0.21)
Overall	1.56 (0.15)	2.29 (0.18)	3.75 (0.18)	5.15 (0.18)

*Note.* The standard error of the mean is presented in parentheses.

Examining participants' persuasion knowledge ratings across the four brand presentation conditions revealed that participants reported higher persuasion knowledge ratings for brands that were presented five times during the narrative, compared to the new brands (5.15 vs. 1.56), F(1, 122) = 292.32, MSE = 2.72, p < .001, brands that were presented during the implicit choice task (5.15 vs. 2.29), F(1, 122) = 200.48, MSE = 2.51, p < .001, and brands that appeared once during the narrative, (5.15 vs. 3.75), F(1, 122) =145.48, MSE = 0.83, p < .001. Additionally, participants reported higher persuasion knowledge ratings for brands that were presented once during the narrative, compared to the new brands (3.75 vs. 1.56), F(1, 122) = 145.08, MSE = 2.04, p < .001, and compared to brands that were presented during the implicit choice task, (3.75 vs. 2.29), F(1, 122) =76.32, MSE = 1.72, p < .001. Finally, participants also reported higher persuasion knowledge ratings for brands that appeared during the implicit choice task, compared to brands that were new (2.29 vs. 1.56), F(1, 122) = 48.03, MSE = 0.69, p < .001. To examine the interaction, participants' persuasion knowledge ratings were compared across the two brand prominence conditions for each of the brand presentation conditions. This analysis revealed that persuasion knowledge ratings were higher when participants were presented with blatantly presented brands for brands that were presented five times, (5.68 vs. 4.62), t(110.70) = -3.02, p = .005, although the assumption of homogeneity of variances was not met F(1, 121) = 4.26, p = .041, and once, (4.20 vs. 3.29), t(121) = -2.67, p = .009, in the narrative. Brand prominence did not affect persuasion knowledge ratings in the other two brand presentation conditions, ps > .05.

Thus, despite the finding that persuasion knowledge activation was higher for brands that were presented five times during the narrative, the ratings on the implicit

choice task did not reveal a negative reaction to those brands. In fact, the ratings in the implicit choice task indicate that participants were more likely to select brands that were associated with higher persuasion knowledge activation (i.e., brands that were presented five times). However, it is important to note that participants reported their persuasion knowledge ratings after completing the implicit choice task. If the implicit choice ratings are based on an unconscious attribution process, perhaps persuasion knowledge, which utilizes cognitive resources (Campbell & Kirmani, 2000), was not activated during the implicit choice task. Rather, persuasion knowledge only became activated once participants were deliberately thinking about the placement of the brands while they provided their persuasion knowledge ratings. If persuasion knowledge was not activated during the implicit choice task, then factors that result in heightened remembering for brands, many not necessarily produce detrimental choice outcomes for the featured brands. In fact, given that consumers typically make brand selections without much deliberation (Bargh, 2002; Friese et al., 2006), then persuasion knowledge may not be as influential in reducing the benefits of product placement. Instead, a nonanalytic process, which is based on an attribution made about the ease of processing a previously encountered brand, may be more influential when consumers make their brand selections.

## **Chapter V: General Discussion**

Recently, consumers have witnessed a dramatic increase in the number of product placements that occur across all forms of media. Despite this enthusiastic use of product placements, researchers have not determined whether or not this form of advertising produces profitable outcomes for featured brands. Together, the studies presented here offer a new perspective to the literature on product placements. The above studies are

rooted in examining the basic cognitive processes that determine the outcomes of a product placement episode. Because these basic cognitive processes ultimately form the basis of consumers' evaluations and choice of product, a more refined understanding of the consequences of product placements can be achieved by examining these processes.

Different from the approach used in the existing literature, the nonanalytic framework examined here adopts a unique conceptualization of memory. Rather than memory being represented merely as an additional outcome, I advocate that memory is a system that underlies the consequences of a product placement by providing a platform from which other more critical outcomes are determined. Therefore, to come to a better understanding of the consequences that arise from a product placement event, it is necessary to examine how information is stored in memory and how information from memory is used to guide performance on a certain tasks.

The studies reported here were designed to examine whether the nonanalytic influence of memory could be used to enhance our understanding of the consequences that arise out of product placements. Experiments 1 and 2 attempted simply to identify how the presentation of a brand within a product placement event alters brand ratings. The results from these initial studies revealed that no changes in brand ratings were observed when the product placements occurred in a modality that did not match the modality in which brands were presented during the ratings tasks; however, when there was a match in modality, brand ratings were higher for all brands that were previously presented. When memory processes were examined in Experiment 2, processing fluency or efficiency, which produced higher recognition ratings, also produced a similar change in implicit choice ratings. Critically, although similar positive evaluative effects have

been reported in the past (e.g., the mere exposure effect), generally these effects are dependant on participants not being able to remember their prior exposure to the stimuli (Matthes et al., 2007; Zajonc, 2004). Despite these previous findings that emphasize the negative association between memory and evaluative measures that is necessary to observe these effects, an alternative explanation rests on an unconscious attribution made about the processing fluency that occurred for brands that were previous presented (Whittlesea & Price, 2001). Given that similar ratings were observed for memory and implicit choice ratings, the findings of Experiment 1 suggest that this attribution processes could account for the changes in brand ratings observed for previously presented brands.

Building upon these initial findings, Experiments 3 and 4 were meant to test this nonanalytic influence of memory on brand ratings against a more deliberate and analytic process by which brand ratings may have been altered. In Experiments 3a and 3b the impact of the level of immersion, or the extent to which participants become transported into the narrative, was examined. In Experiment 3a, when participants provided recognition ratings prior to completing the implicit choice task, there was no impact of prior brand presentation on choice ratings. However, when the recognition task was removed from the procedure in Experiment 3b, participants again reported more favorable implicit choice ratings for brands that were presented. Albeit, the higher implicit choice ratings were only reported for brands that were presented once in the narrative. Although the reason for why implicit choice ratings for brands that were presented five times in the narrative is not clear from the results of Experiment 3a and 3b, the activation of persuasion knowledge, which has been illustrated to be an important

factor in other studies (Matthes et al., 2007; Russell, 2002), was expected to have produced these results.

To examine whether or not persuasion knowledge produced these negative effects for brands that were presented five times, in Experiments 4a and 4b the activation of persuasion knowledge was examined. To heighten the activation of persuasion knowledge, the presentation of brands was manipulated to be more blatant for some participants. Despite the findings that persuasion knowledge and recognition ratings were enhanced for brands that were presented more prominently, those brands were rated higher on the implicit choice task. It is possible that, since persuasion knowledge ratings were obtained after participants completed the implicit choice task, persuasion knowledge may not have been activated while participants reported their implicit choice ratings. If this were the case, then factors that activate persuasion knowledge may not necessarily produce detrimental choice outcomes for the featured brands. Nevertheless, given the corresponding increase that was found for recognition ratings in Experiment 4a, the results of Experiment 4b provide support for the nonanalytic influence of memory in guiding brand preferences.

Together, the results reported here suggest that the traditional, analytic treatment of memory in previous frameworks that examine the consequences associated with product placements might need to be reexamined. Although previous studies have emphasized how memory outcomes tend to be dissociated from other more critical outcomes (Law & Braun, 2000; Matthes et al., 2007; Russell, 2002), the studies reported here suggest that this might not always be the case. In fact, the corresponding changes that were observed for memory and implicit choice ratings suggest that processes the

guide memory judgments may also guide brand ratings. That is, when forming attitudes and behaviours about items, an unconscious attribution is made about how the current processing of the items unfolds. When the processing of an item is altered by some prior experience, memory-guided processing can be (mis)attributed to the quality of the item being evaluated. As a result of this attribution process, the same memory-based processing that give rise to memory judgments can guide subjective attitudes and behaviours.

### **Contributions**

The procedures adopted in these studies utilized a procedure that differed substantially from the manner in which product placements have been investigated in the past. In other approaches, participants are given fairly limited exposure to a brand that featured during a product placement; that is, participants are presented with a short video clip containing a product placement (e.g., Law & Braun, 2000; Matthes et al., 2007; Russell, 2002). In contrast to these approaches, in the current set of studies participants were presented with a number of brands that were embedded within a lengthy narrative. By doing so, these studies presented participants with a more complex set of stimuli, which more closely resembles that manner in which product placements are experienced outside of the laboratory. When the outcomes were examined in this way, the nonanalytic influence of memory was revealed.

The findings from the studies reported here contribute to both our practical understanding of the consequences that arise out of the use of product placements and our theoretical understanding of the basic principles that guide these consequences.

From a practical standpoint, the finding that factors that enhanced perceptual fluency of the brand produced the most consistently positive effects on brand ratings is critical for marketers who intend to utilize product placements to feature their brand. When there was a mismatch in the modality that the brand was presented in during the product placement event and the subsequent brand-rating task, no benefit of prior exposure was observed in the brand rating tasks. However, when there was a match in the modality that the brand was presented in during the product placement event and the subsequent brand rating tasks, an increase in brand ratings was observed. These findings suggest that marketers should be aware of the modality in which a brand is presented during a product placement and ensure that it closely matches the modality in which critical outcomes are obtained. When there is a mismatch in modalities, these placements may not result in any measurable benefits or profitable outcomes for the featured brand.

Despite the caution that must be used in ensuring that a match exists between the modality in which a brand is presented and the modality in which outcomes are measured, the studies reported here also suggest that the positive effects observed are robust to the manipulation of other factors. Manipulating features of the narrative that altered narrative transportation (Escalas, 2004, 2007) as indicated by the feeling of presence (e.g., Li et al., 2002), and that activation of persuasion knowledge (e.g., Matthes et al., 2007) did not produce detrimental outcomes for the featured brands. Thus, enhancing perceptual fluency through the presentation of the brand appeared to be the critical factor that produced positive outcomes for the featured brands. In order to obtain beneficial outcomes for featured brands, however, implicit measures that do not make the influence of the prior presentation of the brand salient appears to be necessary. Given that

consumers tend make brand selections without much thought or deliberation (Bargh, 2002; Friese et al., 2006), the conditions under which consumers make their selections might be ideal situations for these memory-based processing attributions to exert their influence. Thus, when the correct format is used, placing brands within product placements appears to be a fruitful approach that marketers can use to produce beneficial outcomes for their brands.

Beyond the practical contributions, the studies reported here also reveal important insights into the basic processes that guide the consequences that occur after product placements. Although these studies were conducted to examine the consequences that arise out of the use of product placements, at a theoretical level, these studies provide information on how more general attitudes and behaviours are formed. First, the nonanalytic framework presented here provides a simpler perspective on the processes that alter product placement consequences. The most notable difference in the current framework, compared to frameworks advocated by others (e.g., Balasubramanian et al., 2006; Law & Braun, 2000; Russell, 2002), is the treatment of memory. Rather than memory being classified as a separate outcome, the same underlying processes that influence memory judgments were found to also alter implicit choice ratings. Indeed, the findings from Experiment 2 indicate that perceptual fluency, which was found to increase recognition ratings, also that increased implicit choice ratings. However, in Experiment 3a, the positive outcome observed for featured brands was not obtained. Nevertheless, in Experiment 3b and 4b, when the recognition task no longer preceded the implicit choice task, the positive outcome was observed again. These findings suggest that it is an unconscious attribution made about the current processing of item that produced the more

positive implicit choice ratings. When the processing of the brand could be attributed to the prior presentation of the brand, which occurred when the recognition task preceded the implicit choice task, the more fluent processing that occurred for previously presented brands did not influence implicit choice ratings. However, when the processing of the brand was not easily attributed to the prior presentation of the brand, which occurred when the recognition task was not included, the more fluent processing of the previously presented brands resulted in more positive implicit choice ratings for featured brands. Thus, much like how memory judgments are influenced by an unconscious attribution made about the current processing of an item (e.g., Jacoby & Dallas, 1981) a similar process influenced implicit choice ratings.

#### Conclusions

The findings reported here suggests that frameworks that outline more deliberate and analytic frameworks that have been championed in the past to understand the consequences that arise out of product placements might be missing a simpler approach to understanding these outcomes. Rather than an approach that attempts to incorporate a number of complex factors that produce various convoluted results (e.g., Balasubramanian et al., 2006), the nonanalytic framework presented, and supported, here offers a more basic approach to the understanding of product placements. Although the findings are quite preliminary, and would need to be verified using more externally valid methods and procedures, they suggest that the consequences of product placements can be understood by examining a memory-based attribution process.

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#### Appendix A

Sample of the consent form used in the Experiments. Note that the consent form was printed on departmental letterhead

#### University of Manitoba, Department of Psychology LETTER OF INFORMATION/INFORMED CONSENT

**Research Project Title:** Investigating memory and perception after being presented with narrative information

Principle Investigator (P.I.): Tamara Ansons and Dr. Jason Leboe

P.I. Contact Information:

Department of Psychology Chancellor's Hall University of Manitoba Winnipeg, MB R3T 2N2

Email: umansons@cc.umanitoba.ca

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

**Purpose:** The general purpose of this research is to further our understanding of how narrative information is processed and how details from the narrative are remembered and alter individuals' perception of items from the narrative. This research is a PhD dissertation project that is being conducted under the supervision of Dr. Jason Leboe in the Department of Psychology.

**Description:** During this study, you will be presented with narrative information. The narrative that you will be presented with is a modified excerpt from a murder-mystery novel. After being presented with the narrative information, you will be asked to complete some simple math problems. Finally, you will complete a number of questions relating to the narrative that you read.

**Risks:** There are no risks associated with this study; however, participants may become bored or irritated by the repetitive procedure.

**Benefits:** There will be no direct benefits to participants from their involvement in the study.

**Confidentiality:** Confidentiality will be respected. Data will be kept in a secure office to which only the researchers will have access. No information that discloses your identity will be released or published. Participants will be identified with numbers that will be assigned once the study begins. Responses will not be examined individually; instead, all

participants' responses will be combined when analyzed to ensure that responses are confidential. The personal information that is collected for this study will be destroyed five years after it has been collected (by 09/15).

**Compensation:** Students recruited from an introductory psychology course can receive a portion of their grade via experimental credits in exchange for serving as a participant. This study will take approximately 1 hour to complete, and you will earn two experimental credits for your participation. Students not recruited from an introductory psychology course will be paid \$10 in exchange for their participation in the study.

**Participation:** Your participation in this study is completely voluntary. If you choose to participate, you have the right to discontinue your participation at any time during or after this experiment, even after signing this form. Should you choose not to participate or choose to stop once you have begun, you will still receive your experimental credits.

**Contact:** If you have any questions, please ask the experimenter or you may contact the Principal Investigator.

**Results of this Study:** If you wish to receive a summary of our research findings, please leave your name with the researcher. You will receive a summary of our findings via email by 08/10. If you do not wish to receive the summary of the results, please do not leave your name with the researcher.

**Consent:** I have read and understood the above information, and agree to participate in this experiment. I understand that I may keep a copy of this form for my own records.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

This research has been approved by the Psychology/Sociology Research Ethics Board at the University of Manitoba. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122, or e-mail margaret\_bowman@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

Name of Participant (please print)	Participant's Signature	Date
Researcher and/or Delegate's Signature		

### Appendix B

An example of the narrative used in Experiment 2 (a variation of the narrative was used in Experiment 1). The narrative is based on Chapters 1-7 of the novel "Sinfully Rich" by Hulbert Footner (1979 – 1944) that is available in the Canadian public domain.

Footner, H. (1940). Sinfully rich. New York and London: Harper.

Passage #1

# SCENE: A SMALL OFFICE IN A LARGE BUILDING WHERE ROBIN IS SEATED AT HIS DESK

As noon approached, Robin Francis cleared his desk in preparation to leaving his office. It was a very small office, but the fact that he had an office of his own testified to his importance on the premises. He was usually called Society Reporter, which he didn't like; "Social Commentator" or "Columnist" pleased him better. His column was more and more widely syndicated and he had become a big figure in the smart life of the town and, in fact, of the nation. And nobody knew it better than Robin himself. He didn't have to keep office hours any more, but he attended every morning from nine to twelve because of what he called his Puritan conscience. In other respects he was not exactly a Puritan.

Suddenly, Robin's Blackberry rang. He looked down at the call display and saw that it was Robert Smith, City Editor. He waited a few moments before picking up the Blackberry.

"Hi, Robin! Stop by a moment on your way out, will you?"

"Sure!" said Robin. As he ended the call on his Blackberry, he thought: What does he want of me? Something I don't want to do, that's certain.

He passed through the littered city room and into Robert's enclosure in the corner. Robert, keen, gray-faced, was the picture of a city editor. He was only a year or two older than Robin. Looking up at Robin he asked sourly:

"What time did you get to bed this morning?"

"Somewhere around three-thirty."

"How do you keep it up?"

"It's a gift. So, what's up?"

"Mrs. Henry Wilson is hosting a party up on Broadway tonight," said Robert abruptly. "I've just been tipped off."

"Sure you've been tipped off. And every other reporter in town."

"Have you been invited on this event? I hear you and her are quite good friends."

"I have," said Robin as he glanced down at his Blackberry to check his calendar.

"Are you going?"

"Can you see me?"

"No," grumbled Robert. "The woman is batty!"

"Aren't we all?"

"Sixty-seven years old, and trying to outdo the young ones!"

"She's not insane, if that's what you mean," said Robin. "For forty years she was the meek and uncomplaining wife of Henry Wilson."

"You know what old Henry Wilson was; he reduced everybody around him to a mush of concession. Especially his wife. She never knew how rich he was until after he died. He was so busy making money he could never stop to draw up a will, and she inherited millions a year without any strings to it. She's lost her head, that's all; at sixty-seven she's having her first taste of life."

"All the leeches in this city have fastened on her."

"They're all batty, I say," cried Robert.

"No," said Robin, "publicity-drunk.... You ought to have seen Vanessa Wilson the night Karma opened. Her entrance stopped the show. A white satin gown like a bride's, with Gucci accessories. She was like nothing in the world. She ordered champagne for the reporters and sat down to tell them about herself. 'Boys,' I heard her say as I passed by, 'I am 100% natural; and if you don't believe it, I will prove it! "

"Sure," said Robert, "but what can I do? We need the story! She's worth millions, and she's news. I can cover the party all right; what I wanted from you—as a favor—was the inside story. The others won't have that. You're one of her gang."

"Sorry," said Robin. "I'm not doing it."

"Why not? It's your story."

"Sure. But....nothing lasts forever and a woman like Vanessa Wilson threatens my reputation as a journalist. Everything and everybody she is associated with is smeared

with ridicule. Nothing in of ours can stand long against ridicule. Glamour is my stock in trade, and if Vanessa and her like peel all the glamour off, I'll be looking for a new job."

"Maybe so," said Robert, "but that's too long a view for the editor of a daily paper. I've got to play up Mrs. Henry Wilson while she lasts." He returned to the papers on his desk. "Get out! Get to your lunch."

As Robin left Robert's office, he checked the time on his Blackberry and noticed that he needed to hurry to make his lunch meeting.

Passage #2

# SCENE: MRS. VANESSA WILSON'S APARTMENT – A PENTHOUSE APARTMENT IN AN UPPER-CLASS BUILDING

Vanessa Wilson occupied a triplex apartment at the top of the most expensive building on the Avenue. Two walls of the vast living room were painted white and the other two black, thus immediately establishing a modernistic atmosphere. Down at one end was an arrangement of primitive sculptures; other decorations included big wooden bowls of colored glass balls placed here and there on the floor; modernistic sculptured animals on stands and surrealist paintings on the walls. In the beginning Mrs. Wilson had felt obliged to avert her eyes from the primitive sculpture and the surrealists, but she became accustomed to them in time, and all her sophisticated friends agreed that the whole effect was *très-chi-chi*.

At nine o'clock on the morning following the over-publicized party, Sophia Ratcliff rang the bell of the apartment as usual, and was admitted. Brown-haired Miss Ratcliff, who favored severely tailored suits and hats as if she was determined to hide how pretty she was (but only thereby emphasized it), looked a little out of place among the grotesques, but she worked there.

To the right of the entrance door there was a small, plainly furnished room that was called the office. The only feature in the room that made it a suitable office was the Dell computer that was located on a small table in the room. This was Sophia's hangout between the hours of nine and five and often later. Mrs. Wilson rarely visited it; indeed. Sophia sometimes did not see her employer for several days at a time. Her instructions would be arrive on her Dell, transmitted through email, or one of the maids would stop by to give her the daily orders.

Sophia dutifully attacked the big basket of mail and entered the details using her Dell. Same old sniveling appeals. What a world! Mrs. Wilson insisted on having a complete written report of the beggars, and, if she happened to feel in a good humor, would send out checks recklessly without further investigation. How nicely I could use a check! thought Sophia.

At ten o'clock she rang for a servant. Kenneth promptly appeared. "Has Mrs. Wilson rung?" asked Sophia as she paused from feverishly typing on her Dell computer.

"No, Miss."

"Then I think she ought to be wakened now."

"Yes, Miss; but we have a standing order not to rouse her until she rings."

"She has an appointment at eleven, and you know how important that is to her." Sophia said as she consulted the calendar on her Dell. Today Mrs. Wilson was to have a complete check up from the physician at the beauty clinic, followed by a workout and relaxation. She would lunch there, and after lunch she was down for a facial and a manicure.

"If she's late it will upset the whole schedule."

Passage #3

#### SCENE: THE SERVANTS' QUARTERS IN MRS. WILSON'S APARTMENT

Debra, Mrs. Wilson's own maid, was lingering over her Folgers coffee in the servants' hall. Neat, prim and elderly, she had served some of the greatest ladies prior to serving Mrs. Wilson. Debra knew her own worth. She had to put up with a lot from her aging mistress, and she was apt to take it out on her fellow servants. They called her the Duchess, which did not displease her.

As Kenneth entered, he announced "Miss Ratcliff says you're to waken the Madam now."

The elderly maid stiffened her already straight back. "What's she got to do with me, I'd like to know! I'm not in the habit of taking my orders from *her*!"

Kenneth glanced at her with indifferent dislike. "Madam has an appointment at eleven. She's booked to get the whole works today."

Debra jumped up. "I didn't know the hour. I ought to have been informed of it before!" She flounced out.

When Kenneth was left alone his whole expression changed. He stood by the table with his head lowered, thinking hard. His foxy eyes drew closer together; there was power in his face; power and infinite cunning.

The elderly maid, Debra, ran into the servants' hall from the corridor with open mouth and starting eyes. "She's gone!"

Kenneth seized her wrist and, dragging her back into the corridor, pulled the door shut. "Quiet, for God's sake! Do you want to start a panic here!"

"Gone! Gone!" whimpered Debra.

Kenneth pulled her along the corridor and into his own little office, closing that door also. "Now keep your head. Debra. What do you mean, gone?"

"She's not in her bed. She hasn't slept there all night."

Kenneth affected to laugh it off. His face was ghastly.

"Maybe she had a fancy to try another bed."

"I looked in all the rooms. And the bathrooms. She's not there."

"Maybe Madam went home with some of the guests," Kenneth suggested. "I didn't see all of them go."

"She wouldn't do that," moaned Debra. "How could she show herself in the morning? We need to call someone and find out where she is!"

Kenneth hesitated, scowling. "God! It would start such a story going! It would be on the streets in an hour!... Wait! I'll ask the night doorman. I can bribe him to keep his mouth shut!"

The young doorman came in by the service entrance. He was chewing a Kellogg's Nutri-Grain bar, and had his coat collar turned up to hide the lack of a shirt beneath. When the question was put, he paused from chewing the Kellogg's Nutri-Grain bar and said that Mrs. Wilson had not gone out again the previous night after she had come home. He could go on the stand and swear it, he said. It would have been impossible for her to get out of the building without him noticing.

Kenneth considered, scowling and stroking his chin as the doorman continued to chew on his Kellogg's Nutri-Grain bar.

"Do you realize...do you realize what this means?" gasped Debra.

"What are you getting at?" he demanded harshly.

"It means that... that she is *still here*!" Hysterics threatened.

"Not necessarily," said Kenneth. "She might have been carried down the stairs.... In an elevator building nobody watches the stairs."

The doorman looked ashamed as he finished his Kellogg's Nutri-Grain bar and crumpled the Kellogg's Nutri-Grain package, placing it into his jacket pocket.

Debra's eyes widened; she caught her breath preparatory to a scream. Kenneth, with a lightning move, stopped it with a hand over her mouth. "Shut up!" he said in her ear, not loudly but with a force that rendered the woman limp.

"What are you going to do?" she whispered. "The police?"

"I'll call her attorney, Mr. McTavish," he muttered. "He can take the responsibility."

#### Passage #4

Stanley McTavish lost no time in obeying Kenneth's summons. As soon as he received the call, McTavish raced to Mrs. Wilson's apartment in his Volvo. While driving in his Volvo, McTavish thought to himself that Mrs. Wilson was by far his richest client. "A matter of importance," Kenneth had said when he called in a calm voice, so as not to throw the attorney into a dither before he got there. McTavish was the sort of lawyer who never pleads in court; estate management was his dish. He had developed the art of handling rich widows to a fine point; he and Mrs. Wilson had always got along famously. He indulged all her whims, and drew up a new will whenever she demanded it. McTavish got along well with Kenneth, too—on the surface; there was an unacknowledged working agreement between them. They traded information. McTavish went out of his way to court everybody who was in any way connected with his client.

#### SCENE: MRS. WILSON'S APARTMENT AS MR. MCTAVISH ARRIVES

McTavish quickly parked his Volvo and approached the apartment just as Kenneth was getting ready to let him in. Kenneth had recovered his usual smoothness. McTavish was a very tall man with a small head having but little hair left on it. His legs were like pipe stems within his trousers, but he had a neat round belly that stuck out unexpectedly above, and for some reason he featured it by wearing a white waistcoat and letting his jacket hang open. He was very energetic; always striding along at top speed with his J.Crew coat flapping. Also extremely talkative; fond of asking questions and seldom pausing to hear the replies.

"Well, Kenneth, how is every little thing? I was surprised to get so early a call. Luckily, it caught me just as I was in my Volvo, leaving the office. Dropped everything, of course, to wait upon her exalted majesty, Queen Vanessa. How is my gracious lady this morning? Nothing wrong, I hope. The spiteful newspapers! You can't believe a word you read!"

"She hasn't seen them, sir."

"Good work! Keep them from her, Kenneth; keep them from her; and I'll divert her mind into other channels. Pass on, that's my motto; always pass on to pleasanter things!"

Kenneth led the lawyer into the living room so that their voices could not carry through the door of the office. "Something is very, very wrong, I'm afraid, sir."

McTavish naturally was appalled when he heard Kenneth's story. But he was not nearly so great a fool as his flatulent talk might have suggested; he kept his head; he questioned the Kenneth shrewdly. Yet he was genuinely dismayed; he kept saying: "I can't understand it! I can't understand it! She *must* be here and she is not here." McTavish and Kenneth each recognized in the other a superior intelligence; they deferred to each other politely—and never let up in their watchfulness. But everybody (except Sophia Ratcliff) who was connected with the rich woman acquired that watchful air.

McTavish said to Kenneth: "I'm glad you didn't contact any of the people who were here last night, because, of course, if the worst *has* happened, suspicion will fall upon them first."

Together they made another tour of the apartment, omitting only the office. They overlooked Sophia in there. They opened all the closet doors and looked under the beds. On the third floor there was an immense entertainment room with the most impressive Sony sound system. Mrs. Wilson would frequently utilize the Sony system to entertain her guests. They went through all the components of the Sony sound system before moving on to another room.

Afterwards, McTavish attempted to question Debra about her mistress' movements the night before, but the lady's maid became so upset he had to give it up. They called in Anne to calm her. Anne, a very pretty girl, was first housemaid. She had come into the household in the first place without Mrs. Wilson's previous knowledge, since that lady did not care to surround herself with young and pretty maids. Mr. McTavish decided that there was no help for it but to call the police. While the police where on their way, McTavish made his way down to his Volvo to collect some documents that he was certain that he would need once the police started their investigation.

Passage #5

#### SCENE: ROBIN'S OFFICE

At the same hour, in his little office, Robin was sweating over his column. Few could have guessed the labor that went into the shaping of those screwy paragraphs. When he got stuck, Robin jumped up, took a turn between desk and door, and stretched to test his muscles.

The telephone rang and he picked it up. A sweet, uncultivated voice came over the wire: "Is this Mr. Francis?"

"In person," said Robin. "Who is it?"

"Anne."

Robin ran over a swarm of girls' faces in his mind, trying to fix the name to one of them. "Anne who?" he asked.

She snickered. "Just Anne. You know, at Mrs. Wilson's. Have you forgotten?"

"Now I get you!" cried Robin. "Anne with the dimpled shoulders. So nice to bite!"

She snickered again. "Oh, you!... I'm serious now, Mr. Francis. What is it worth to you if I give you an important piece of information?"

"Depends upon its importance, darling."

"It's important all right." After a moment's hesitation she went on. "All right, I'll trust you. You wouldn't let a girl down ... Mrs. Wilson has disappeared."

"Good God!" said Robin. "Disappeared? Where to?"

"If they knew where she was, she wouldn't be disappeared, would she? Nobody outside knows it yet. Mr. McTavish has just called the police."

Robin had been a reporter before graduating to the features, and all his old instincts leaped into play. "Be there in fifteen minutes," he said.

He took the subway, the quickest method of getting through Toronto, and bettered his quarter of an hour by a minute or two.

#### SCENE: MRS. WILSON'S APARTMENT

Kenneth opened the door of the Wilson apartment and Robin, seeing by his forbidding expression that he was not going to be admitted, adjusted his tactics accordingly.

"'Morning, Kenneth. Can I speak to Miss Ratcliff for a moment?"

"Certainly, Mr. Francis." Kenneth knocked on the door of the office, and opening it, announced: "Mr. Francis." When Robin went in he closed the door.

Sophia Ratcliff rose from her desk blushing pinkly to match the pick Mac lipstick that she was wearing. In order to divert attention from it, she said quickly: "Robin Francis! You shouldn't surprise a girl like this!"

Robin, surprised by her calmness, said "I must say you appear to be taking the situation coolly."

"What situation?"

"I hear that Old Miss has disappeared. Didn't you know it?"

"No. Nobody in this house tells me anything.... Anyhow, I don't believe it. You've been hoaxed." Sophia replied coolly as she pulled out her Mac lipstick and applied a fresh coat.

Robin opened the door wide, and returning to his seat studied Sophia with mixed pleasure and exasperation. She had a distinguished profile; she used no make-up except Mac lipstick and her light brown hair was drawn back in a loose twist.

"What do you mean, nobody here tells you anything?" he asked.

"They all hate me," said Sophia calmly, "not that I care. From the Madam down."

"I can understand the servants," said Robin. "They're just spiteful. Why should the Madam hate you?"

"She suspects me of being critical, though I never say anything. Perhaps it's because I keep my mouth shut."

Robin chuckled. "If she hates you, why doesn't she fire you?"

"Because, she knows I'm honest. Anybody else in this job could do her out of thousands without her knowing it."

"You're too good for this crazy house. Why don't you fire yourself?"

"Because I need the money, dear one."

"You could always get a job, A girl like you." Robin said, as he admired her Mac lipstick.

"Sure. But not at the same pay."

Passage #6

#### SCENE: MRS. WILSON'S APARTMENT

The doorbell rang, and Kenneth appeared in the foyer with suspicious suddenness. He cast a vicious glance into the office, but Robin was looking at him with a smile, and he did not venture to close the door. He admitted two men, keen, wary, stalwart, well-dressed; headquarters detectives, unmistakably.

"This way, gentlemen," Robin sang out. "Use this room for your office."

McTavish, having heard the voices, was already approaching through the foyer with his lapels flying. He was none too pleased with the situation as he found it, but Robin was in control. Everybody drew up chairs—Kenneth being invited to sit with the others—and

the investigation opened. Robin and Sophia, without giving anything away in their faces, learned for the first what it was all about.

"They got here about twelve-twenty," said Kenneth; "Mrs. Wilson and eight guests." He named them. "Mrs. Wilson seemed upset ..."

"What about?" asked one of the detectives.

"I couldn't say, Lieutenant. I had no conversation with her. She went upstairs and I served drinks to the others. Other guests came in. There were thirty-one in all; just a small party." Kenneth proceeded to name them. He had a remarkable memory.

"You were here," said the detective to McTavish.

"Yes, Lieutenant. My client was kind enough to ask me to her social parties. Last night I had a bit of business to talk over with her, but I got no opportunity."

Kenneth continued to recount the night's events. "After about twenty minutes Mrs. Wilson came downstairs. She had an exclusive Chanel dress that she wanted to debut at the party. I was sure to have it ready for her before she arrived home. She seemed angry when she came back down."

"What did she say?"

"I wasn't near enough to hear. Someone tried to smooth her down, but she got more angry, and people began to look. I went toward them, and my mistress said to me: 'I shan't come down again. Stop serving liquor and turn off the Sony sound system at one-thirty. They should all go home by then."

"Was that the last time you saw your mistress?"

"Yes, Lieutenant."

Passage #7

#### SCENE: MRS. WILSON'S APARTMENT

The detectives proceeded to search from room to room. They took their time to search the entertainment room with the immense Sony sound system. Nobody spoke. The last was the boudoir, a pleasant corner room with south and west exposures. Here the old lady spent all her time when she was alone, and she had refused to have any surrealist paintings or modernistic sculpture in it. The decorator had furnished it with beautiful pieces of no special period. The detective immediately placed his hand on a high, carved, oaken cabinet standing against the north wall. It was an ancient piece, standing on turned legs about four feet above the floor. It had double doors with long hinges. A panel of

antique velvet was thrown over the top. The cabinet was about five feet long and eighteen inches high. All stared at it, struck with horror by its significant shape.

"What's kept in here?" asked the detective.

Debra answered tremulously: "Nothing, sir. It's just a showpiece."

He tried the door with his thumbnail. It was locked. "Where's the key?"

Debra's jaw dropped. "Why... why..." she stammered, "the key was in it. I've seen it there hundreds of times!"

The detectives each took an end of the cabinet and lifted it from the floor. It was too heavy to be empty.

When attention was first directed to the cabinet, Kenneth had gone downstairs. He came running back with an Estwing hammer. His face was livid and sweating. He handed the hammer to the detectives, saying huskily: "Force it!"

The detective inserted the hammer between the two doors of the cabinet and one flew open. Inside they saw a huddle of pale-pink satin. The lady's maid screamed insanely. Kenneth turned on her in a passion.

"Quiet, you fool!"

Debra sank down fainting. Robin picked her up, and turning through the corridor, kicked open a door at random and dropped her on a bed. He shouted for Anne—the household might as well be roused now, and in ten seconds he was back in the boudoir.

The two detectives were lifting out the pitifully twisted figure in its silken garments. They laid her on a sofa. Kenneth had turned his back on the sight, but McTavish was staring as if turned into stone. There was no visible wound on her; no stain of blood. Her jewels were gone. The detectives examined her with a puzzled scowl.

"Can't make it out," one of the detectives muttered. "Looks as if she might have died naturally—she was old; then robbed afterwards and stuck away to hide the robbery. There's a slight abrasion on the ear lobe where the earring was pulled off. It didn't bleed."

Robin knelt over and confirmed it.

One of the detectives called and asked for a medical examiner. They then started to process the scene. Suddenly, one of them turned to Robin and said somewhat sourly:

"I suppose you're going to phone your paper now."

"Anything against it?" asked Robin good-naturedly.

They both shook their heads. "If I could conduct this investigation without publicity I might get somewhere," he grumbled. "But that's impossible. Go ahead. Only don't point the finger of suspicion at anybody yet."

"I shan't," said Robin. "The story is good enough without it."

Passage #8

#### SCENE: MRS. WILSON'S APARTMENT

When the police officers finished with Mrs. Wilson's boudoir, the detective headed to the office, since it provided more privacy than any of the downstairs rooms. Robin was with him. A bit of cork lay on the desk between them the detective was examining it through a magnifying glass. The cork had been found lying below the JVC LCD TV during the police searchers.

"I can't see that it means anything in particular," said the detective. "The JVC TV wasn't moved, and I am sure that there are corks lying around every house."

"Not a house like this," said Robin.

"I suppose the old lady ordered up some drink and the cork rolled under the JVC TV, and she couldn't find it."

"That cork wouldn't fit any of the usual kinds of drinks. It's too short."

"A medicine bottle, then."

"It's too big around. Besides, the cork to a medicine bottle is always picked up....even if it is under that JVC TV"

Robin took a closer look at the cork

"This looks like the cork out of a whisky or a wine bottle," said Robin. "It has been cut in half by a very sharp instrument. Notice how clean the cut is. Unluckily, this is the bottom half. The top half usually has the name of the bottler branded in it. Originally this cork was used for a legitimate purpose. You can see the spiral hole made by the corkscrew. But there is also a transverse cut, a clean cut, across the top, made perhaps with the same instrument."

"Quite a Sherlock, ain't yuh?" said the detective ironically.

"Well, corks are one of my specialties. What do you make of it?"

The detective shook his head.

"Well, put it away with the other exhibits until the right clue turns up."

Before their conference broke up, they had an opportunity to obtain some further light on the cork. There was a knock at the door, and upon being invited to do so, Debra entered. The elderly lady's maid had recovered from her hysterics, but when her eyes fell on the tall oaken cabinet, she paled again and swayed on her feet.

"A glass of Dasani?" said Robin, jumping up.

She nodded her head and drank the entire glass as soon as Robin brought it over to her. "Thank-you. I'm all right now." She refused to look at the cabinet again. "There's something you ought to know," she said. "I don't know what it means, but you ought to know it."

Debra went to the front of the room. On the right-hand side there was a kind of corner cupboard, with a whole rank of open shelves decreasing in size as they went up. All the shelves were crowded with items that old ladies love to collect; miniature portraits, jewelry boxes, figurines, and so on. Debra pointed to an object on a middle shelf that she appeared to be afraid to touch.

It was a paper cutter in the form of a dagger.

"What about it?" asked the detective.

"It wasn't there yesterday," said Debra hoarsely. "Madam wouldn't let anybody but me dust her things. I know everything that belongs here."

"We took no special notice of it when we searched the room," said the detective. "When did you see it first?"

"When I was in here a while ago. But I was too upset to speak."

Robin took the precaution of using his handkerchief to pick the dagger up. "Good God, this is no paper cutter. It's as sharp as a razor! It has *recently* been sharpened. Look!" Robin pulled a hair out of his thick thatch, and holding it up, sliced it neatly.

"But the old lady didn't die by that," said the puzzled detective. "There was no mark on her!"

"All right," said Robin, "it wasn't brought to this room for any good purpose, either."

Knowing that Debra wouldn't want to hear their next conversation, the detective guided her out the door. After Debra had left the room, Robin asked "Where's the cork that was found under the JVC TV?"

The detective produced it from the envelope where he had stowed it, and Robin, with delicate fingers, showed him how exactly the point of the dagger fitted the slit in the top of the cork.

"So what?" said the detective.

"The person who carried this had no cover for it. So they stuck the point in the cork to keep it from cutting their clothes."

"And then?"

"My guess is, that the cork worked itself off the point and the dagger slit its pocket and was lost."

"How did it get laid on the shelf"

"That's for us to find out."

Passage #9

#### SCENE: THE OFFICE IN MRS. WILSON'S APARTMENT

Kenneth entered to announce Mr. McTavish, and the dagger was put out of sight. Kenneth glanced at it strangely out of the corners of his eyes. Having made his announcement, he was forced to retire. To be kept out of all these examinations and conferences, not to know what was going on, was almost more than he could bear. He had been ordered to attend the front door. The news of Mrs. Wilson's death was now on the streets and all kinds of people were trying to get into the apartment.

McTavish bustled into the room, talking as he came. He was always talking. With his small head, protuberant belly and elongated legs, he had the look of a stork—an aging stork when he perched his glasses on the end of his beak. He had brought Mrs. Wilson's will. Seating himself fussily and spreading the document, he said.

"I must warn you gentlemen that I can't guarantee this to be my client's last will."

The detective glanced at the date. "It's less than a month old."

"That makes no difference. She was never satisfied."

"But if there was another will, you would know about it, wouldn't you?"

"Perhaps not. I have reason to believe she may have gone to another lawyer."

"What reason?"

McTavish cleared his throat deprecatingly. "It's a delicate matter! I mustn't betray the confidence of the dead!... You see, gentlemen, my client wished to take a certain course of which I strongly disapproved. We argued about it—she was a very imperious woman, but on this point, I *could* not give in, my conscience wouldn't let me! And so she threatened to employ another lawyer."

"When was this?"

"Three days ago."

"Well, let's read this anyhow."

It was a lengthy document since Mrs. Wilson was in the habit of making all kinds of odd and capricious donations and canceling them as soon as made. There were three paragraphs of special interest to the detective.

To my friend, Robin Francis, five hundred thousand dollars over and above taxes, because he is a gentleman.

All the rest and residue of my estate to my nephew, the son of my deceased sister. It is my wish and desire that my nephew, after setting aside a sum sufficient for his own needs, should employ the bulk of my husband's fortune to the Red Cross. My nephew is to be advised in this matter by my friend and executor, Mr. McTavish, and such other persons as may be qualified to advise him.

All the servants employed by Mrs. Wilson were put down for various sums except, oddly enough, Kenneth. Sophia was not mentioned. Mrs. Wilson appointed her nephew and McTavish to be her executors, and stipulated that the latter should receive one hundred thousand dollars a year for his services to the estate.

When the reading was finished the detective said dryly: "Congratulations, Robin."

"Thanks," replied Robin.

"You don't appear to be surprised at the news," the lawyer remarked.

"Mrs. Wilson discussed this will with me at the time it was drawn," said Robin.

"Did you make any suggestions?"

"Only one—but she didn't carry it out. I thought she ought to have named an institution, like the Bank of Montreal or a trust company as one of her executors to ensure that her money went to the Red Cross."

"You lacked confidence in me, eh? Thought that the Bank of Montreal would be safer option?" put in McTavish sourly.

"Not at all. But in the case of so large an estate it's customary. Especially when most of the fortune would be going to the Red Cross"

"What did she mean by this 'gentleman' stuff?" asked the detective.

"I have no idea," said Robin. "Maybe Mr. McTavish can tell us."

The lawyer shook his head. "She insisted on having it written in that manner, but she didn't say why."

"I didn't know there was a nephew," said the detective.

"Mrs. Wilson had never seen him," said McTavish. "Over 50 years ago her sister married and went to England to live, and her family lost touch with her. When Mr. Wilson died last year, this man wrote to the widow and sent proofs of his identity. He wanted to come over and see his aunt. He was a very plain fellow, and Mrs. Wilson didn't want to be associated with him."

"He will have to come over now."

"Surely. I'll contact a lawyer in London with whom I have connections, and ask him to get the fellow off on the next Air Canada flight that is available."

"Strange that Kenneth should have been overlooked," said Robin.

"I spoke to Mrs. Wilson about that. She told me that Kenneth himself had come to her that very day, saying he had heard gossip in the servants' hall that she was going to make a new will, and that all the servants were to be remembered. She told me that Kenneth, almost with tears in his eyes had asked her not to name him. He had only been working for her a few months, he said, and if she should die, it would make talk. 'Wait till I have time to prove myself in your service,' he said."

"Hm! Sounds a little too good to be true!" said Robin.

Passage #10

#### SCENE: THE OFFICE IN MRS. WILSON'S APARTMENT

There was a knock on the door, and Kenneth entered. He handed a card to the detective.

"The gentleman said he wanted to see the detective in charge, sir."

"All right. Bring him up." The detective showed the card to McTavish. "Do you happen to know him?"

McTavish glanced at the card calmly. "Heffelman? Slightly. He's said to be a good man."

Mr. Heffelman was shown in; a prosperous, dignified man; he looked as if he had a nice little place at Greenwich, a son at Yale. He seemed embarrassed to find McTavish in the room, but quickly concealed it. The detective invited him to be seated, and he took a folded document from his breast pocket.

"At Mrs. Wilson's request, I came here yesterday to discuss drawing up her will. I had been recommended to her by someone at the Bank of Montreal, where she banks. When she had made her wishes clear, I returned to my office and had it written accordingly. Yesterday afternoon she came to my office at the Bank of Montreal unexpectedly. She had thought of several changes and additions she wanted made, and the document had to be typed a second time. Here it is according to her final instructions."

"But not signed," said McTavish.

"Not signed. It has no standing in law. However, since the police have considered it necessary to investigate Mrs. Wilson's sudden death, I thought they ought to see it."

The detective took the document. "By all means. And thank you very much for your cooperation, Mr. Heffelman."

"Read it," said McTavish.

The detective did so. In certain particulars it was the same as the former will. Robin would still receive his inheritance and the bulk of the fortune was supposed to be given to the Red Cross.

The servants were remembered as before, except Kenneth, who was still omitted. The nephew, however, was now cut off with only fifty thousand dollars. The estate was left to "my beloved husband-to-be, James Bishop." Bishop was instructed to donate the bulk of the money to the Red Cross in the same words that Mrs. Wilson had previously used. The executors named in this will were James Bishop, Bill Heffelman, Stanley McTavish and the Bank of Montreal; Heffelman and McTavish were each to receive fifty thousand a year for their services.

When it had been read, Mr. Heffelman said: "Well, gentlemen, I feel that I have done my duty. This paper is of no further value now." He reached for it.

"Don't destroy it," said Robin quickly. "You never know!"

The detective folded it. "With your permission I'll keep it for a while," he said to Heffelman.

"By all means." The lawyer got up. "I'll bid you good day, gentlemen."

"Good day, Mr. Heffelman, and thank you again."

Passage #11

#### SCENE: MRS. WILSON'S APARTMENT

Robin went downstairs, and on the pretence of inspecting the guard at the back door, passed through the service rooms, looking for Anne. He found the maid in the servants' hall demurely eating a sandwich for lunch. As the sharp-eyed Kenneth had followed him back, he could only exchange a glance with her and pass on.

He returned upstairs. Soon after, he heard a feminine voice casually humming on the other side of the door, and went out. It was Anne, making believe to be busy on the landing with a Pledge duster. She smiled seductively.

"Hello, Robin."

"Hi, beautiful!"

He handed her a collection of bills for tip that she had provided him earlier. "Look," he said, "if you want, you can earn more of the same during the next couple of days. See all you can, hear all you can, and keep your pretty mouth tight shut."

She nodded. Anne belonged to the cuddly type. She leaned against Robin's broad chest and, looking up in his eyes, murmured: "I would do anything for you, Robin."

Just at that moment the elevator door slid back, and Sophia and the medical examiner stepped out. Anne jumped away, but Sophia's eyes had already taken in the scene and an amused smile crept over her face. Anne was still holding the collection of bills in her hand. Robin ground his teeth together. If it had been anybody else he wouldn't have minded, but Sophia's smile raked him with sharp points.

She went on into the boudoir. Robin sent the girl away and followed. The detective was busy with some reports at the far end of the room. Sophia was still smiling.

"Damn it all!" muttered Robin. "Damn it all!..."

Sophia's smile to broke into an outright laugh just after applying a fresh coat of her Mac lipstick.

The gist of the medical examiner's report was that Mrs. Wilson had died from natural causes. Her organs showed the changes and deteriorations natural in one of her age, and it was indicated that her heart had suddenly failed, possibly as a result of emotional excitement or shock. There was no wound or bruise anywhere upon her, and no trace of poison in her organs.

"That can't be right," said the detective. "There are certain pieces of evidence that point to murder,"

The medical examiner shrugged. He pulled out the photos of the body from the file that he was holding. "Sorry to disappoint you. We can only report on what we find." He paused for a minute before showing the detective a photo of the woman's wrist. "The only odd finding was a tiny bluish speck on her wrist. We figure that she must have hooked herself on a piece of jewelry when she was dressing."

"Not necessarily," said the detective quietly. "Couldn't that mark have been made by a hypodermic syringe?"

"My God!" exclaimed the doctor. "You may be right. But there's no poison... no poison in her! I can swear to that. I checked the reagents myself!"

"Still, she was stuck with a hypodermic," insisted the detective. "Why?... Notice that it's right on a vein."

"A vein!" The doctor's eyes widened. "Oh, my God, yes!... I must go back and look at her heart."

After some time, the medical examiner called the detective. "You were right," he murmured. "When you said vein, I thought that some air could have been injected into her vein, causing her to die in a few seconds. Looks like that is what happened here."

#### Passage #12

Three-quarters of an hour later, the detective and Robin were on their way to see Mr. James Bishop, Mrs. Wilson's fiancée. They rode in silence for the most part as they made their way through the streets of Toronto, each looking out of his own window. They got out at the Hilton Hotel on Broadway. It was a magnificent hotel. At the desk, the detective asked for Mr. James Bishop, and they were presently bidden to go up to his room.

#### SCENE: HOTEL ROOM OCCUPIED BY MR. BISHIOP

Bishop himself admitted them. Though it was four in the afternoon, he looked as though he had just rolled out of bed.

"Hello, Robin," he said. "They didn't tell me there were two of you."

"Robin is acting in an advisory capacity," explained the detective, "as a friend of the family."

"Whose family?"

"Mrs. Wilson's."

"Didn't know she had any. Sit down, men, and relax."

Robin and the detective studied him covertly. He was called the handsomest young man in Toronto, and it may well have been true. Starting as a photographer's model in Toronto, he had become a photographer himself. Subsequently, he impressed the right people and in no time at all he became the darling of the socialites in Toronto.

"I'm glad we found you in," said the detective as an opener.

"Oh, naturally, I canceled all my engagements today," said James.

The complacent face expressed no sorrow, and Robin thought: "In spite of all the money she lavished on her favorites, the old woman has no mourners."

James looked over at Robin. He smiled politely at the two men. "Sorry, I don't mean to be rude, but I don't see where Robin comes in on this."

"I'm down in the old lady's will for a fat legacy," said Robin, watching his face. "And I'm bound for my own sake to see that all mystery is cleared up."

James's smooth face showed no change. "Oh, has the will been read?"

"Yes, by the police."

There was a silence. The other two could see that James was craving for some assurance that he had been taken care of, but they would not say anything.

The detective broke the silence. "I suppose you know that Mrs. Wilson planned to leave you her entire fortune after certain bequests had been made. She died before she could sign the will. A nephew gets it."

James sat where he was, staring at the detective. His face blenched to the color of soiled wax. His expression was clownish from shock. Several moments passed before he could speak. "How do you know?" he asked huskily.

"We read both wills this morning."

"It's not true!" James suddenly cried out. "I want a drink," said James shakily. "We all need it. It's in the next room. I'll fetch it." He went through a door on the right, taking care to close it after him.

Passage #13

#### SCENE: HOTEL ROOM OCCUPIED BY MR. BISHIOP

Once James left, the detective walked towards the desk by the window and with delicate fingers was turning over the papers on it. He said: "Stand by the door, Robin, and give me a sign if you hear him coming."

Robin obeyed. "What are you after?"

"Did you notice how he started for this desk, and then thought better of it. Maybe there's something here."

A moment later the detective drew out a sheet of note paper and whistled softly. "Here's a piece of evidence!" He hastily copied the note on the back of an envelope.

"He's coming back," warned Robin.

The detective thrust the letter back in its pile and strolled away from the desk, putting the envelope in his pocket. Robin seated himself. James re-entered, with a bottle of Skyy vodka and glasses on a tray. He was bent now on removing the bad impression he had made before.

"Take a good one, boys. What'll you have for a chaser?... Drink hearty! Here's to crime!"

Robin and the detective drank and got out as soon as they could.

Going down in the elevator, Robin asked: "What's in that note?"

"Wait till we're in a taxi."

A minute or two later the detective was reading his notes to Robin. The letter was from Mrs. Wilson

"'The new will is made, dear one. I have just come from the lawyer's office, and now I am settling down to rest and daydream about my boy. I am so sorry you can't come to the party tonight. There won't be any pleasure in it now for me. I'd give the whole thing up if I could, but it's too late. Come to me later. I have a surprise for you. I'll be counting the minutes until I see you. Ever your own, Vanessa."

"Could you believe it!" said Robin.

"No wonder James was upset by our news," remarked the detective; "to learn, if he *is* the killer, that he had killed too soon!"

#### Appendix C

List of brands used in Experiments 1-4.

Participants (23 female,  $^6$  male,  $M_{age} = 18.76$  years) were recruited from the same participant pool used in Experiments 1-4 and were asked to rate the brands along the scale 1 (*dislike*) to 9 (*like*) according to their personal preference. One of the brands labeled as Counterbalance A or B were presented in the narrative and both were presented during the choice task. Brands labeled as Recognition appeared only during the recognition phase.

Category	Brand	Туре	M <sub>Rating</sub>	<b>SD</b> <sub>Rating</sub>
Airlines	British Airways ®	Counterbalance A	5.34	1.72
Airlines	Air Canada ®	Counterbalance B	7.14	1.98
Airlines	American Airlines ®	Recognition	5.34	1.80
Banks	Royal Bank of Canada ®	Counterbalance A	6.52	1.84
Banks	Bank of Montreal ®	Counterbalance B	5.10	2.32
Banks	Toronto-Dominion Bank ®	Recognition	4.76	2.13
Car	BMW ®	Counterbalance A	7.93	1.44
Car	Volvo ®	Counterbalance B	6.45	2.03
Car	Audi ®	Recognition	7.76	1.88
Cell Phone	iPhone ®	Counterbalance A	7.48	1.99
Cell Phone	Blackberry ®	Counterbalance B	7.41	1.78
Cell Phone	Nokia ®	Recognition	4.79	2.51
Cereal Bar	Quaker ® Fruit and Oatmeal	Counterbalance A	5.93	2.34
Cereal Bar	Kellogg's ® Nutri-Grain ®	Counterbalance B	6.21	2.40
Cereal Bar	Nature Valley ®	Recognition	6.69	2.51
Charity	Doctors without Borders ®	Counterbalance A	7.52	1.96
Charity	Red Cross ®	Counterbalance B	7.93	1.16
Charity	Unicef ®	Recognition	7.86	1.71
City	Vancouver	Counterbalance A	7.97	1.15
City	Toronto	Counterbalance B	7.21	1.57
City	Montreal	Recognition	6.86	2.39
Coffee	Nescafe ®	Counterbalance A	5.28	2.84
Coffee	Folgers ®	Counterbalance B	4.59	2.76
Coffee	Nabob ®	Recognition	4.34	2.39
Computer	Acer ®	Counterbalance A	4.62	1.90
Computer	Dell ®	Counterbalance B	5.48	2.46
Computer	Toshiba ®	Recognition	5.69	1.75
Designer Bag	Prada ®	Counterbalance A	6.66	2.39
Designer Bag	Gucci ®	Counterbalance B	6.97	2.18
Designer Bag	Louis Vuitton ®	Recognition	6.90	2.23

# Appendix C – continued

Category	Brand	Type	M <sub>Rating</sub>	<b>SD</b> <sub>Rating</sub>
Dress	Dior ®	Counterbalance A	6.69	2.55
Dress	Chanel ®	Counterbalance B	6.76	2.44
Dress	Versace ®	Recognition	6.90	2.34
Duster	Swiffer ®	Counterbalance A	7.14	2.03
Duster	Pledge ®	Counterbalance B	5.55	2.11
Duster	Rubbermaid ®	Recognition	5.41	1.38
Hammer	Fuller	Counterbalance A	4.34	1.63
Hammer	Estwing ®	Counterbalance B	4.59	1.30
Hammer	Stanley TM	Recognition	5.52	1.74
Hotel	Westin ®	Counterbalance A	4.90	1.47
Hotel	Hilton ®	Counterbalance B	6.31	1.81
Hotel	Sheraton ®	Recognition	5.93	2.07
Lipstick	Smashbox ®	Counterbalance A	4.90	2.69
Lipstick	Mac ®	Counterbalance B	6.90	2.19
Lipstick	Revlon ®	Recognition	5.14	2.46
Men's Jacket	Holt Renfrew ®	Counterbalance A	5.41	1.88
Men's Jacket	J.Crew ®	Counterbalance B	5.17	1.98
Men's Jacket	Moores ®	Recognition	5.52	1.92
Sound System	Yamaha ®	Counterbalance A	6.55	1.74
Sound System	Sony ®	Counterbalance B	7.97	1.48
Sound System	Samsung ®	Recognition	6.76	1.53
TV	RCA ®	Counterbalance A	4.83	1.71
TV	JVC ®	Counterbalance B	5.62	2.04
TV	Sharp ®	Recognition	6.00	1.81
Vodka	Absolut ®	Counterbalance A	5.62	2.98
Vodka	Skyy ®	Counterbalance B	5.17	2.66
Vodka	Grey Goose ®	Recognition	6.24	2.90
Water	Aquafina ®	Counterbalance A	6.31	2.55
Water	Dasani ®	Counterbalance B	6.28	2.67
Water	Evian ®	Recognition	5.97	2.03

#### Appendix D

The specialized recognition instructions, adapted from Higham and Vokey (2004).

For the next phase of the study, you will be presented with a series of phrases. You will be asked to enter two ratings for each phrase. One is a recollection rating and the other is a familiarity rating. Here is some information about each rating.

#### Recollection rating

If the phrase is accompanied by a conscious memory of its prior occurrence in the first phase of the study, then you are recollecting it. "Recollection" is the ability to become consciously aware again of some aspect or aspects of what happened or what was experienced at the time the phrase was presented (e.g., aspects of the presentation of the phrase, or of something that happened in the room, or of what you were thinking or doing at the time). In other words, the "recollected" phrase should bring back to mind a particular association, image, or something more personal from the time of study, or something about its appearance or position (i.e., what came before or after that phrase). One half of the phrases in this phase of the study were presented in the first phase and one half were not

#### Familiarity rating

Sometimes you may know a phrase occurred in the first phase because it provides a feeling of familiarity. This feeling can be thought to occur independently of recollection. A phrase might seem familiar whether or not you recollect anything from the first phase of the study. Likewise, recollection can occur with or without a feeling of familiarity. As stated above, one half of the phrases in this phase were presented in the first phase and one half were not

To clarify the difference between these two ratings, consider the following examples.

#### *High recollection—high familiarity*

If a phrase evokes a feeling of familiarity, and you can recollect something about the phrase's occurrence in the first phase, then you should rate both recollection and familiarity as high.

#### High recollection—low familiarity

For any particular phrase, you might recollect your encounter with the phrase during the first phase, but it does not seem familiar. For example, you might remember coughing when this phrase was presented earlier, but you have no feeling of familiarity associated with this memory. If this is the case, recollection should be rated high but familiarity should be rated low.

## Appendix D – continued

Low recollection—high familiarity

For any particular phrase, you might have a strong feeling of familiarity associated with it, but not recollect anything about your encounter with it in the first phase. If this is the case, recollection should be rated low but familiarity should be rated high.

Low recollection—low familiarity

Phrases that evoke no feeling of familiarity or recollection should be rated low on both recollection and familiarity.

Make the familiarity and recollection ratings for each phrase by entering a number from 1 to 4 where:

1 = definitely no; 2 = probably no; 3 = probably yes; 4 = definitely yes

## Appendix E

Independent Television Commission - Sense of Presence Inventory (ITC-SOPI)

## **Please note:**

The ITC-SOPI has been removed due to copyright restrictions. Please refer to:

Lessiter, J., Freeman, J., Keogh, E., & Davidoff, J.D. (2001). A Cross-Media Presence Questionnaire: The ITC Sense of Presence Inventory. *Presence: Teleoperators and Virtual Environments*, 10(3), 282-297.