

**IMPLICIT MEMORY AND PRODUCT PLACEMENT IN A SHORT  
STORY**

An Undergraduate Research Scholars Thesis

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## **ABSTRACT**

Implicit Memory and Product Placement in a Short Story. (May 2013)

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Product placement is rising in popularity as a marketing technique that allows companies to expose consumers to their brand by inserting their products in media like music, television, and print. This study explores implicit memory for products placed in the medium of print. Participants read a short story in which 20 name-brand products were placed. Then, all participants were presented with both a forced choice-purchasing task, and a semantic comparison task. In the forced choice task, a category name was presented at the top of the screen and two alternative product pictures of the same category type (i.e., two beers) were provided at the bottom where subjects picked the product they would purchase at the store. While in the semantic comparison task, three product pictures were presented and subjects were told that the cue product at the top could be matched to either product on the bottom depending on the verbal dimension cue presented in the center. The order of these test tasks was counterbalanced across participants. The results indicated there was no influence of product placement in the story on performance in the first test task, regardless of whether it was forced choice or semantic comparison. However, when forced choice was second, forced choice decisions were significantly faster on trials that included a product that had been placed in the

story and had then also been seen in the semantic comparison task. It was argued that the sequence of cognitive processes instated by the sequence of tasks in this experiment – namely, processing the individual dimensions of a particular product (as in the semantic comparison task) and then deciding amongst products in a particular category (as in the forced choice task) – duplicates the sequence of cognitive processes in which buyers engage every day. As such, the semantic comparison task may provide a new direction for successful marketing techniques.

# CHAPTER I

## INTRODUCTION

People today are exposed to a variety of entertainment media. Whether it is television, movies, books, or video games, product placement is often seen across the whole range of media outlets. Product placement “is defined as the purposeful incorporation of brands or products into entertainment media” (Russell & Belch, 2005, p.74; Kwon, 2012). The general idea is that product placement is advantageous for the company producing those products because it increases exposure, which in turn could lead to increased recall (and sales) of the product brand (i.e., explicit memory; Schacter, 1987).

Such exposure could also lead to changes in behavior that are not necessarily under the intentional control of the consumer or could lead to behavioral changes of which the consumer is not aware (i.e., implicit memory; Schacter, 1987). This is important when dealing with shopping behavior. Usually consumers do not spend a lot of time trying to recall all the possible dimensions of a product when purchasing it. Rather they rely on quick judgment to make their decision, a decision that is often unconscious and where the possible impact of their previous exposure to advertisements can be seen (Shapiro & Krishnan, 2001).

Product placement is more commonly used in the popular media of television and movies due to their visibility to the consumer. However, product placement also takes place in print media. Fay Weldon’s “The Bulgari Connection” is a well-known novel where product placement was utilized throughout its entirety, as well as incorporating the brand name into the title (Nelson,

2004). Along with this novel, the young adult novel “Cathy’s Book” and children’s workbooks like “The Cheerios Counting Book” and “The Hershey’s Milk Chocolate Multiplication Book” are utilized as product placement mediums (Nelson, 2004).

Product placements are used by companies to increase exposure of their brands to consumers, but are they effective? Exposure serves to increase the chances that a brand will be selected in the future (e.g., while shopping) (Nedungadi, 1990). Effectiveness of product placement is often measured through consumer memory (i.e., explicit and implicit memory; e.g., Law & Braun, 2000). When explicit memory tests are used, participants are asked to recall, through a free recall task, the brands/products they saw in the entertainment outlet (i.e., movie, commercial, book). In these kinds of tasks, researchers explicitly ask participants to recall what they saw in the recent past (Law & Braun, 2000).

In film, when product placement’s effectiveness is examined through the use of explicit memory tasks (i.e., free recall), only about 25% of the brands placed in the film were recalled at a higher rate by participants than in the control condition (i.e., participants did not view the film; e.g., Babin & Carder, 1996). Other research that utilized explicit memory tests (i.e., free recall) in measuring the effectiveness of product placement report a low to insignificant effect of product placement on memory (e.g., Karrh, 1994). This evidence shows that the influence of past experiences on memory can be quite variable. Although explicit memory tests are a viable measure of product placement, they capture only certain aspects of past experiences (Law & Braun, 2000).

However, in implicit memory tests participants are given a task in which they are not asked to recall past events. Rather, subjects are simply given a task (i.e., forced choice), asked to perform the task to the best of their ability, and earlier exposure to the test stimuli results in priming, a facilitation in performance (i.e., increased accuracy or faster response times) when compared to the corresponding baseline. Thus, due to the covert nature of implicit memory tests, “it is believed that indirect tests of memory may be more appropriate” measures of product placement (Law & Braun, 2000; Krishnan & Trappey, 1999).

When it comes down to the overall effectiveness of brand placement in print, research shows that it is a source that is worth further exploration (Manzano, 2010). Manzano (2010) used implicit memory tests in three experiments to explore the influence of product placement in a short story. In each of the three experiments, participants read a story that varied centrality of placement (i.e., subtle placement vs. prominent placement).

The first experiment examined whether centrality of placement affected perceptual (i.e., a stem completion task) and conceptual (i.e., a category generation task) priming. The results showed significant priming in both tasks, with slightly more priming occurring in the conceptual test (i.e., category generation task) than in the perceptual test (i.e., stem completion task). The results also showed an effect of centrality of placement in both tasks but, in both cases, this effect was dependent on test awareness.

In the second experiment, participants read the story and were given a forced choice task. In this task, participants were asked to write down the brand that they would prefer of the two brands

(e.g., Miller Lite and Keystone) presented from the same product category (i.e., Beer), mimicking an impulse-buy situation (Manzano, 2010). The results showed that previous exposure did not affect preference choice, regardless of the type of placement in the story.

In the third experiment, participants read the story and were given a shopping list scenario. In this task, participants were presented with a category (e.g., Grocery store items, Electronics stores) and were asked to list the items that they would purchase or the places at which they would shop. Overall, results showed a significant priming effect. However, this pattern was dependent on awareness, with priming emerging only if participants were test aware. There was no effect of centrality of placement.

In Manzano (2010), two of three experiments yielded priming. The experiment described in the present paper was designed to follow up on the second experiment, where no priming effects were found in the forced choice task. One reason for the absence of priming in that experiment could have been that only accuracy was measured. The sensitivity of an impulse-choice task like forced choice is important; measuring response time can increase the sensitivity of the task and possibly capture a priming effect. For this reason, participants in the current experiment were tested individually and both accuracy and response time were measured in the forced choice task.

Another issue that could have contributed to the lack of priming in Manzano's (2010) forced choice experiment was the transition from verbal materials (i.e., the story) to a forced choice task in which pictures of the brand objects were presented (e.g., Weldon & Roediger, 1987). In order to expose participants to pictures before those stimuli were presented in the forced choice task,



another task (i.e., the semantic comparison task) was interjected between the story and the forced choice test. The semantic comparison task introduced product pictures prior to the forced choice task and served as a second exposure to the brand products.

The semantic comparison task was derived from Thompson-Schill's (1997) experiment, where three conditions of a semantic comparison task varying in selection levels (i.e., high selection, low selection) were used. The semantic comparison task used in the present experiment was similar to the high selection condition in Thompson-Schill (1997) where participants were asked to make a comparison between a target word and two probe words on the dimension shown in the previous screen.

In addition, the interjection of the semantic comparison task between the story and the forced choice test served another purpose. When the brand product is presented in the story, it is surrounded by a context that may play a role in masking the embedded product (e.g., Oliphant, 1983) and could interfere with the detection of priming effects in the forced choice test. In the semantic comparison test, the brand product was presented with just two other brand products, thus creating a context that was much more similar to the one participants experienced in the forced choice test, in which only one other product was presented, than the verbal context of the story.

Finally, and most importantly, presenting the semantic comparison task as the first task was meant to serve as a lab analogue for purchasing behavior that occurs in everyday life. Typically, in a real life shopping situation, people identify a need (e.g., alcohol), then examine the many

dimensions (e.g., price, flavor) of the products that can fit that need (e.g., Miller Lite, Keystone), and then compare the products to one another before making a selection. When the first test is the semantic comparison task, it serves to get participants to think about products along a particular dimension (e.g., price) much like they do in everyday life. Then when the participants are given the forced choice task second, they will choose between two products, again mimicking what happens in a real buying situation. For these reasons, it seemed that exposure to both the story and the semantic comparison task would be more likely to produce priming in a forced choice test than exposure to the story alone, as in Manzano (2010).

## CHAPTER II

### METHODS

#### *Participants*

Sixty-four undergraduate students from Texas A&M University participated in this experiment in return for partial course credit. Participants were informed that participation was voluntary and that alternative assignments were available for the course credit. All participants self enrolled through the online experiment sign up system (SONA).

#### *Design*

This experiment used a 2 X 2 X 2 X 2 mixed design. Order (Semantic Comparison first vs. Forced Choice first) was the between-subjects variable. Of the 64 participants, 32 saw the semantic comparison task first and 32 saw the forced choice task first. Task (Forced choice vs. Semantic Comparison), Study (Studied target (i.e., in the story) vs. Non-Studied target (i.e., not in the story)) and Cuing (Target is cued vs. Target is not cued in semantic comparison) served as the within-subjects variables. Study and cueing were stimulus manipulations and were counterbalanced across participants.

#### *Materials*

Some of the materials used in this experiment were derived from Manzano's (2010) second experiment (e.g., product norming data, original short story without products, and some of the specific brand products). Two versions of the same story were used. The only difference between the two versions was the specific brand products that had been placed in the versions. Twenty

products were placed in each story, for a total of 40 critical brand products. Participants read only one of the stories. Subsequently, the brand products in that story served as the studied target brand stimuli in both the forced choice and semantic comparison tests. Brand products from the unread story served as baseline stimuli in the forced choice and semantic comparison tests. Whether a particular participant read story A or story B was counterbalanced across participants.

When creating the trials (i.e., studied, non-studied, filler, and the practice), 66 different product categories (e.g., perfume brand, shoe brand, soap brand, wine brand) were used. All of the brand products had been previously normed by Manzano (2010) and were selected for inclusion using much the same criteria as Manzano (2010) had. That is, items with a low relative frequency (between 5% to 10% production frequency) were selected and served as the stimuli. The two brands used in the forced choice task, chosen from the same product category (e.g., beer brand: Miller Lite, Keystone), were selected with relatively similar production rates in order to decrease ceiling and floor effects as well as to limit the effects of previous exposure differences between the pair of brands.

A total of 255 brand product pictures were used in these trials. Each participant saw 20 pictures that were studied brand products, another 20 that served as the baseline, and 20 that served as filler items. For each of these 60 target brand products, an additional brand product served as the alternative in the forced choice test and two additional brand products served as the cue picture and the alternative brand product in the semantic comparison test. In addition to these, participants saw a total of 6 practice trials (3 in forced choice and 3 in semantic comparison) for

a total of 15 images (2 in each forced choice trial and 3 in each semantic comparison trial). In the forced choice task, each trial had 2 pictures of brands from the same product category (e.g., Beer (verbal cue): Miller Lite, Keystone) that were used. In the semantic comparison task, each trial had 3 pictures of associated brand products from three different product categories (e.g., Ore-Ida Golden Fries (cue product), Ruffles Chips, Gorton's Salmon). (See Figure 1).

The same short story (*Vulnerable Hours* from the book *Up All Night: A Short Story Collection* by David Levithan) was used in this experiment as was used by Manzano (2010). The product brand names were placed throughout the story (20 in each story) in the same places that Manzano (2010) used, as well as in parts of the story where the brands could seamlessly fit (e.g., Story A: "Sarah put on her cover-up, ...and this killer Clinique "Pure Posh" lipstick that gave her lips a sleek lush color," Story B: "Sarah put on her cover-up, lipstick, and some LA Looks "Straight out" hair gel to keep unwanted curls in place").

### *Procedures*

Subjects were told that they would be participating in a two-part experiment in which they first would read a story and complete a comprehension questionnaire, and then move on to the computer portion of the experiment. An average of 22 minutes was given to each participant to read the short story. When they finished, they were given an average of 8 minutes to complete a two-page reading comprehension questionnaire. At the 30-minute mark the participants were told that the second part of the experiment would begin. If they did not complete the comprehension questionnaire, they were given extra time after the second part of the experiment to complete the comprehension questionnaire.

In the second part of the experiment, participants were told that they were going to take a computerized simulation of shopping situations. The experiment construction software, E-Prime 2.0, was used to construct and present the computerized portion of the experiment. Each task began with 2-3 instruction screens that the participant was asked to read, after which the experimenter went over the instructions and the practice trials to clarify any confusion. Each task began with 3 untimed practice trials followed by the 40 “real” experimental trials. The order of the stimuli (i.e., studied, baseline, or filler) in each task was randomly determined for each participant. Once both tasks were completed, the participants were given the two-page awareness questionnaire.

For the forced choice task, participants were given a product category cue (e.g., Beer) and were told to select the item they would purchase at the store by choosing between the two brands provided (e.g., Miller Lite, Keystone), in a manner similar to what might occur in an impulse buy scenario (see Appendix A). Their response was considered correct if they picked the target product (i.e., studied or non-studied targets).

In the real trials in the forced choice task, each trial started with a 150ms blank screen. Then the product category was shown at the top of the screen for 2s. While the product category remained on the screen, two pictures of brand products (e.g., target brand and alternative brand) appeared at the bottom of the screen for 3s or until the participant made a response (i.e., selecting “D” for the product on the left or “L” for the product on the right). Once the trial ended, a 250ms blank screen was presented and the next trial began.

Participants saw 40 real trials: 20 product brands from the story (and from semantic comparison, if forced choice was second), 10 non-studied product brands from the other story version, and 10 filler product brands. The 20 non-studied items were never seen in both test tasks.

In the semantic comparison task, participants were told that the cue product picture at the top could match either of the two product pictures on the bottom, depending on the specific cue dimension displayed. Participants were told to think about the possible relationships between the three items in order to correctly choose which of the two bottom items (e.g., Ruffles Chips, Gorton's Salmon) matched the cue item (e.g., Ore-Ida Fries) on the cue dimension (e.g., Food Group or Grocery Department) that was provided in the center of the three-product display (see Appendix A). Their response was considered correct if they picked the cued item, regardless of whether it was the studied brand product or not.

In the real trials in the semantic comparison task, each trial started with a 150ms blank screen and then the three product images (e.g., cue product, target product, and alternative product) appeared for 3s. After the 3 s expired, while the three product images remained on the screen, a verbal cue dimension appeared in the center for 3s or until the participant made a response (i.e., selecting "D" for the product on the left or "L" for the product on the right). Once the trial ended, a 250ms blank screen was presented and the next trial began. Participants again saw 40 real trials: 20 product brands from the story (and from forced choice, if semantic comparison was second), 10 non-studied product brands from the other story version, and 10 filler product brands. Again, the 20 non-studied items were never seen in both test tasks.

Regardless of the test task, an equal number of targets (whether studied or not) were presented on the left and right sides of the screen. In addition, the side of the screen on which the target – whether studied or unstudied – was presented was counterbalanced across participants. This was also true of the filler items. Also, whether the target appeared on the same side or not across the two tasks was also counterbalanced across participants. Finally, after the participant completed the computerized part of the experiment, they were given the awareness questionnaire (see Appendix B).



## CHAPTER III

### RESULTS

When analyzing performance in the forced choice and semantic comparison tasks, accuracy priming was calculated by subtracting the proportion of correct responses in the baseline from the proportion of correct responses in the studied condition (i.e., studied proportion correct – baseline proportion correct = accuracy priming). For response time priming, mean response time for trials in the studied condition was subtracted from mean response time in the baseline condition (i.e., mean baseline RT – mean studied RT = response time priming).

When the forced choice task was second, the difference ( $M= 88\text{ms}$ ) between response time to products presented in both the story and in semantic comparison ( $M= 1211$ ) and response time to products that were not studied ( $M=1299$ ) was significant,  $t(31)= 4.147$ ,  $p<.001$  (see Table 1).

When examining just those trials in which participants picked the target product (i.e., whether studied or baseline), the difference ( $M= 97\text{ms}$ ) between the response time for studied products ( $M=1199$ ) and for non-studied products ( $M=1296$ ) was also significant,  $t(31)=-3.784$ ,  $p< 0.001$  (see Table 1). While accuracy for studied items ( $M= 0.56$ ) was numerically greater than the baseline ( $M= 0.53$ ), this difference ( $M = 0.03$ ) was not significant,  $p= 0.345$  (see Table 1). In contrast, when the forced choice task immediately followed the story (i.e., when it was the first task), the difference ( $M= 11\text{ms}$ ) between response time for studied products ( $M= 1235$ ) and response time for non-studied products ( $M= 1246$ ) was not significant ( $p= 0.68$ ). When forced choice immediately followed the story, accuracy for the studied items ( $M= 0.51$ ) was not

numerically greater than the baseline ( $M= 0.58$ ) and this difference ( $M= -0.08$ ), though marginal, was not significant,  $p= 0.053$ .

Given the significant priming effect in the forced choice task when it was second, the influence of the semantic comparison as the first test task was examined to determine if the specific kind of exposure that products received in the semantic comparison task had an influence on forced choice performance in the second test task.

First, the forced choice performance as a function of cueing (i.e., target was cued vs. target was not cued in the semantic comparison task) was examined. When the forced choice task was the second test task, the difference between response time for studied targets when they were cued ( $M=1208$ ) in the semantic comparison task and when they were not cued ( $M=1215$ ) in the semantic comparison task was not significant ( $p > 0.5$ ). The difference between forced choice accuracy when the studied target was cued ( $M=0.55$ ) in the semantic comparison task and when the studied target was not cued ( $M=0.57$ ) in the semantic comparison task also was not significant ( $p > 0.5$ ). This general pattern held whether forced choice performance was examined as a function of only those items that had been correctly responded to in both the cued and the not cued conditions in the semantic comparison task, or whether forced choice performance was examined as a function of whether a target had been previously selected, correctly or incorrectly, in the semantic comparison task (all  $p$ 's  $> 0.5$ ). This pattern of results was also true when looking at only those forced choice trials where a studied target was chosen (i.e., "correct" forced choice responses) as a function semantic comparison performance, (all  $p$ 's  $> 0.5$ ).

Table 1: Forced Choice Results when it was the second task

	<b>Studied</b>	<b>Baseline</b>	<b>Priming</b>
<b>Accuracy</b>	0.56	0.53	0.03
<b>Response Time</b>	1211	1299	88*
<b>Response Time for Correct Only</b>	1199	1296	97*

\* $p < 0.05$ ,

In the semantic comparison task, there were no accuracy priming effects when semantic comparison was first or second, (both  $p$ 's  $> 0.5$ ). When accuracy priming in the semantic comparison task was examined as a function of cuing, again there were no significant effects whether the target was cued or not cued, when semantic comparison was either first or second, (all  $p$ 's  $> 0.3$ ). This pattern of effects also held true for response time priming in the semantic comparison test, with one exception. When the semantic comparison task was second and the targets were not cued, response time in the studied condition ( $M = 1473\text{ms}$ ) was significantly faster than response time in the baseline condition ( $M = 1568\text{ms}$ ),  $t(31) = -2.22$ ,  $p = 0.034$ . When the influence of the forced choice test as the first test task was examined to determine if the specific kind of exposure that products received in that task (i.e., selected as the product the participant would purchase vs. not selected as the product the participant would purchase), again no specific contingency effects on semantic comparison performance were found.

Level of awareness was determined by coding the awareness questionnaires in a manner that allowed for a numerical representation of subject's response, so that an awareness score could be calculated. When the subject's response to each question showed no awareness, they were given

a 0 or 1 depending on the question. When subject's response showed that they were aware but not intentionally retrieving, they were given a 2 or a 3 depending on the question. Lastly, when the subject showed that they were intentionally retrieving (e.g., ability to give product examples as well as correctly identify the task as a memory test that used repeating products in both tasks), they were given a 4 on that question. Awareness scores were calculated by adding up all the points configured from coding the awareness questionnaire. Scores could range from a low of 6 points to a high of 23 points. Subjects with an awareness score in the bottom tertile were classified as unaware, subject with an awareness score in the middle tertile were classified as aware, and subjects with an awareness score in the top tertile were classified as intentionally retrieving.

Finally, correlational analyses were undertaken to investigate the relationship between test awareness and priming in the forced choice and semantic comparison tasks. There were no significant correlations between test awareness and forced choice performance. In contrast, there was one significant correlation between test awareness and semantic comparison performance. A series of correlational analyses pointed to the same condition as that in which the significant RT priming effect in the semantic comparison task had been observed, namely when the semantic comparison test was second and the targets were not cued. In this condition,  $r = -0.367$  ( $n = 32$ ) for the relationship between test awareness and priming. When only trials where the response was correct (i.e., the target item was not cued and it was not selected) were examined, this correlation increased to  $-0.538$ . When awareness categories were created, priming was +191 for the least aware participants ( $n = 7$ ), +76 for aware participants ( $n = 11$ ), and -80 for the most

aware participants ( $n = 14$ ). This pattern of effects revealed that, as participants became more aware, they found it increasingly difficult to correctly reject a non-cued studied target.

### *Summary of Results*

Response time priming was observed in the forced choice task when it was preceded by the semantic comparison task. In addition, a priming effect was observed in the semantic comparison test when it was preceded by the forced choice test, but this was only in the non-cued condition, and the effect was heavily dependent on test awareness.

## CHAPTER IV

### CONCLUSION

In this experiment, the effects of product placement in a short story were explored using implicit memory tests (i.e., forced choice, semantic comparison). Specifically, this experiment focused on measuring priming effects in forced choice when it was the second test task. The main goal was to construct conditions under which priming would occur in forced choice, after priming had not been observed in the forced choice task in Manzano's (2010) second experiment.

When semantic comparison preceded forced choice (i.e., forced choice was the second test task), it served to ease the transition from verbal material in the story to picture stimuli in the forced choice test by exposing participants to pictures of the brand products. It was hoped that the semantic comparison task would also serve to decrease context effects in the story by presenting the brand products in relative isolation outside the story prior to the forced choice task. Most importantly, when the semantic comparison task was presented prior to forced choice, the sequence of tasks was intended to serve as a laboratory analogy for the way people purchase products in everyday life. Typically, in a real life purchasing situation, people first identify a particular need (e.g., Beer), then process the different dimensions (e.g., size, color) of the products that satisfy that need (e.g., Miller Lite, Keystone), and then compare the products to others that fit that need before making a selection.

Indeed, the results of the present experiment showed that the combination of story and semantic comparison task produced a priming effect in the forced choice purchasing task. Forced choice

priming was only found for response time but not for accuracy. Response time in the forced choice task (when it was the second test task) was faster on trials that included a target brand product that had been previously presented in both the story and the semantic comparison task (than on trials that included a target brand product to which the participant had not been previously exposed), regardless of whether it was the brand product that was selected. In comparison, priming was not observed in the forced choice purchasing task when it was preceded only by the story, replicating the absence of priming under those circumstances observed by Manzano (2010).

This clearly indicated that the presence of the semantic comparison task was necessary for priming in the forced choice task. However, it is unclear if both the story and the semantic comparison task were necessary for priming in the forced choice task. Future experiments should have a condition where only the semantic comparison task precedes the forced choice task in order to determine whether both are necessary. This would allow for a clearer picture to emerge of the cause of priming in the forced choice purchasing task in the present experiment. In addition, although it is possible that the semantic comparison task was critical for the observation of forced choice priming because it specifically asked participants to contemplate individual dimensions of the brand products, future research will be necessary to determine whether this was indeed the case. Such research would compare conditions in which semantic comparison precedes forced choice with conditions in which other types of tasks that do not require the consideration of individual dimensions of the brand products precede forced choice.

The influence of forced choice on the semantic comparison task was much more circumscribed. Priming was observed only when the target brand products were not cued. That is, response time was faster on trials in which a studied target brand product was present, but the alternative brand product was cued (and was the correct response), than on trials in which an unstudied target brand product was present and the alternative product was cued. Interestingly, this condition was also the locus of the most prominent relationship between awareness and priming in the present experiment. When awareness was taken into account, levels of awareness did not significantly influence the forced choice. However, in semantic comparison trials where the target brand product was not cued and the alternative was correctly chosen, there was a very large inverse relationship between response time priming and level of awareness: as participants reported more awareness, they found it more difficult to reject the studied target when the alternative was cued (and was the correct response). To our knowledge, this is the first reported association in the scientific literature between awareness and priming in the semantic comparison task.

Unlike the evidence observed by Manzano (2010), in which exposure in the story affected the stem completion and category generation tasks, we found no influence from the story alone on the semantic comparison or the forced choice. This finding brings forth the question, what aspects of these tasks (i.e., stem completion and category generation) allow for priming to emerge from product placement in a story? Future research will examine this question by replicating the Manzano (2010) experiment with a modified baseline (i.e., across participants) as well as further examining the aspects of the semantic comparison task (i.e., dimensions) that facilitated priming in the forced choice task. Regardless, it appears that semantic comparison types of techniques, if used in advertising media, could greatly influence purchasing behavior.



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## APPENDIX A

### *Sample of a Semantic Comparison Trial*



Food  
Group

\*Alternative dimension cue is “Grocery Department”

### *Sample of a Forced Choice Trial*

Beer



## APPENDIX B

### *Awareness Questionnaire*

1. What do you think was the purpose of the last two tasks you completed? The last two tasks you did were (1) a comparison task, in which you matched one of two products with a third product, and (2) a purchasing task, in which you chose to purchase one of two products.
  
2. What was your general strategy in trying to make decisions in these two tasks?
  
3. While you were doing either of these tasks, did you notice any relationship between the brands that were presented in the story, the brands in the comparison task, and the brands that were presented in the purchasing task?
  
4. If you noticed a relationship between the brands in the story, the brands in the comparison task, and/or the brands in the purchasing task, what was that relationship and in which of the tasks did you notice it?
  
5. Did you notice that brands in the story, the brands in the comparison task, and/or the brands in the purchasing task were the same across any of these tasks?
  
6. If you noticed that brands were repeating across the story, the comparison task, and/or the purchasing task, did you intentionally choose the brands that were being repeated or did you continue to try to do your best?
  
7. If you noticed the brands were repeating or you intentionally chose the repeating brands, did this occur in the comparison task or the purchasing task?
  
8. If you noticed the brands were repeating or you intentionally chose the repeating brands, did you become aware of this when a particular brand was being displayed? If so what was that brand?