The Effectiveness of Narrative Transportation Varies by Product Type and Gender

By

Junwen Su

* * * * * * * * *

Submitted in partial fulfillment
of the requirements for
Honors in the Department of Psychology

Union College
June, 2017

Abstract

SU, JUNWEN Social psychology: A study of narrative transportation in commercial setting. Department of Psychology, June 2017.

ADVISOR: GEORGE BIZER

Previous studies had explored that narrative transportation increases affectivity and decreases cognitive responses. Specifically in the context of advertisement, narrative transportation was found to increase product and brand evaluation, and therefore was considered as an effective promotional strategy for marketers. In the current study, we examined the direct impacts of narrative advertisement on people's positive affectivity, critical thinking ability and brand evaluation and how the impacts differed between females and males and also between people assigned to read ad of spontaneous product and deliberative product. Participants were randomly assigned to read one of four types of radio transcript: narrative spontaneous product ad, narrative deliberative product ad, fact-based spontaneous product ad, and fact-based deliberative product ad, and were then asked to complete questionnaires measuring their positive affect, critical thinking ability and brand evaluation. Participants yielded significantly less critical thinking ability and higher brand evaluation when reading narrative ad, regardless of product type and gender. The trend of the results illustrated a directions that only participants assigned to read spontaneous product ad yielded a a higher brand evaluation in narrative ad condition than in fact based ad condition, meaning the effect of narrative transportation on brand evaluation might be intensified by spontaneous product. Moreover, when viewing narrative ad, females generated lower critical thinking ability than did males; however, this pattern was not seen in fact-based ad condition. Therefore, the gender difference on cognitive responses only appeared among people assigned to read narrative ad. Narrative transportation was therefore found as an effective strategy, especially for advertising spontaneous products or products aimed at female consumers.

The Effectiveness of Narrative Transportation Varies by Product Type and Gender

When you are watching a video on YouTube and an advertisement appears, will you click the button “skip” on the lower right hand corner? Is there any chance you will wait until the video finishes? To be honest, I will not watch the advertisement unless I am interested by a particular story it is relating. People may have experienced entering a fictional world where they emotionally identify with the characters, especially when reading a story. This generally occurs in all settings involving story-telling style communications, including books, radios, videos, films, etc.

If you visit the YouTube page of Coca Cola, you have the opportunity to watch hundreds of video advertisements, with each one relating a story in which a bottle of coke helps to strengthen a relationship. Why do all marketers believe that making consumers lose themselves in a narrative world facilitates the sales of their product? Previous research has already discovered the answer: narrative transportation. This paper will conduct an investigation into how narrative transportation acts as an effective mechanism to positively influence consumers in purchasing a product.

Narrative Transportation

The concept of narrative transportation theory was first introduced by Richard Gerrig (1993) within the context of a novel. The theory describes a phenomenon that people will forget about reality in a psychological sense since they are distracted by a story; therefore; the changes in their mental states will have a persuasive effect on people’s behaviors and their reflection of the narrative (Green & Brock, 2002). The state of being transported into a story will make the world of origin partially inaccessible. The separation of the world of origin and the world of story ultimately allows an individual’s engrossment in the story (Green& Brock, 2000).

The story can either be fictional or non-fictional, as long as it contains imagery, a plot, and characters (Green, 2004; Green, 2006; Slater & Rouner, 2002). Verisimilitude refers to the degree in which the story is similar to real-life experiences, and is identified to be the key factor in

determining the likelihood the receivers suspend reality; for example, the higher the level of verisimilitude, the more likely it is that people will become transported into the fictional narrative (Bal, Butterman, and Baker, 2011; Green, 2004).

A plot resembling real-life experiences would provoke imagery, while receivers would take the evoked scene and relate it to their own experiences, thereby becoming engrossed in the story (Green &Brock, 2002). A character will assist receivers in their identification with the story as a result of the empathy induced by the character's beliefs and emotions that make the receivers feel as though the characters are experiencing real feelings (Slater & Rouner, 2002). For commercial purposes, a character would allow the receivers to become more immersed in a particular scene since a character can make the product appear more trustworthy in a relatively untrustworthy setting (Escalas, Moore & Britton, 2004).

Previous research has investigated that narrative transportation results in narrative persuasion, while the effects of such persuasive marketing techniques are strong and long-lasting (Green, Garst & Brock, 2004). Unlike analytical persuasion in which message receivers carefully consider the relevant consequences in regards to money, time or any other type of resource (referred to as the investment) based on their beliefs, narrative persuasion usually does not involve such an investment of resources (Escalas, 2007; Slater & Rouner, 2002). Therefore, while processing narrative persuasive messages, story receivers can generate attitudes or change the intended meaning without carefully evaluating the advertisement (Green, 2004, 2008).

In addition, the narrative messages are generally not overtly persuasive; the characteristics of narrative transportation place more emphasis on being unintentionally affective than intentionally cognitive (Green, 2008). Thereby, even after their behaviors have been affected, story receivers may not have been aware that the story's aim was to persuade them to make a purchase (Escalas, 2007). This is fundamentally why previous researchers believe that narrative transportation has a strong

and enduring impact on receivers and why it is therefore utilized as an effective method to convey messages.

Consequences of Narrative Transportation in a Commercial Setting

Previous research has investigated the persuasive effect of narrative transportation in commercial settings, or more specifically, in advertising. They have identified that changes in affective and cognitive responses, beliefs, attitudes and intentions are the potential consequences of displaying narrative transportation in advertisements (Holbrook and Batra, 1987; Green &Brock, 2000; Escalas, 2004; Schlosser, 2003).

Affective response. Stories always aim to elicit emotions and feelings in the receivers. Emotions and feelings can be summarized by affect, which describes the mental state that partially influences how people interact with others and with their surroundings. Holbrook and Batra (1987) examined 60 adult female participants' ratings of the advertising content, including their emotional responses and attitudes toward the advertisement and the brand of 72 narrative television commercials, which included the entire spectrum of emotions which are likely to appear on prime-time television, with each participant randomly assigned 6 commercials to rate. The researchers found that there was no significant correlation between the advertisement content and participants' attitudes toward the advertisement and the brand; however, it was found that there was a significant correlation between emotions and the advertisement content and participants' attitudes; for example, participants who had a greater emotional response to the advertisement would give a higher rating and tended to have a more positive attitude toward the advertised brand. They conducted path analysis for advertisement content, emotion and attitudes, while the path coefficients suggest that emotions mediated the effect of advertising content on attitudes.

Morris et al. (2002) conducted a study on 23,168 participants and asked them to evaluate 240 printed narrative advertisements in 13 product categories. The participants were required to

complete a survey which asked them to describe their affective attitude, cognitive attitude, purchase intent, intent to visit the story and change in brand interests. The researchers carried out an analysis in which they compared the coefficients of the direct path from cognitive to affective attitude, cognitive to conative attitude, affective to conative attitude and the indirect path from cognitive to conative via mediation of affective attitude. The results suggested that the affect-conative path yielded the higher path coefficient than other paths; therefore, affect had the strongest impact on an individual's intention to purchase a product. Hence, affect was identified as the mediator of attitudes and predictors of intentions in advertising and is therefore referred to as one of the most powerful factors for determining whether or not an advertisement is effective in delivering its message.

Narrative transportation influences affective responses generated by story receivers; for example, the greater the level of transportation evoked by the story, the more intense the affective responses which are produced (Escalas, 2004). Lamar and Landreville (2009) investigated the correlation between the level of being transported and the intensity of affective responses within the context of film where they discovered that people who are more immersed in the story become more emotionally connected to the story's plot which results in producing more intense affective responses in reflection of their beliefs and imagery relating to the plot. Similar to past research conducted on films, Escalas et al. (2004) found a similar pattern of association in advertising. The term "hook", which refers to being transported into a story, is widely used while narrative transportation is also discussed. Escalas et al. (2004) asked forty-eight undergraduate students to review ten TV narrative advertisements selected from thirty-eight television ads from winning collections. The ten advertisements were selected from thirty-eight television ads based on the degree of narrative structure for covering a variety types of narrative advertisements in the market. Participants were asked to watch all of the ten ads in a theater-style classroom and then report the level at which they were hooked, as well as affect intensity and whether the advertisement had inspired any positive feelings or an optimistic outlook. The results suggested that "being hooked" is

positively correlated with affect intensity, feeling upbeat and developing optimistic feelings and attitudes, such that people reported a higher level of “being hooked”; furthermore, they also reported how the advertisement intensely affected them in that they developed positive attitudes toward the story being related. Escalas et al. (2004) thereby concluded that the level of immersion in a story correlates with affective responses and attitudes toward the advertisement.

Moreover, previous researchers highlighted that people’s affective responses and attitudes will change in narrative transportation since a narrative evokes empathy. Escalas and Stern (2003) investigated consumers’ sympathy and empathy responses, as well as their attitude changes toward the brand. Participants were first asked to complete a questionnaire measuring their attitudes toward the brands that would be shown in the advertisement they were about to watch prior to them actually watching the commercials. Following this, the researchers asked half of the participants to view 8 classical drama TV commercials while the other half viewed vignette drama TV commercials before being asked to report their degree of sympathy, empathy and their attitudes toward the brands. Classical drama commercials included a normal story plot and characters while vignette drama commercials included rapid jumps from unrelated characters and story plots and was therefore less likely to evoke any emotion in the respondents. The manipulation check illustrated that the participants who watched the classical drama commercials became more immersed in the story compared to those watching vignette drama advertisements. The results suggest that the participants watching classical dramas felt more sympathetic toward the story and characters as well as feeling more empathy and undergoing more changes on brand attitudes than the participants who watched vignette dramas. The researchers then conducted a LISREL mediation test to infer that in both types of advertisement, levels of sympathy and affect attitudes change through the mediation of empathy. Therefore, people will empathize more with the story conveyed in the advertisement during narrative transportation as well as developing a more positive attitude toward the brand.

Escalas and Stern (2003) therefore concluded that sympathy and empathy, which they referred to as emotional responses, will increase correspondently with the degree in which people are immersed.

According to previous research conducted on the association between affective responses and narrative transportation, individuals' affective responses will be significantly increased if they are narratively transported into a story; therefore, this will influence their intention to make a purchase as well as their and attitudes toward the commercial and the advertised brand. The effect of narrative transportation on emotional response correlates with the degree of "being hooked" and is dependent on how much sympathy and empathy are evoked by the commercial.

Cognitive response. Self-referencing, which occurs when people refer to or relate any incoming information to their existing memories, is conceptualized as one type of cognitive response (Debevec & Romero, 1992). Escalas (2007) suggest that narrative persuasion and analytical persuasion both affect people through facilitating self-referencing although via a different path. Participants were asked to read three types of color print advertisement: no self-referencing, analytical self-referencing, and narrative self-referencing. Within each type of advertisement, the argument will be either strong or weak. Then participants were then asked to complete a series of questions in which they had to relate their thoughts about the advertisement; their responses were later coded by experimenters to analyze the self-referencing path; furthermore, the participants were asked to fill out a feeling scale, as well as scales measuring their brand attitudes, purchase intentions and level at of transportation. The results suggest that narrative self-referencing will not be moderated by argument strength while analytical self-referencing will due to the fact that self-referencing is recorded as being higher in participants reading advertisements containing a strong argument compared to participants reading an advertisement that related a weak argument. Through decoding all of the thoughts each participant listed, Escalas inferred that in relation to narrative processing, self-referencing served as a distraction from evaluation of the advertisement's argument

and therefore resulted in enhanced brand evaluation, regardless of argument strength. However, in analytical processing, self-referencing increased the elaborated analysis of an advertisement's argument; therefore, a strong argument was more persuasive and resulted in higher brand evaluation. In conclusion, Escalas suggests that narrative transportation enhances the interpretation and intake of incoming information by distracting people from analyzing the advertisement's argument and therefore facilitates in persuading them to make a purchase.

Narrative transportation can provoke two types of cognitive responses: critical thoughts and narrative thoughts. Previous research has supported the notion that narrative transportation reduces critical thoughts, even when the plot and the behavior of characters are inconsistent with the receivers' existing beliefs (Green & Brock, 2000). Green and Brock (2002) asked participants to read either a fictional version or a nonfictional version of a nine-page text about a murder at a shopping mall. Participants were then asked to complete a series of surveys which measured their story-specific beliefs, thoughts about the story, evaluations of the character, the level of reality monitoring, and whether those who read the fictional version were immersed in the story. The results suggest that the participants which were significantly immersed in the story exhibited beliefs which were more consistent with the story's conclusion; therefore, the participants who read the fictional version generated more consonant beliefs in comparison to the participants who read the nonfiction version of the story. In the second part of their experiment, Green and Brock (2000) assigned a different group of participants to read the same fictional or nonfictional texts about the murder; however, this time they provided the participants with a list of false notes which were described as facts which had been stated in the story they just read although they actually contradicted the facts in the real world or made absolutely no sense. Participants were asked to rate which of the false notes were correct and were also asked to complete the same series of questionnaires as the participants in the first experiment. The results suggest that narrative transportation has a negative effect on the participant's ability to identify the mistakes and logical

flaws in the story; the participants who were more fully immersed in the story identified fewer incorrect notes than the participants who were less immersed. Therefore, Green and Brock suggest that in regards to narrative transportation, people develop beliefs that are more consistent with the statements in the story and will therefore be less able to identify the mistakes or logical flaws in the story.

In support of this claim, Chang (2009) explored the consumers' ability to evaluate the strength of an argument while reading a narrative advertisement. Participants were randomly assigned to read either a narrative magazine article about family relationships or a facts-based magazine article explaining why water is good for our health; in addition, they were also asked to read an advertisement for contact lenses that either contained a strong or weak argument. Following this, participants were asked to complete a series of tests measuring their level of immersion, as well as whether the advertisement had evoked empathy, the amount of cognitive responses, and the number of thoughts related to the article and the advertisement, ability to evaluate the argument strength and their attitudes toward the ad and the brand. The results suggest that participants who read a fictional article generated more cognitive responses, more thoughts relating to the advertisement and developed a more positive attitude toward the brand in their evaluation; however, they also exhibited a lower ability to evaluate the argument strength in comparison to those who read a nonfictional article. Therefore, Chang (2009) inferred that reading narrative advertisements will enable people to develop more cognitive responses related to the advertisement, although it will reduce people's ability to evaluate the strength and weakness of the argument presented in the advertisement.

Peracchio and Meyers-Levy (1997) created a resource matching mechanism in an attempt to explain why more cognitive responses did not result in increased critical thinking ability to evaluate the advertisement. Participants were randomly assigned to read either a narrative or factual

advertisement; within each type of advertisement, participants were randomly assigned to read either an advertisement with text and pictures on a separate page or an advertisement that contained both text and pictures on the same page. The primary objective for having the four types of layout was that the factual advertisement on an integrated page (low) required the lowest processing resources, whereas the narrative advertisement on the separate pages (high) required the most processing resources, with a factual advertisement on separate pages (moderate) requiring an equal amount of attention. Next, the participants were asked to evaluate the product, list all thoughts that they have about the product and recall the messages contained in the advertisement; in addition, they asked to report whether they were interested in the product and the brand being advertised. Peracchio and Meyers-Levy (1997) then asked each participant to complete a secondary task in which they had to conduct a fact analysis, which also required cognitive processing resources. The time it took each participant to complete this task was recorded. The results suggest that cognitive capability to process information had an effect on the following cognitive activities; the participants that read the advertisement which required a lower cognitive ability took significantly less time to complete the fact analysis task in comparison to the participants who had read the more intellectually challenging advertisements. Therefore, Peracchio and Meyers-Levy (1997) determined that processing a narrative required a significant amount of capability and would therefore leave limited space for further processing and analyzing of information.

Interplay between Affect and Cognitive Responses. The affect and cognitive responses become dominant in information processing in different situations. When the processing resources are limited, the affect responses would have a larger impact on consumer's purchase choice; however, when the processing resources are abundant, cognitive responses dominate (Shiv & Fedorikhin, 1999). Shiv & Fedorikhin (1999) conducted a study on 165 undergraduate participants. The participants were first randomly assigned to complete either an easy or hard memorizing task, and then were randomly assigned to make a choice between a free fruit salad and a free chocolate

cake after seeing either a photographic salad or cake or were shown an actual salad or cake. When shown the photographic and actual version of the same products, the participants exhibited varying reactions of intensity. The fruit salad was an alternative which was either an inferior on affective dimension although superior in relation to cognitive dimension, whereas the chocolate cake was an alternative that is superior on affective dimension but inferior on cognitive dimension. Regardless of the presentation mode (either photographic or real), the level of processing resources allocated to the task influenced participants' choices. The participants which were assigned an easy memorizing task, which took up less processing resources, were more likely to choose the fruit salad, whereas the participants assigned a difficult memorizing task, which took up more resources, were more likely to choose chocolate cake. They concluded that, when the processing resources are limited, people are more likely to follow their affective responses and therefore generate consistent beliefs, attitudes and behavioral intentions.

Therefore, following the concept that a narrative story takes up a large space in terms of cognition, as narrative thoughts tend to require more cognitive space, affective responses become dominant over cognitive responses and therefore reduce logical thinking.

Attitude, Product Evaluation and Brand Evaluation

Attitude refers to a global and long-lasting evaluation of a person and is usually based on affect, cognition, and behaviors. As was previously mentioned, brand evaluation increases along with an increase in affective responses while it has a negative impact on logical thinking ability which consequently influences their understanding of the story (Escalas et al., 2004; Escalas &Stern, 2003; Escalas, 2007; Chang, 2009). No previous research has been conducted to investigate whether changes on affective and cognitive responses mediate the effect of narrative transportation on brand evaluations. However, Escalas (2004) directly measured how attitudes toward an advertisement and brand differ in participants reading narrative and fact-based advertisements.

Participants were randomly assigned to read either a narrative advertisement or a fact-based advertisement of a pair of running shoes and were subsequently asked to rate their overall positivity, their attitude toward the print advertisement, their attitude toward the brand, and whether they were immersed or not. The results suggest that the participants reading the narrative advertisement developed a more positive attitude toward the advertisement and the brand in comparison to the participants reading the fact-based ad. Their attitudes toward the advertisement and toward the brand were highly correlated in participants reading narrative and fact-based advertisements. Therefore, in regards to narrative transportation, people will develop more positive attitudes toward the advertisement and the brand, although the cause of such effects remain unclear.

Escalas (2004) explored the self-brand connection, which refers to the connection people build in order to create and represent desired self-images using products or brands, and how this connection affects consumers' attitudes toward the brand. Participants were asked to view a power point presentation of a storyboard of either a narrative advertisement or a vignette advertisement, which was found to induce less emotional responses than the narrative advertisement shown in the previous study; the participants were then asked to complete a questionnaire in which they had to rate their self-brand connection, as well as their attitudes toward the product and the brand. In addition, they had to relate their actual purchasing intentions. The results suggest that the participants who viewed the narrative advertisements developed higher self-brand connections and attitudes toward the advertisement and the brand. Therefore, the researcher concluded that narrative processing enhances self-brand connections since the participants will relate narrative information to existing memories and will therefore create a link between the brand described in a story and the story receivers' personal experience. Escalas (2004) therefore concluded that narrative transportation allows the incorporation of the brand onto memory, while this connection enhances the consumers' brand evaluation.

Product Type

Purchasing behaviors are usually categorized into impulsive buying and considered buying. An impulse purchase takes place when consumers experience a strong and sudden urge to purchase an item that will not immediately complete a specific task; they make the purchase without any further consideration or evaluation of the product (Beatty & Ferrell, 1998; Cobb & Hoyer, 1986). A considered purchase is the reverse, meaning that consumers put a lot of effort in considering and evaluating the quality as well as his or her demand for the product (Cobb & Hoyer, 1986).

Consumers are likely to associate their emotions and feelings with sets of behaviors, while these works to either drive people toward making an impulse purchase or discouraging them from doing so (Rook & Gardner, 1993). Therefore, an increase in positive affect will enhance the urge to purchase impulsively (Beatty & Ferrell, 1998). In support of this claim, Vohs and Faber (2007) explored the effect of suppression of self-regulatory sources, which regulates affective and cognitive responses in the decision-making process, while also facilitating impulse purchases. Participants were asked to write down any thoughts that entered their minds. In controlled conditions, participants had no restrictions and they could write down any thoughts; however, in self-regulatory sources depletion condition, the participants were told to place a check mark on the paper whenever they thought of a white bear. The participants were given $10 as compensation for their participation and were told that they could make the choice whether or not to spend the money at a bookstore. The results suggest that the participants who relied on their self-regulatory sources which were depleted made a greater number of purchases and bought higher value products in comparison to the participants in the controlled condition, thereby illustrating that participants were less likely to resist impulse purchases when lacking the ability to regulate their affective and cognitive responses.

Bellenger et al. (1978) investigated how impulsive purchases vary based on the type of products in an actual retail store environment. They asked 1,600 store consumers to report what

they purchased on that particular day and when they made the decision to purchase each item. Based on the participants' responses, the researchers calculated the percentage of each item that was purchased on impulse without previous consideration. The results showed that certain types of products were more likely to be purchased impulsively by consumers than other types. Bellenger et al. (1978) categorized such types of products as spontaneous products while those that are less likely to be bought impulsively were referred to as deliberative products. Spontaneous products were therefore found to be associated with impulsive purchase intentions, and deliberative products were found to be associated with considered purchase intention.

Gender Differences in Emotion

Females and males have different levels of "affect intensity", meaning that females and males would generate varying intensities of affect in response to factors that can potentially induce an emotional response (Fujita, Diener & Sandvik, 1991). Each participant was asked to self-rate his or her affect intensity prior to completing a mood report for 42 consecutive days which aimed to assess the level of positive and negative emotions they had experienced that day. The researcher decoded the daily mood reports and analyzed the texts in order to rate the affect intensity in males and females. The results suggest that, on average, the emotional intensity experienced by females was 13% more intense than their male counterparts. Fujita et al. (1991) therefore determined that females experienced a much higher level of intense emotion than males; therefore, anything which could have a potentially influential affect would have a stronger impact on females than on males.

McRae et al. (2008) investigated how females and males differ in their emotional regulation of neuronal bases. Participants were instructed to complete 90 trials of cognitive reappraisal tasks, where each trial contains an instructive word in the middle of the screen, a picture (either negative or neutral), a rating period asking "how negative do you feel?" and the word "relax". This task forces participants to use their cognitive emotion regulation strategy in order to regulate their emotion responses to the negative pictures. The researchers used functional magnetic resonance

imaging to analyze the neuronal activity of participants while they were doing those trials. The results suggested that females are less capable of self-regulating emotions through cognitive regulation and are less able to remove existing emotions than males due to the way their prefrontal regions and amygdala function. Therefore, females generate emotions more easily due to their weaker ability to regulate emotions, while their emotional response tends to last longer than males'.

In advertising, females reported more intense and frequent affective responses than males after being exposed to emotional advertisements (Moore, 2007; Simon & Nath, 2004). Moore (2007) asked each participant to watch 6 TV commercials and then to self-report their empathic emotions in response to the advertisements' effectiveness. The results suggest that females produce significantly more empathetic emotions and a higher level of response toward the advertisement than males. Therefore, the researchers concluded that, in the context of the advertisement, gender difference has a similar impact to the general effect of the advertisement.

Hypothesis

Building upon all of the previous research, the identified underlying mechanism of how narrative transportation influences consumers was well explained. Processing narrative information would facilitate consumers in taking up the majority of their cognitive space for creating connections between the world of origin and the world of story, thereby allowing consumers to develop imagery for a story's plot and empathy for the story's characters, which would increase the affective responses in consumers. The potential consequences of narrative transportation include increased affective responses, decreased critical thinking ability, and improved attitudes toward the advertisement, the product, and the brand.

Positive Affect

We first proposed that the narrative transportation would result in increased affective responses. Changes in affective responses are the most primary changes that occurred during narrative transport. The imagery and empathy evoked by the story will allow consumers to become

more engrossed in the story, while previous research has supported the theory that the increase in people's affective response correlates with the extent to which they become narratively transported; moreover, it is dependent on the level of sympathy and empathy which is evoked in response to the story (Escalas, 2004; Escalas & Stern, 2003). Therefore, story-telling advertisements will increase affective responses in participants. Since our advertisements for the two types of products were both positive, we predicted that the participants would develop increasingly positive attitudes while reading the narrative advertisement.

The product type will also influence the changes in affective responses. Previous research has suggested that impulse purchases correlate with affective states in that people tended to exhibit more positive affective states before and after completing an impulse purchase (Gardner & Rook, 1988). Although we did not explore people's purchasing intentions or purchase behavior in this study, the spontaneous product was found to be a representative of impulse purchasing intention, while the deliberative product was found to be a representative of a considered purchase intention (Voh & Faber, 2007). Therefore, in this study, a spontaneous product was substituted for an impulse purchase intention and a deliberative product was substituted for a considered purchase decision. We thereby expected that advertisements for spontaneous products will have a more positive effect on consumers' emotional response.

Gender is another factor that we expected to influence changes in affective responses since females experience more intense emotions than their male counterparts (Fujita, Diener & Sandvik, 1991). In addition, females were found to be less capable of regulating their emotions and reducing the effect of their existing emotions than males therefore, emotions are more easily elicited and last longer in females (McRae et al, 2008). Such gender differences were also discovered within the context of advertisements (Moore, 2007). Therefore, females will generally be more positively influenced than males by advertisements and product type.

H1: Participants reading a narrative advertisement will generate a higher level of positive affect than participants reading fact-based advertisements. Participants reading advertisements for spontaneous products will generate a higher level of positive affect than participants reading advertisements for deliberative product. Female will generate a higher level of positive affect than males.

Critical Thinking Ability

We proposed that narrative transportation would result in reduced critical thinking ability. Previous research has supported the belief that narrative transportation reduces participants' ability to identify and criticize logical flaws in a story (Slater & Rouner, 2002). Although researchers have discovered that narrative advertisements generate more cognitive responses, participants still failed to identify those flaws since narrative processing took more space in their cognitive capability and therefore left limited space for fact analysis (Chang, 2009; Peracchio & Meyers-Levy, 1997). Therefore, we predicted that critical thinking ability of the participants will decrease while processing narrative advertisements.

We also expected that the interplay between affect and cognitive responses would play a significant role in influencing critical thinking ability. Shiv & Fedorikhin (1999) suggest that affect responses will have a larger impact whereas cognitive responses will have a much smaller impact on purchasing behavior due to the fact that processing resources are limited since the entire processing space is finite. Therefore, as narrative information takes up a significant amount of cognitive processing space, affective responses will become dominant in processing thoughts.

Since we already expected the increase in affect will be influenced by product type and gender, we also predicted that a similar pattern of impact would be seen in critical thinking ability. As the increase in positive affect will be greater in female participants who viewed spontaneous product advertisements the affect will take up more space in their thinking process and cognition

will take less space. Therefore, we expected that product type and gender would also influence the level of critical thinking ability yielded by participants.

H2: Participants reading narrative advertisements will generate a lower level of critical thinking ability than participants reading fact based advertisements. Participants reading advertisements for spontaneous products will generate a lower level of critical thinking ability than participants reading advertisements for deliberative product. Females will generate a lower level of critical thinking than their male counterparts.

Brand Evaluation

We proposed that narrative transportation will also influence brand evaluation. According to previous research, narrative transportation will first enhance people's evaluation of the advertisement, which was found to correlate with brand evaluation (Chang, 2009; Gardner, 1985). In addition, narrative transportation will build the self-brand connection through mapping the story plots onto existing memories (Escalas, 2004). Therefore, we expected to see a more positive brand evaluation in participants reading narrative advertisements. We did not expect that product type and gender would influence participants' evaluation of the brand since no previous research has produced evidence for this.

H3: The participants who read narrative advertisements will generate a higher brand evaluation than the participants who read fact-based advertisements.

Advertisement Type x Product Type Interaction

We proposed that the impact of narrative transportation on affective responses, cognitive responses and brand evaluation will depend on product type. Shiv and Fedorikhin (1999) investigated the depletion of the self-regulatory sources, which results in increased affective responses and decreased cognitive responses, including critical thinking ability, which will result in people making more impulse purchases. In this study, we revealed that participants who read

narrative advertisements had the same affective response and critical thinking ability to Shiv and Feforikhin's experiment on depleting self-regulatory sources. Therefore, a narrative advertisement would allow the impulse purchasing intention to become more accessible for participants as they process the information presented on the advertisement. Deliberative products are associated with considered purchase intentions, which requires cognitive responses to process the information; therefore, processing a deliberative product is inconsistent with the changes that narrative transportation has on participants. Since spontaneous products are consistent with the increased preference of impulse purchasing decisions and the increase in affective responses, the decrease in critical thinking ability and the improvements in brand evaluation will be more significant in participants who read advertisements for spontaneous products than those reading deliberative product advertisements.

However, in participants reading fact-based advertisement, there would be no such self-regulatory sources depletion; therefore, participants will show a similar level of preference toward spontaneous and deliberative products, representing impulse and considered purchase intention, respectively. Therefore, there is little difference between affective responses, critical thinking ability and brand evaluation in participants reading advertisements for spontaneous and deliberative products.

> H4: The effect of narrative transportation depends on product type; for example, participants reading a narrative advertisement will yield a large discrepancy on affective responses, critical thinking ability and brand evaluation between spontaneous and deliberative conditions, whereas participants reading fact-based advertisements will yield equivalent affective responses, critical thinking ability and brand evaluation between spontaneous and deliberative products.

Advertisement Type x Gender Interaction

We also proposed that the impact of narrative transportation on affective responses, critical thinking ability and brand evaluation will depend on gender. Females generate more intense emotional responses to anything that could potentially change their emotions in comparison to males (Fujita, Diener & Sandvik, 1991). Specifically, in regards to narrative transportation, females will yield much more empathy, which has been identified as a factor influencing how much affective responses would be produced in previous literature (Moore, 2007; Escalas & Stern, 2003). Therefore, as narrative transportation will induce much more intense emotional responses in females, we expect that females will generate greater affective responses, less critical thinking ability and more improved brand evaluation than males. However, the participants who read fact-based advertisements showed no emotional response and affects; therefore, we predict that there will be no difference in males and females' emotional response when shown fact-based advertisements.

> H5: The effect of narrative transportation depends on gender; for example, participants reading a narrative advertisement will yield a large discrepancy on affective responses, critical thinking ability and brand evaluation between females and males, whereas participants reading a fact-based advertisement will yield equivalent affective responses, critical thinking ability and brand evaluation between females and males.

Gender x Product Type

This research has primarily focused on the impact of narrative transportation; we therefore did not expect any relationship between gender and product type.

Advertisement Type x Product Type x Gender Interaction

We proposed that the interaction of advertisement type and product type will depend on gender. The depletion of self-regulatory sources will elevate the level of affective responses and

diminish cognitive responses (Vohs & Faber, 2007). Due to the fact that there is a greater number of affective responses which require processing, there will be less cognitive space for processing cognitive responses (Shiv & Feforikhin, 1999). The effect of the depletion of self-regulatory resources is therefore exacerbated by the reduced space for cognition. Therefore, affect becomes the key contributor in the interaction of advertisement type and product type. As was previously stated, females will generate much more intense emotional responses to factors that have the potential to induce emotional changes (Fujita, Diener & Sandvik, 1991). Since narrative transportation primarily increases in people, we predict that the gender differences in emotional responses will have a significant impact on the interaction between ad type and product type in all three measures.

H6: The interaction of advertisement type and product type is dependent on gender in that the interaction is stronger in females than in their male counterparts.

Method

Participants

Thirty-two Union College student from a variety of majors participated in this study in exchange for either experimental credits toward the fulfillment of a course requirement or $2 cash payment, with 21 females and 11 males. Ages ranged from 18 to 22.

Material - Independent Variables

Product A pre-survey was conducted to decide what type of product would be used in the current study. The survey was posted on MTurk, and 51 participants participated in for exchange of payment. They were shown a series of 16 products that have similar price, and were asked to indicate how much effort they spend on thinking about and comparing the product when making a choice on a five-point scale anchored by “practically no thoughts or effort” (1) and “a great deal of thought or effort” (5). Their ratings were averaged for each product. The tissue paper had the lowest rating, meaning it’s the most spontaneous product among the 16 items listed, and multivitamin had

the highest rating, meaning it's the most deliberative product among the 16 items listed. The averages were then recoded to a -2 (most spontaneous) to +2 (most deliberative) scale, and the tissue paper and multivitamin had the equal distant from the midpoint. Therefore, tissue paper and multivitamin were chosen as the spontaneous and deliberative product in the current study.

Advertisement Design The advertisement was designed as a transcript of a radio advertisement in form of text of 100 words. Participants were asked to read the transcript very carefully and consider how it would sound like if you heard it on the radio. There were totally four versions of the radio transcript, with two for advertising paper tissue (spontaneous product) and two for advertising multivitamin (deliberative product). For each type of product, one would be narrative advertisement, which telling a story with characters, and another would be fact-based, which listing positive facts of the product. Paper tissue was given a fake brand name as Cirrus, from the word cloud, and multivitamin was given a fake brand name as Longeva, from the word longevity.

Material - Dependent Variables

Positive Affect Participants filled out a PANAS scale measuring their positive affect. The PANAS scale contained 20 words that described different feelings and emotions (Watson, Clark & Tellegen, 1988). Ten of the 20 words referring to positive feelings, and the other ten words referring to negative feelings. An example for positive word could be "excited" (#3), and an example for negative word could be "distressed" (#2). Participants indicated to what extent they feel the same way with the word about the transcript of the video advertisement on a scale ranging from 1 (very slightly or not at all) to 5 (extremely).

Critical Thinking Ability Participants filled out a judgement evaluation scale measuring their critical thinking ability. The scale contained 11 words that described different attributes (Burke & Edell, 1989). Seven of the 11 words refer to positive beliefs, meaning less critical thinking, and the other four words refer to negative beliefs, meaning more critical thinking. An example for positive

word could be “believable” (#1), and an example for negative word could be “phony” (#6). Participants indicated to what extent they they think the 11 words describe the transcript of radio advertisement they just read on a five-point scale anchored by “not at all well” (1) and “extremely well” (5).

Brand Evaluation Participants filled out two scales measuring brand attitude and brand equity, respectively, for measuring brand evaluation. The brand attitude scale contained 5 words describing attitudes toward the brand being advertised in the radio transcript (Spears & Surendra, 2004). The five words all refer to positive attitudes, and an example of the word could be “appealing” (#1). Participants indicated to what extent they think the word describes the brand mentioned in the advertisement they just read on a scale from 1 (not at all well) to 5 (extremely well). The brand equity scale contains four statements describing consumers’ purchase preference between the brand described in the radio transcript and any other random brands (Yoo & Naveen, 2001). All the four statement refer to higher preference of the brand being advertised than other brands, and an example of the statement could be “It makes sense to buy Cirrus/ Longeva instead of any other brand, even if they are the same” (#1). The brand name differs as participants read radio transcript advertising different product (Cirrus for paper tissue and Longeva for multivitamin). Participants indicated to what extent they agree with the statements on a five-point scale anchored by “strongly disagree” (1) and “strongly agree” (5).

Gender At the end of the study, participants were asked to indicate their gender.

Manipulation Check -Narrative Transportation Participants filled out a scale measuring whether they were got transported into the story. The transportation scale contained 11 statements that described the feelings that participants have while reading the advertisement (Green & Brock, 2000). Eight of the 11 statement refer to success narrative transportation into the story, while the other three state reversely. An example of a positive statement could be “While I was reading the narrative, I could easily picture the events in it taking place” (#1), and an example of a negative

statement could be “While I was reading the narrative, activity going on in the room around me was on my mind” (#2). Participants indicated to what extent they agree with the statement on a seven-point scale anchored by “strongly disagree” (1) and “strongly agree” (7).

Manipulation Check-Product Type (Spontaneous vs. Deliberative) Participants were asked to evaluate how much effort they spend on thinking about and comparing the type of product in the advertisement when making a choice on a five-point scale anchored by “practically no thoughts or effort” (1) and “a great deal of thought or effort” (5).

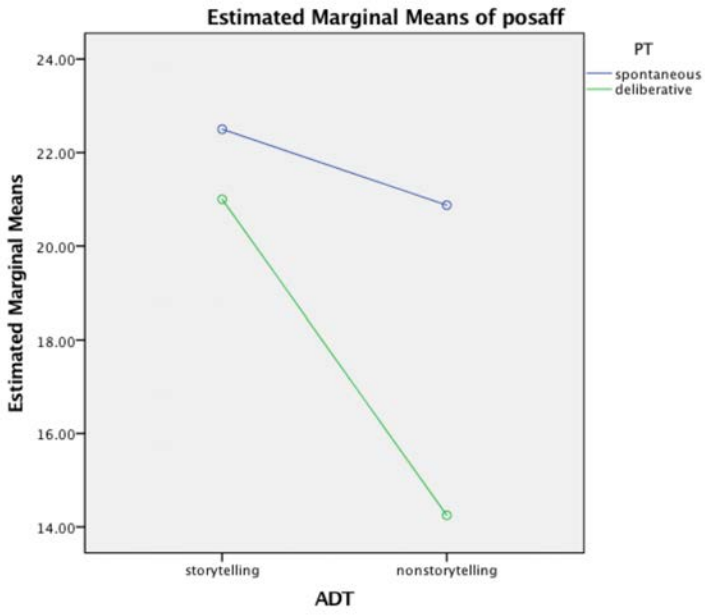
Procedure

This experiment is based on presenting the advertisement and questionnaires on paper. Students participants were first given a study introduction included in the informant consent, and then were asked to read the radio transcription of the advertisement. There are four versions of the advertisement text, manipulating narrative transportation into the story and the product type (see the Appendix). Each participant was randomly assigned to read one of the four versions. After finish reading the ad text, participants were given the series of questionnaire measuring the positive affect, critical thinking ability, brand evaluation, brand equity, demographic information (gender) and checking the effect of manipulation. The study ends with showing the participants a debriefing statement. The entire study takes approximately 15 minutes.

Results

The positive affect scale consisted of 10 items (α = .0.81), the critical thinking ability scale consisted of 11 items (α = .0.84), the brand attitude scale consisted of 5 items (α = 0.92), and the brand equity scale consisted of 4 items (α = .78). The brand attitude scale and the brand equity scale were combined to create the brand evaluation measure, which consisted of a total of 9 items (α = . 88). The sum of each measure of each participant was computed, respectively.

We first assessed whether positive affect was influenced by the advertisement type, product type and gender. There might be an effect of ad type on positive affect, F (1, 28) = 4.107, p = .052, such that participants reading a narrative advertisement (M = 21.75) generated more positive affect than participants reading a fact-based advertisement (M = 17.56). There also might be an effect of product type on positive affect, F (1, 28) = 3.886, p = .059, such that participants reading advertisement of spontaneous product (M =21.69) generated more positive affect than participants reading advertisement of deliberative product (M =17.63). There was no effect of gender on positive affect, F (1, 24) = .29, p = .87, such that males (M = 19.63) and females (M =20.06) generate equal level of positive affect. These effects were not qualified by an advertisement type x gender interaction, F (1, 28) = .004, p = .95, a gender x product type interaction, F (1, 24) = 0.64, p = .43, an advertisement type x gender x product type interaction, F (1, 24) =. 047, p = .83, but might be qualified by an advertisement type x product type interaction, F (1, 28) = 0.23, and might be qualified by a gender x product type interaction, F (1, 28) = 2.624, p = .12. The trend is shown in the figure below.



We then assessed whether critical thinking ability was influenced by the advertisement type, product type and gender. There was an effect of ad type on critical thinking ability, F (1, 28) =

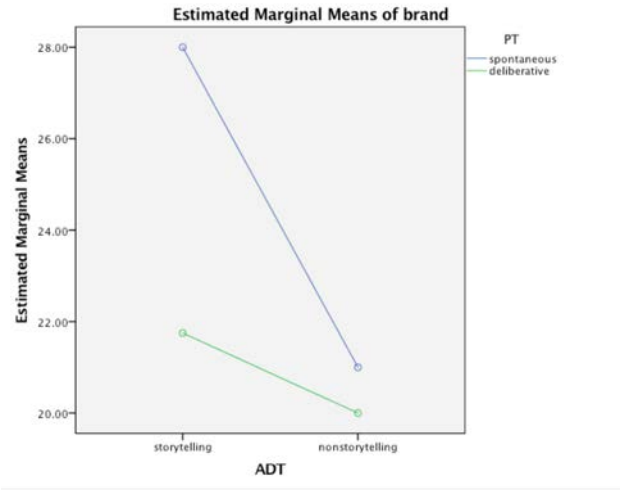
22.45, $p < 0.001$, such that participants reading a narrative advertisement (M = 37.75) scored higher on the critical thinking ability scale than participants reading a fact-based advertisement (M = 28.50), implying that they yielded less critical thinking ability. There was no effect of product type on the level of critical thinking ability, $F (1, 28) = .50$, $p = .49$, such that participants reading advertisement of spontaneous product (M = 33.81) and participants reading advertisement of deliberative product (M = 32.44) generated similar level of critical thinking ability. There was also no effect of gender on the level of critical thinking ability, $F (1, 24) = .45$, $p = .51$, such that males (M = 32.50) and females (M = 33.86) produced similar level of critical thinking ability. These effects were not qualified by an advertisement type x product type interaction, $F (1, 28) = .004$, $p = .95$, and a gender x product type x advertisement type interaction, $F (1, 24) = .977$, $p = .33$.

These effects were qualified by an advertisement type x gender interaction, $F (1, 28) = 5.38$, $p = .028$. Among participants reading narrative advertisement, there was no effect of gender on critical thinking ability, $t (14) = 1.26$, $p = .227$, such that females (M = 36.7) and males (M = 39.5) produced similar level of critical thinking ability while reading fact based ad. Among participants reading fact based ad, there might be an effect of gender on critical thinking ability, $t (14) = 1.93$, $p = .074$, such that females (M= 30.36) scored higher on critical thinking ability scale than did males (M = 24.4), implying females yielded less level of critical thinking ability than did males while reading fact based advertisement. Among females, there was an effect of advertisement type on critical thinking ability, $t (19) = 2.73$, $p = .013$, such that females reading narrative advertisement scored higher (M = 36.70) on critical thinking ability scale than did females reading fact based ad (M = 30.36), implying that females reading narrative ad produced lower level of critical thinking ability than did females reading fact based ad. Among males, there was also an effect of advertisement type on critical thinking ability, $t (9) = 5.53$, $p < .001$, such that males reading narrative ad (M = 39.5) scored higher on the critical thinking ability scale than did males reading fact based ad (M = 24.4), implying males reading narrative ad generated lower critical thinking ability level than did males reading fact based ad.

These effects were qualified by a gender x product type interaction, F (1, 28) = 7.99, p = .009. Among females, there was an effect of product type on critical thinking ability, t (19) = 2.62, p = .017, such that females reading ad of spontaneous product (M = 36.60) scored higher on critical thinking ability than did females reading ad of deliberative product (M = 30.45), implying that females reading ad of spontaneous product generated less critical thinking ability than did females reading ad of deliberative product. Among males, there was no effect of product type of critical thinking ability, t (9) = 1.49, p = .171, such that males reading ad of spontaneous product (M = 29.17) and males reading ad of deliberative product (M = 36.80) produced similar level of critical thinking ability. Among participants reading ad of spontaneous product, there was an effect of gender, t (14) = 2.36, p = .033, such that females (M = 36.60) scored higher on the critical thinking ability scale than did males (M = 29.17), implying that females yielded lower level of critical thinking ability than did males while reading ad of spontaneous product. Among participants reading ad of deliberative product, there was also an effect of gender, t (14) = 2.36, p = .033, such that females (M = 36.60) scored higher on the critical thinking ability scale than did males (M = 29.17), implying that females yielded lower level of critical thinking ability than did males while reading ad of deliberative product.

We also assessed whether brand evaluation was influenced by the advertisement type, product type and gender. There was an effect of ad type on brand evaluation, F (1, 28) = 4.28, p = .048, such that participants reading a narrative advertisement (M = 24.88) generated higher brand evaluation than participants reading a fact-based advertisement (M = 20.50). There was no effect of product type on brand evaluation, F (1, 28) = 2.94, p = .098, such that participants reading advertisement of spontaneous product (M = 24.50) and participants reading advertisement of deliberative product (M = 20.88) yield similar level of brand evaluation. There was an effect of gender on brand evaluation, F (1, 28) = 6.53, p = .016, such that females (M= 24.62) generated higher brand evaluation than males (M= 19.18). These effects were not qualified by an advertisement x gender interaction, F (1, 28) = .967, p = .334, a gender x product type interaction, F

(1, 28) = .037, p = .848, a gender x product type x advertisement type, F (1, 28) = .161, p = .692, but there might be an advertisement type x product type interaction, F (1, 28) = 1.54, p = .225. The trend is shown in the figure below.



Discussion

H1: The hypothesis was partially supported by the data we have acquired so far. Gender did not influence positive affectivity at all. Based on previous literature, we hypothesized that the gender difference on emotion intensity and regulation would allow females to generate more positive effects in responses to narrative advertisements, which was previously found to effectively elicit the level of positive affectivity; however, our findings were not consistent with this hypothesis. There was a trend that the advertisement type and product type influenced the level of affective responses, but the results were not significant. The results suggested a non-significant correlation that participants assigned to read a narrative advertisement yielded higher positive affectivity than participants assigned to read a fact based advertisement. This trend might have been due to the increase in affectivity being found to have correlated with narratively transportation into the story in previous research. The results also suggested a non-significant result that participants assigned to read a spontaneous product advertisement yielded higher positive affectivity than

participants assigned to read a deliberative product advertisement, and this might have been due to impulse purchase being found to be associated with increase in affectivity. Our study only had 32 participants and we expect that the two effects would become significant with more participants.

H2: The hypothesis was partially supported. The advertisement type did influence critical thinking ability, and participants who were assigned to read a narrative advertisement generated lower level of critical thinking ability than the participants who were assigned to read a fact based advertisement. As narrative information processing took most space in the cognitive capability and left limited space for fact analysis, critical thinking ability was restricted in participants in narrative advertisement condition. Since the cognition processing space became limited, affective responses dominated in processing thoughts and therefore resulted in reduced cognitive responses, including critical thinking ability. However, gender and product type were found to have no effect on critical thinking ability.

H3: With regard to brand evaluation, we only hypothesized that the advertisement type would affect brand evaluation, and this was supported by our results. Participants who were assigned to read the narrative advertisement generated higher brand evaluations than participants who were assigned to read the fact based advertisement, and this might be due to that narrative transportation building brand-self connection and thereby enhancing the brand evaluation in participants. As we expected, there was no effect of a product type on brand evaluation, but we found that gender significantly influenced brand evaluation, such that females yielded a higher brand evaluation than males did, which was not even an element of our hypothesis.

H4: The hypothesis was partially supported. The effect of advertisement type on critical thinking ability is not dependent on product type. There is a trend that the effect of advertisement type on positive affect and brand evaluation is dependent upon the product type, albeit the results were non-significant. Among participants assigned to reading the narrative advertisement, participants assigned to read the spontaneous product advertisement and the deliberative product advertisement did not generate much difference on positive affectivity. However, among

participants assigned to read the fact-based advertisement, participants assigned to read spontaneous product advertisement and deliberative product advertisement had a trend to show a much larger difference regarding the level of positive affectivity, such that participants reading the advertisement of spontaneous products yielded a much higher positive affect than the participants reading the advertisement of the deliberative product did. This differed from what we hypothesized. Our results supported the notion that in narrative transportation, participants have increased positive affectivity and diminished critical thinking ability; thus, the introduction of the narrative advertisement brings the same effect as the depletion of self-regulatory sources on the decision making process. However, in participants reading fact based advertisements, there was not such depletion since our results suggested that participants assigned to read narrative advertisements generated a higher positive affect level and lower critical thinking ability level than participants assigned to read fact based advertisements did.

Since brand evaluation was found to be correlated with positive affectivity, we expected that the brand evaluation would also increase as positive affectivity increased. Following all these, the difference on the positive affect between participants reading spontaneous product advertisements and deliberative would be larger among participants reading narrative advertisements than among participants reading fact-based advertisements. However, our results suggested the opposite of this, such that the difference is much larger among participants reading fact based advertisements. In other words, participants' reading of spontaneous product advertisements yielded higher positive affectivity than did participants' reading of deliberative product advertisement, only when assigned to read fact-based advertisements. In terms of brand evaluation, the trend of our results matched what we expected. Among participants assigned to read narrative advertisements, we observed a large difference in brand evaluation between participants reading spontaneous product advertisements and those reading deliberative product advertisements; participants assigned to read spontaneous products generated higher brand evaluation than participants assigned to read deliberative product advertisements. However, only a minor difference was observed among

participants assigned to read fact-based advertisements. We anticipate that the result would become significant if we have more people participate in the future.

H5: The hypothesis was partially supported; the interaction did not exist in positive affect and brand evaluation, but was evident in critical thinking ability, meaning that the effect of the advertisement type on positive affects and brand evaluation is not dependent on gender, but the effect of advertisement type on critical thinking does depend on gender. Since gender was found to be a demographic factor influencing how people respond to anything that potentially elicits emotional responses, we expected narrative transportation, which mainly affects people through eliciting emotions, such as positive affect, sympathy and empathy, would influence participants dependent on their gender. In other words, we anticipated that the effect of narrative transportation on positive affectivity, critical thinking ability and brand evaluation would be exacerbated in females but not in males. However, our results suggested that the impact of advertisement type on positive affect and brand evaluations is not dependent on gender. The effect of advertisement type on critical thinking ability was found to depend on gender. Among all participants reading the fact-based advertisement, there was no effect of gender on critical thinking ability, but among all participants reading narrative advertisements, there was a trend showing that gender influences critical thinking ability, albeit in a non-significant manner. In females and males, participants who were assigned to read narrative advertisements generated lower critical thinking levels than participants assigned to read fact-based advertisements. This suggests that while people are reading fact-based advertisements, gender does not influence critical thinking ability. However, when people are reading narrative advertisements, gender will lead to a large discrepancy in a critical thinking level across males and females. This is consistent with what we expected: gender difference is exacerbated by the narrative transportation.

H6: The hypothesis was not supported; the interaction did not exist in all three measures, meaning that the effect of the interaction between the advertisement type and the product type on positive affect, critical thinking ability and brand evaluation was not dependent on gender. As

gender was found to influence the amount, intensity and duration of emotional responses, we anticipated that the interaction between advertisement type and product type, which has affect as its key contributor, would be exacerbated in females. However, the results were not consistent with what we expected, and no such trend was evident.

We did not come up with any hypothesis related to the interaction between product type and gender, but the results suggested that an interaction is evident in critical thinking ability. Females who were assigned to read spontaneous product advertisements yielded much lower critical thinking ability than the females assigned to read the deliberative product advertisement did. The critical thinking ability in females is generally lower than males across the two conditions. However, there was no difference in males reading spontaneous product advertisements and deliberative product advertisements, suggesting that the product type has no effect on critical thinking ability in males. There is also a trend showing that there might be a similar interaction in positive affect, albeit it is non-significant. Females assigned to read spontaneous product type yielded much higher positive affectivity than did females assigned to read deliberative product. However, such discrepancy was not seen in males, and males yield equal levels of positive affect while reading advertisements of spontaneous products and advertisements of deliberative products. No interaction was seen in the brand evaluation.

General Discussion

The hypothesis was only partially supported. According to our results, advertisement type was found to have a non-significant effect on positive affect but in a direction that in narrative advertisement conditions participants yielded more positive affectivity. The results also suggested that the advertisement type had an effect on critical thinking ability and brand evaluation. The product type only had a trend effect on positive affectivity but had no effect on critical thinking ability or brand evaluation. Gender was found to have no effect on all three measures.

There was a trend that the effect of an advertisement type on brand evaluation is dependent the on product type. When assigned to read narrative advertisements, participants yielded higher brand evaluation in spontaneous product conditions compared to participants in deliberative product conditions; however, the discrepancy on brand evaluation due to the product type did not exist in participants who were assigned to read fact-based advertisements. There was also a trend that the effect of advertisement types on positive affectivity is dependent on the product type; however, this interaction was opposite to what we expected to see. The results suggested that people reading spontaneous product advertisements generated much higher positive affectivity than people reading deliberative product advertisements in fact-based advertisement conditions, but such differences did not exist in narrative advertisement conditions. We hypothesized that such difference would appear in narrative advertisement conditions but not in fact-based advertisement conditions. The effect of advertisement types on critical thinking ability was found to be dependent on gender. In narrative conditions, females generated significantly lower critical thinking ability than males did, but such discrepancy between gender was not evident in fact-based advertisement conditions.

Other than the findings that supported our hypothesis, we had several findings that we did not hypothesize. Gender had a significant impact on brand evaluation, such as females yielding higher brand evaluations than males did, regardless of the advertisement type and product type. Interaction between product types and gender was seen in critical thinking ability, indicating females yielded lower critical thinking ability in spontaneous product conditions and more critical thinking ability in deliberative product conditions, while males did not show differences in critical thinking ability between spontaneous products and deliberative product conditions. Additionally, we saw a trend that the effect of a product type on positive affectivity might depend on gender. Females generated much higher positive affectivity when assigned to read spontaneous product advertisements than when assigned to read deliberative product advertisements, while males generated equal levels of positive affect between the two conditions.

Implications

Our results supported the notion that narrative transportation will decrease critical thinking ability and increase brand evaluation, and that it exhibits a trend that might increase positive affectivity in the context of advertisement. This result was consistent with the findings in previous research, whether in a general context or in a specific context of advertisement. According to our research, even a 100-words text had the potential to have such an impact upon participants; therefore, it is worth for marketers to try applying narrative in an advertisement. If they added a picture of video, for example, to further help consumers visualize the story plot, the evidence suggests that this is likely to yield more positive emotions and stronger self-brand connections; thus, a narrative might have a stronger impact upon improving brand evaluations.

Our results also suggested that people had higher positive affect when viewing the advertisement of a spontaneous product. Previous research has supported the concept that an increased positive affect will facilitate impulsive purchases (Betty & Ferrell, 1998). Our research demonstrated that spontaneous products, which substituted actual impulse purchase behavior in this study, will increase positive affect. Even though we did not identify a direct impact of a product type on brand evaluation, having a more positive affect towards a product would also potentially improve sales. Therefore, making consumers perceive a product as a spontaneous product – one where they do not spend much time considering the purchase decision - might increase the sale of the product.

We also found a trend that the effect of narrative transportation on brand evaluation was much stronger in spontaneous product conditions than in deliberative product conditions, meaning that narrative transportation lead to a higher brand evaluation while the product was perceived as spontaneous. Therefore, the strategy of using a narrative within an advertisement is more effective and impactful to advertise a spontaneous product than a deliberative product. Additionally, the brand evaluation is the evaluation for the entire brand but not the specific type of product. Ideally, if one brand produces both spontaneous and deliberative products, using narrative advertisement only

in a spontaneous product might also enhance the evaluation of the entire brand. In other words, a brand might not need to waste money and time on designing narrative advertisement for both spontaneous and deliberative products, and that would save commercial costs.

Moreover, in fact-based advertisement conditions, there was no gender difference in critical thinking ability; however, in narrative advertisement conditions, the gender difference existed. While reading fact-based advertisements, females and males had similar levels of critical thinking ability, meaning that they were able to identify logic flaws and mistakes. Therefore, marketers who use fact-based advertising need to avoid any logic flaws and mistakes in advertisement to ensure that brand evaluations in consumers will not be affected, especially in a negative way by any mistakes. While reading narrative advertisements, females yielded much lower levels of critical thinking ability than males. Hence, when using narrative to advertise female-orientated products, marketers can add some logic flaws or inconsistent beliefs with the real world for the purpose of enhancing the narrative effect of the story on consumers; for example, a Cinderella story for advertising high heels. However, males generated consistent level of critical thinking ability across the narrative advertisement and fact based advertisement conditions. Thereby, marketers must pay attention to the logic of advertisement, even when a narrative is introduced to advertise the product.

Additionally, we found that females generated different levels of critical thinking ability when reading advertisements of spontaneous products and advertisements of deliberative products; however, such discrepancy did not appear in males. Therefore, spontaneous products were found to effectively reduce critical thinking ability in females. While designing advertisement for spontaneous products, marketers can target females more to increase sales. For example, tissue paper advertisement could include more female characters, more female-related story plot or more female-concerned issues. However, for the advertisement of deliberative products, marketers might want to equally target females and males, since females and males yielded similar levels of critical thinking ability.

Limitations

One limitation of our research is the sample. First, we only had 32 participants, with a mere 8 participants in each condition. The number of participants is really small to have a statistically significant result since a small sample size offers a reduced capacity to detect significant differences between variables. There is also a possibility that type II errors occurred in the study due to the small sample size, such as failing to detect an effect that is actually present in the population but was not detected by the data we have collected so far. Therefore, we expect those we marked as "not yet significant but might be a trend" would become significant, and the statistical power of our results would increase, after we continue collecting data in the spring term.

Furthermore, our sample is not representative enough. Our goal was to investigate how the effect of narrative transportation is dependent on gender and product type in consumer, which means it could be ideal to get a random sample of people of at least a variety of ages and occupations. However, when we conducted the pilot tests to investigate if the advertisement successfully induces narrative transportation, we found participants did not pay sufficient attention to the advertisement text and therefore decided to conduct the research in person, rather than positing an online survey. Hence, we only got undergraduate students from Union College to participate. These undergraduates were aged from 18-22, and thereby only represented a small proportion of consumers within the market. Hence, the results of our research are not generalizable; to improve this in the future, we need to include more non-college students with different ages and occupations to cover as broad a range of consumers who can independently make a purchase decision as is possible. We expect any results using this sample would have a similar pattern as in this research but with more statistical power.

Another limitation of our research is that our advertisement is in the form of radio transcript. First, radio transcript is not perceived as the main form of advertisement, especially for college students. Union College is a residential college, so there are not many chances for students to drive on a daily basis and listen to such advertisements on radio. When we asked them to imagine how

the text would sound on a radio, they might struggle to visualize the story we wanted them to understand due to the lack of experience with radio advertisement. Additionally, radio advertisement has a specific feature that only sounds are incorporated. This is quite different with TV advertisements or poster advertisements that people have more exposure to. Poster advertisements always have a picture but have no sound, while TV advertisement always has a more vivid presentation of the product with sound and pictures to help consumers better visualize the product and the corresponding story. Therefore, we were barely able to generalize our results to those two types of advertisement since they are in completely different forms and contexts. To improve that, we could include all three types of advertisement, and the presentation type of advertisement would become the fourth independent variable. We would expect the TV advertisements to yield the most significant results, and radio advertisement to yield the least significant results, with poster advertisement following in between, because a TV advertisement has the largest potential to induce narrative transportation in consumers.

Having only one item in each product type is also a limitation of our research. We had tissue paper for the spontaneous product, and multivitamins for the deliberative product. Even though we have done a pre-test on how much thoughts people put in while making purchase decisions and discovered the two were the best to use, the two items might not represent how consumers understand spontaneous and deliberative products. If any of them had a special or even extreme attitude towards the product or the brand, the data would be skewed. For example, a person who loves a certain brand of tissue paper and has used it for ten years, will not easily have their brand evaluation towards the brand we created modified through the effect of narrative transportation. In other words, even though most people perceive tissue paper as a spontaneous product and multivitamins as a deliberative product, some people will not. To improve this, we can include more types of product in each type to avoid the confound resulting from the extreme associations between the product or the brand and the participants, or increase the sample size as we stated before.

Directions for Future Study

One avenue for future research would be testing why the effect of interaction between advertisement type and product type on positive affect is the opposite to what we hypothesized. The results suggested that in narrative advertisement condition, participants assigned to read spontaneous and deliberative advertisement generated no difference on positive affect, but a significant difference was observed in fact-based advertisement conditions. The most likely explanation for this could be that narrative transportation increased the overall positive affectivity and the product type had a much diminished power to even make a difference. In fact-based advertisement conditions, the overall positive affect will not increase. Therefore, the product type would be the only factor increasing positive affectivity, and according to our results, the product type was found to have an effect on a positive affect. Following this, the effect of product type on positive affectivity might be too small to focus on whilst positive affectivity has already been increased in narrative transportation.

We could conduct a within subject test to examine our explanation for our rejected hypothesis. Participants will be assigned to read one narrative story and two advertisements in the form of 100-words text in two different orders. The first group will be asked to initially read two narrative stories of the two products that are in the advertisements, followed by two fact-based advertisements of one spontaneous product and one deliberative product. The second group will be asked to read two fact-based advertisements of one spontaneous product and one deliberative product, followed by two narrative stories. After participants finish reading the stories, they will be asked to report their affectivity toward the product, and affectivity will be measured again after they finish reading the advertisements. If such a study was conducted, we would expect to see that positive affectivity in response to narrative stories would be generally higher than positive affectivity in response to fact based advertisements. More importantly, we would expect to see a difference in the positive affect measured after reading the two advertisements in participants who read the narrative stories after the advertisements but not in the participants who read the narrative

stories before the advertisements. This is because the effect of the product type on positive affect can be ignored while narrative transportation had already increased positive affectivity a lot.

Another avenue for future research could be to investigate which type of narrative advertisement best increases brand evaluation in consumers. We have already examined how the product type will influence the effects of narrative transportation, and investigation of the effects of different forms of narrative advertisement on narrative transportation will further assist marketers more effectively in using narrative devices in advertisements. Referring back to our limitations, we found the radio transcript is not a widely used advertisement type in modern society and thus it might not have the capacity to cover all the potential consumers in the market. Therefore, a study examining and comparing the effects of a variety of forms of narrative advertisement on brand evaluation will be helpful.

We could conduct a pre-test to determine a product that most consumers have neutral attitudes towards the product self and barely have a strong preference on the brand of the product, such as bottle water. We would then need to create a story plot for advertising the fake product with a fake brand name, and present the story to consumers in different forms. We could use the form of only text, the form of text and different numbers of pictures showing the story (maybe from 1 to 10), the form of text and sounds simply reading the story, the form of text and sounds performing the story, the form of a short video presenting the story but with no characters, and the form of a short video with real actors performing the story. Participants would be randomly assigned to view one form of the advertisement, and would then be asked to fill out a questionnaire to provide their evaluation of the brand. We would need a large sample size to ensure, in each condition, a sufficient number of participants to allow us to detect the difference across conditions.

We would expect that participants who were assigned to view a short video with real characters performing the story would yield the highest brand evaluation and participants who were assigned to view a short text with no other complimentary materials would yield the lowest brand evaluation. According to previous research, the effect of narrative transportation is correlated with

the extent that participants get immersed into the story, such that the more participants get transported into the story, the more likely their emotions, attitudes and behaviors will reflect the story. We anticipate that the way the story is presented to an audience will be the key contributor regarding the extent to which participants get transported. After seeing actors performing the story, participants will have a better imagery regarding the story and therefore become more deeply immersed. However, when only reading the story from text, it is much harder for participants to imagine the story and map those onto their existing memories to create brand-self connections. Therefore, we expect different forms of narrative advertisements will make participants generate different levels of brand evaluation due to the level of narrative transportation elicited in consumers.

Conclusion

An extensive amount of research has explored the effect of narrative transportation on people within a variety of contexts. Our research specifically focused on narrative transportation in advertisement, and investigated how product types (spontaneous and deliberative) and gender (female and male) interact with the effect of narrative transportation on consumers. The key findings suggested that narrative transportation will diminish critical thinking ability and improve brand evaluation. More remarkably, the trend of our results indicated a direction that narrative transportation will increase brand evaluation in participants reading spontaneous products advertisements, and the results also suggested that it significantly reduces critical thinking ability on analyzing advertisements in females. Therefore, introducing narrative into an advertisement would be effective, especially when the advertisement targets a spontaneous product or is aimed at female consumers.

References

Bal, P. M., Butterman, O. S., & Bakker, A. B. (2011). The influence of fictional narrative experience on work outcomes: A conceptual analysis and research model. *Review of General Psychology*, *15*(4), 361.

Beatty, S. E., & Ferrell, M. E. (1998). Impulse buying: Modeling its precursors. *Journal of retailing*, *74*(2), 169-191.

Bellenger, D. N., Robertson, D. H., & Hirschman, E. C. (1978). Impulse buying varies by product. *Journal of Advertising Research*, *18*, 15-18.

Burke, M. C., & Edell, J. A. (1989). The impact of feelings on ad-based affect and cognition. *Journal of marketing research*, 69-83.

Chang, C. (2009). " Being Hooked" By Editorial Content: The Implications for Processing Narrative Advertising. *Journal of Advertising*, *38*(1), 21-34.

Cobb, C. J., & Hoyer, W. D. (1986). Planned versus impulse purchase behavior. *Journal of retailing*.

Debevec, K., & Romeo, J. B. (1992). Self-referent processing in perceptions of verbal and visual commercial information. *Journal of Consumer Psychology*, *1*(1), 83-102.

Escalas, J. E. (2004). Imagine yourself in the product: Mental simulation, narrative transportation, and persuasion. *Journal of advertising*, *33*(2), 37-48.

Escalas, J. E. (2004). Narrative processing: Building consumer connections to brands. *Journal of Consumer Psychology*, *14*(1-2), 168-180.

Escalas, J. E. (2007). Self-referencing and persuasion: Narrative transportation versus analytical elaboration. *Journal of Consumer Research*, *33*(4), 421-429.

Escalas, J. E., Moore, M. C., & Britton, J. E. (2004). Fishing for feelings? Hooking viewers helps!. *Journal of Consumer Psychology*, *14*(1), 105-114.

Escalas, J. E., & Stern, B. B. (2003). Sympathy and empathy: Emotional responses to advertising dramas. *Journal of Consumer Research*, *29*(4), 566-578.

Fujita, F., Diener, E., & Sandvik, E. (1991). Gender differences in negative affect and well-being: the case for emotional intensity. *Journal of personality and social psychology*, *61*, 427.

Gerrig, Richard J. *Experiencing narrative worlds: On the psychological activities of reading*. Yale University Press, 1993.

Green, M. C. (2004). Transportation into narrative worlds: The role of prior knowledge and perceived realism. *Discourse Processes*, *38*(2), 247-266.

Green, M. C. (2008). Transportation theory. *International encyclopedia of communication*, 5170-5175.

Green, M. C., Garst, J., & Brock, T. C. (2004). The power of fiction: Determinants and boundaries. *The psychology of entertainment media: Blurring the lines between entertainment and persuasion*, 161-176.

Green, Melanie C., and Timothy C. Brock. "The role of transportation in the persuasiveness of public narratives." *Journal of personality and social psychology* 79.5 (2000): 701.

Green, Melanie C., and Timothy C. Brock. "In the mind's eye: Transportation-imagery model of narrative persuasion." (2002).

Green, Melanie C., and John K. Donahue. "Simulated worlds: Transportation into narratives." *Handbook of imagination and mental simulation* (2009): 241-256.

Holbrook, M. B., & Batra, R. (1987). Assessing the role of emotions as mediators of consumer responses to advertising. *Journal of consumer research*, *14*(3), 404-420.

LaMarre, H. L., & Landreville, K. D. (2009). When is fiction as good as fact? Comparing the influence of documentary and historical reenactment films on engagement, affect, issue interest, and learning. *Mass Communication and Society*, *12*(4), 537-555.

McRae, K., Ochsner, K. N., Mauss, I. B., Gabrieli, J. J., & Gross, J. J. (2008). Gender differences in emotion regulation: An fMRI study of cognitive reappraisal. *Group processes &*

intergroup relations, *11*(2), 143-162.

Moore, D. J. (2007). Emotion as a mediator of the influence of gender on advertising effectiveness: Gender differences in online self-reports. *Basic and applied social psychology*, *29*(3), 203-211.

Morris, J. D., Woo, C., Geason, J. A., & Kim, J. (2002). The power of affect: Predicting intention. *Journal of Advertising Research*, *42*(3), 7-17.

Peracchio, L. A., & Meyers-Levy, J. (1997). Evaluating persuasion-enhancing techniques from a resource-matching perspective. *Journal of Consumer Research*, *24*(2), 178-191.

Slater, Michael D., and Donna Rouner. "Entertainment—education and elaboration likelihood: Understanding the processing of narrative persuasion." *Communication Theory* 12.2 (2002): 173-191.

Schlosser, A. E. (2003). Experiencing products in the virtual world: the role of goal and imagery in influencing attitudes versus purchase intentions. *Journal of consumer research*, *30*(2), 184-198.

Simon, R. W., & Nath, L. E. (2004). Gender and emotion in the united states: Do men and women differ in self-reports of feelings and expressive behavior? 1. *American journal of sociology*, *109*(5), 1137-1176.

Smith, R. E., & Swinyard, W. R. (1988). Cognitive response to advertising and trial: Belief strength, belief confidence and product curiosity. *Journal of Advertising*, *17*(3), 3-14.

Spears, Nancy, and Surendra N. Singh. "Measuring attitude toward the brand and purchase intentions." *Journal of Current Issues & Research in Advertising* 26.2 (2004): 53-66.

Van Laer, T., De Ruyter, K., Visconti, L. M., & Wetzels, M. (2014). The extended transportation-imagery model: A meta-analysis of the antecedents and consequences of consumers' narrative transportation. *Journal of Consumer Research*, *40*(5), 797-817.

Vohs, K. D., & Faber, R. J. (2007). Spent resources: Self-regulatory resource availability affects impulse buying. *Journal of consumer research*, *33*, 537-547.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology*, *54*, 1063.

Yoo, Boonghee, and Naveen Donthu. "Developing and validating a multidimensional consumer-based brand equity scale." *Journal of business research* 52.1 (2001): 1-14.