The Impact of Stress and External Impulse Trigger Cues on Online Impulse Buying

A thesis presented to
the faculty of
The Patton College of Education
of Ohio University

In partial fulfillment
of the requirements for the degree
Master of Science

Brittanie L. Moran
June 2012

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This thesis titled
The Impact of Stress and External Impulse Trigger Cues on Online Impulse Buying

by

BRITTANIE L. MORAN

has been approved for
the Department of Human and Consumer Sciences
and The Patton College of Education by

Lynn Eunjung Kwak
Assistant Professor of Human and Consumer Sciences

Renée A. Middleton
Dean, The Patton College of Education
Abstract

MORAN, BRITTANIE L., M.S., June 2012, Apparel, Textiles and Merchandising

The Impact of Stress and External Impulse Trigger Cues on Online Impulse Buying

Director of Thesis: Lynn Eunjung Kwak

The purpose of this study was to explore the impact of stress and external impulse trigger cues on impulse buying online with the theory of Symbolic Self-Completion as the research framework. Quantitative methods were employed in order to accurately analyze the relationship between each variable. Participants were recruited through convenience sampling from a Midwestern University in the United States. A total of 156 surveys were collected all from female participants.

The survey was all done online so as to accurately reflect online shopping. Deception was used in order to induce minor stress and threat to participants’ self-concept which was directly followed by the impulse tendency images. Material Values and Extrinsic Contingency Focus were measured as they were used to see the moderating effects they had on impulse tendency.

The overall results, resulting from the quantitative data of the survey, were that stress did in fact impact impulse tendency but was a delayed reaction. The delayed reaction resulted in only the second image being used for impulse buying. The order of the images was randomly assigned. It was also evident that the impulse cues ideas and suggestions were more effective than the impulse cues sales and promotions.
In addition to the main findings, the results show that the younger participants are overall more impulsive. This verifies previous research findings and assumptions of this research.

Approved: _____________________________________________________________

Lynn Eunjung Kwak
Assistant Professor of Human and Consumer Sciences
Acknowledgments

I would like to thank my advisor Dr. Lynn Kwak for all of her time, guidance, feedback, and support during the process of my research. To my other committee members, Dr. Sky Cone and Dr. Matthew Vess, thank you for providing feedback and guidance for my research. Lastly, I would like to show my gratitude to the Human and Consumer Sciences faculty and staff for their support and guidance during my time at Ohio University.
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Chapter 1: Introduction

Impulse buying has become a prominent part of consumer behavior and marketing strategies. Most consumers do not realize that every advertisement they see is specifically designed to make a certain population think they need the product in the advertisement. Impulse buying is a behavior that occurs after experiencing the urge to buy a product or service. Impulse buying tends to be very spontaneous, without deliberation of all information, and focuses on immediate gratification (Strack & Werth, 2006). Impulse buying can happen through many shopping mediums including the internet. The internet is now considered to be a marketing tool and can be used to reach a very large number of people and is a way to acquire something that gives almost immediate gratification. With the internet being so prevalent in today's society, shopping has never been easier and some consumers even use the internet to shop in order to improve a negative mood. In these instances, consumers substitute material objects to compensate for an unstable self-concept.

Over half of the people who use the internet for any reason such as work, school, or personal use, are shopping online (LaRose & Eastin, 2002). Convenience is one of the main reasons for shopping online because one can shop any time of day in the comfort of their own home. Convenience is also a motivator in online shopping for those who live in rural areas and who do not live near a mall or shopping center. Online shopping, for more than a decade, has been one of the fastest growing channels of shopping with an annual growth rate of 25 percent (Dawson & Kim, 2009). With today’s tech-savvy generation the idea of online shopping has become a shopping norm.
With internet shopping, the consumer cannot actually try on the clothes nor have direct contact with any object therefore, retailers must implement creative ways to compensate for this missing element. Many retailers are implementing impulse buying strategies on their websites to improve the shopping experience and make it more realistic as it would be in a bricks-and-mortar store. The idea behind interactive websites is to create an environment that evokes positive emotions towards the retailer and making it more likely that the consumer will spend more (Fiore & Jin, 2003). Retailers saw a jump in online apparel sales when they started using features such as zooming and the ability to swap colors on clothing (Kim & Lennon, 2009).

Online retailers are now implementing some of the same external impulse cues onto their websites to encourage more spending. LaRose and Eastin (2002) noted that online consumers are more impulsive than others and that impulsive buyer’s account for at least one fourth of online consumers. Impulse purchases account for over $4 billion in annual sales in the United States and retailers have found that over 50 percent of mall shoppers buy on impulse (Dawson & Kim, 2010). In normative terms, impulse buying is thought to be wrong, yet accounts for a substantial amount of goods sold every year. Kalla and Arora (2011) broke down the motives for impulse buying into internal factors (shopper related) and external factors (shop related). While either of these factors may not be the sole reason for the substantial amount of sales, marketers can take advantage of the shopper related factors for the retailers benefit.

Previous research done on impulse buying, focus on one aspect of the behavior; shopper related factors or shop related factors. The motivation for impulse buying may
vary from person to person and could be induced by something as simple as stress. One individual may be more motivated by internal factors such as stress where another is more motivated by external or store factors such as a store display. These motivating factors work together to create the “need” to buy, but affects each individual differently and may vary in degrees.

One way an individual may be relying on both internal and external cues is with self-symbolizing. The individual feels that a part of their "self" has been threatened or is incomplete and in order to correct this imbalance they might buy material objects (Dittmar et al., 1996). The material objects are associated with the part of the "self" that is not in balance. The internal impulse cue is the threatened self-definition while the external impulse cue comes from a store environment or a product itself. The present study is focused on this kind of self-symbolizing through buying, particularly impulse buying.

There are three purposes of this study: 1) to examine the effect of stress on impulse buying, 2) to explore the moderating role of support scales such as Material Values and Extrinsic Contingency Focus, on impulse buying, and 3) how external impulse trigger cues impact impulse buying. Dittmar, Beattie, and Friese (1996) stated that an important reason that people buy on impulse is in order to counterbalance a perceived self-discrepancy. In this case, the self-discrepancy is stress and impulse buying is utilized to gain the symbols to mend this discrepancy.
Definition of Terms

Stress, broadly defined, is a demand for an individual to change his or her behavior patterns due to any environmental, social, or internal demand (Lee et al., 2007).

External Impulse Cues are the cues or prompts by a marketer or retailer in a shopping set-up. These cues can be anything from a sale sign to the placement of a display in a store (Kalla & Arora, 2010).

Internal Impulse Cues are what an individual responds to when they feel an urge to do something. For example, one can experience the urge to go out and buy something yet have had no direct visual experience that caused it (Kalla & Aroro, 2010).

Impulse Buying is defined as a sudden urge to buy something without previously planning to do so where the decision to buy is done very rapidly and without deliberation (Kacen & Lee, 2002).

Symbolic Self-Completion proposes that people who have an incomplete self-definition complete that part of the self by acquiring and displaying symbols associated with it (Wicklund & Gollwitzer, 1982).

Materialism refers to the amount of importance possessions have for a consumer (Belk, 1985).

Self-Discrepancy is the difference between the actual self and the ideal self (Kalla & Aroro, 2010).

Actual Self refers to how an individual sees themselves (Kalla & Aroro, 2010).

Ideal Self refers to how an individual wants to be seen (Kalla & Aroro, 2010).
Status Symbols are used to split our world and society into social categories. Status symbols show position, express lifestyles, opinions, and values of different social categories (Carr & Vignoles, 2011).

Compulsive Buying is excessive urges and behaviors regarding shopping and spending money. Compulsive buying much of the time leads to adverse consequences (Black, 2001).
Chapter 2: Review of Literature

Impulse Buying

There has been a debate about the definition of ‘impulse buying’ between many researchers over the years and has been synonymous with unplanned buying which is defined as “any purchase that a shopper makes and has not been planned in advance” (Kalla & Arora, 2010, p. 147). Iyer’s (1989) work clarified this by suggesting that all impulse buying is unplanned, but not all unplanned purchases are impulsive. It has been agreed that there are behavioral and hedonistic dimensions to impulse buying (Kalla & Arora, 2010). A hedonic activity is spontaneous and is focused on the love of doing something instead of the need to do something (Babin et al., 1994).

When shopping in a bricks-and-mortar store it is a complete sensory experience. The lights are set specific to the mood the retailer is going for, the smells, the layout, and even the music that is being played is meant to help shoppers buy. In the conventional buying environment of bricks-and-mortar stores, four main types of buying motives have been identified. Instrumental-economic aspects (such as efficiency, convenience, and good value), and the three dimensions to the psychological gains: social-experiential, emotional, and identity-related benefits (Dittmar, Long, & Bond, 2007). The emotional aspect of psychological gains according to Dittmar, Long, and Bond (2007) are "buying in order to get a "buzz" and enjoyment, as well as motives to regulate or repair one's emotions, where individuals shop and buy in order to improve their mood" (p. 339). These four buying motives can be easily translated to online shopping.
When the buying process happens via the internet, the whole experience is changed and has caused retailer's to become creative in their online stores. Previous research has found that there are triggers in online stores just as in bricks-and-mortar stores that influence the urge to impulse buy. Dawson and Kim (2010) found that these external trigger cues can be broken down into four categories: promotions, ideas, sales, and suggestions. Promotions includes: buy one-get one free deals, coupons, free shipping, etc. The ideas category includes new styles, featured items and items featured at specific price points just to name a few. Sales category includes any item that is marketed as being priced lower than initially suggested. The last category is the suggestions category which includes items that are shown as suggested to "go with" an article of clothing that a customer is viewing and even customer favorites (Dawson & Kim, 2010). These external trigger cues are a great jumpstart to the impulse buying decision because it gives the consumer an idea or motive to buy.

**Online Shopping**

In Western society the Internet has become an indispensable tool that many people use daily for work or private purposes. Due to the development of the internet, marketing has changed drastically by creating a new marketing category as well as a new venue for marketers. People are spending more and more time on the internet as it becomes more useful. One popular activity involves consumers searching for product information or even buying goods online (Farag et al., 2006). Shopping online has recently surpassed shopping in a brick-and-mortar store because retailers can offer additional benefits to the customer online such as convenience, price comparison,
customer reviews, and social shopping (Chiou & Ting, 2011). However, not everyone is shopping online. Experience plays a large part in a person’s use of online stores.

The more experience an individual has with the internet, the more likely they are to shop online or even just do product searches. Farag, Schwanen, Djist & Faber (2006) found that online shoppers tend to make more purchases in-store than those who don’t shop online. As far as website features, male and female online shoppers differ in what they value. According to Ulbrich, Christensen, and Stankus (2011), male online shoppers value “accurate descriptions, fair and transparent pricing, easy tracking of shipments, and a wide range of products” significantly more than females (p. 196). Female online shoppers value “preprinted return labels, correct sizing information, and quick-loading pages” significantly more than their male counterparts (Ulbrich et al., 2011 p. 196).

Chen and Lee (2008) identify three antecedents of a consumer’s attitude towards websites: belief about the contents, utilitarian shopping value, and hedonic shopping value. The content of the website includes “availability, design attractiveness, structure of information, and interaction speed or response time of the website.” (Chen & Lee, 2008, p. 3) The two types of shopping value, utilitarian and hedonic, reflect the idea of performing an act "to get something done" as opposed to doing it because "you love it" (Triandis, 1977). Utilitarian shopping value is task-related and rational and whether the initial need of shopping is accomplished through the shopping trip. Hedonic shopping value is subjective and personal and is the potential for entertainment and well-being (Babin, Darden & Griffin, 1994).
Trust and brand equity are very important for online retailers. When a consumer trusts the retailer, they develop a purchasing intention. “Trust in online shopping is referred to as a willingness of customers to be vulnerable to the action, to the product, or website” (Chen & Lee, 2008, p. 6). Trust in a website helps consumers deal with their worries about risk and security of their information and resources. Consumers need to know that their personal information will be protected. Research shows that online trust positively influences buying behavior (Chen & Lee, 2008).

Knowing what consumers value in online stores is very important for those individuals in charge of such operations as merchandising and store layout. Each department can then be tailored to meet the needs of a specific consumer group such as “men’s” or “women’s” departments. With what men value in an online store, the store is most likely to do well if it is set up in an easy to use and simply merchandised way. In the end, knowing what the consumer values not only makes them happy, but can also benefit the retailer with increased sales. One way to increase sales is to make it easy for impulse purchases.

Internet technology encourages the expansion of website features. Basic features include extensive product offerings, convenience, and ease of navigation. Interactivity on an apparel website enhances communication, customization of information, image manipulation, and entertainment for the consumer. Interactivity on websites also increases the desire to browse and purchase online. Previously consumers were hesitant to shop and buy online because the lack of tactile information that is acquired through direct contact with a product. Having interactive images on a website helps the consumer
obtain more information about the product such as visual and tactile qualities. Effective website features may have a significant impact on the financial standing of apparel companies that are competitors (Fiore & Jin, 2003).

Verplanken and Sato (2011) mention that consumers may be attracted to some products simply because of the physical proximity. Objects or products that are closer to the consumer in proximity seem more attractive and more important than those that are far away. In an online setting, ease and convenience of a website would facilitate the same attraction to products. Online retailers always place their newest items or the items they want to get rid of on the front page. This allows for the consumer to find the products easily and quickly.

**Buying Motives**

Internal impulse buying motivators or cues are essentially a sudden urge or desire to buy something. These internal motivators are merely about the “shopper” and have nothing to do with a specific “shop.” The urges an individual might feel to suddenly buy something can stem from many thoughts and emotions. One such example is self-discrepancy (Kalla & Arora, 2010). A self-discrepancy is when an individual views a difference between the ideal self and the actual self and has been studied by such researchers as Wicklund and Gollwitzer (1982). Wicklund and Gollwitzer (1982) studied self-discrepancies and the urge for symbolic self-completion which may be satisfied through impulse buying. Dittmar (2005) found that materialism played a large role in compulsive or excessive buying and was strongest in a sample of younger participants (the mean age being 34.2 years). Also found by Dittmar (2005) was that the younger
sample had a larger gap in their real and ideal selves and was more inclined to buy in order to strengthen their image. Self-esteem has also played a role in excessive buying studies where self-esteem has a negative relationship with compulsive buying (O’Guinn & Faber, 1989; Verplanken et al., 2005). Previous research has also shown that low self-esteem is linked with increased susceptibility to being influenced by other individuals (Kalla & Arora, 2010).

External impulse buying motivators are cues used by the marketers in a shopping set-up. In this case, the urge to acquire the good comes after seeing the product or a promotional item. The stimulus creates an instant need to purchase just after exposure (Kalla & Arora, 2010). Because impulse buying is considered to be irrational in the sense that it happens instantly without deliberation, the external cues may often be the reason for impulse buying. Visual stimuli as an initiator in impulse buying have been used in different settings in previous research. One such context was a self-service environment in a mall (Lehtonen & Maenpaa, 1997; Stern, 1962). It was found that pleasure from shopping is greater when the shopper is free and unobserved. Anonymity plays a role in shopping pleasure because the consumer can be his or herself and no one is going to question their purchases.

Materialism

Materialism is best defined by Belk as "the importance a consumer attaches to worldly possessions" (1985, p. 291). When materialism is high, possessions become a main focus for a consumer and create both satisfaction and dissatisfaction. As individuals move from children to adolescents, defining oneself moves from things to activities that
relate an identity (Belk, 1985). Material goods are used to express a consumer’s personality and lifestyle that the consumer sees as their ideal personality and lifestyle. Those material goods also express to others who each individual is (Goldsmith & Clark, 2012).

Currently, our consumer culture and our culture in general is characterized by materialistic values (Dittmar et al., 2007). The media feeds this frenzy by showing individuals who are in pursuit of money and material objects in order to obtain a certain image or status. Materialism is an advocate for consumers to be conscious of their status (Goldsmith & Clark, 2012). Goldsmith & Clark (2012) state that "materialism leads consumers to put a disproportionate amount of their resources into acquiring goods" (pp 44). The current literature and research on the topic shows that materialism creates a need to buy certain objects and possessions and that materialistic consumers are concerned with how they are viewed by their peers (i.e. status).

A consumer that is considered to have high involvement in fashion would have the status of being a fashion innovator. A fashion innovator is someone who is highly interested in fashion and would value the status of being a fashion innovator (Phau & Lo, 2004). Using the theory of Symbolic Self Completion, one can conclude that a fashion innovator would complete their ideal self with the latest fashions. As previously stated, items that symbolize a self-definition, such as fashion innovator, are more likely to be bought on impulse.
Extrinsic Contingency Focus

The self-esteem of any individual is more self-protective when the individual is focused on extrinsic contingencies. "Extrinsic sources are those that are perceived as coming from outside the self, such as interpersonal acceptance for one's accomplishments and living up to socially defined expectations" (Williams et al., 2010, p. 300). Using a previous example of a fashion innovator, this would mean that self-esteem is focused on being the forefront of fashion and wearing the latest fashions. A fashion innovator wants to be noticed for being fashionable and ahead of the fashion curve therefore, their self-esteem is reliant on having the latest and the best in fashion and dress.

When threatened with rejection or failure, people tend to lash out and try to defend the part of their “self” that has been threatened. One way of defending might be self-enhancement such as buying something new to boost their self-esteem. This is especially true for those with high contingent self-esteem (Vonk & Smit, 2012).

Impulse Buying Tendency

Impulse buying tendency is "the degree to which an individual is likely to make unintended, immediate and unreflective purchases" (Jones et al., 2003, p. 506). Just as individuals vary in how impulsive they are in general, there are also levels to how likely one is to impulse buy. Jones et al. (2003) found that impulse buying tendency is product specific and that product specific impulse buying tendency is a result of general impulse buying tendency. Because impulse buying in general can be thought of as "a wish to indulge" or with hedonistic goals each individual has a different set of products that they would impulse buy (Kalla & Arora, 2011). For example students in fashion related
majors and courses have high fashion involvement and have been found to have higher impulse buying scores when compared to students in other non-fashion related majors (Park et al., 2006).
Chapter 3: Methodology

This study focuses apparel purchases specifically because apparel is a common impulse purchase. In order to understand impulse buying further, an experiment was conducted. Many prior studies on impulse buying are qualitative or in the form of surveys, or non-experimental studies. Prior studies on impulse buying served as a basis for this experiment (Dawson & Kim, 2010; Dittmar et. al., 1996; Kim & Lennon, 2010; Mattila & Wirtz, 2008; Phau & Lo, 2004).

A pilot study was conducted in order to assess whether a pre-test of impulse tendency would interfere with validity of the experiment. The pilot study was also conducted to gauge whether the chosen images and stress measures were effective. What the pilot study found was that the ease of use was very important in getting accurate results with the stress measure. Previous research shows that individuals in fashion related majors tend to be “fashion innovators.” Fashion innovators are the consumers who buy new fashionable and trendy dress items first (Phau & Lo, 2004). The participants of this study may fall into the fashion innovator category as they were recruited from majors related to fashion.

Theoretical Background

Symbolic-Self Completion Theory

Symbolic self-completion theory by Wicklund and Gollwitzer (1982) proposes that people complete themselves by using symbols to make up for elements that they perceive to be absent based on their own self definitions. The objects that they use enable them to more completely exhibit the qualities they perceive themselves to possess. "A
self-definition is a sense of oneself as having permanent qualities, which in turn have implications for future behavioral and thinking patterns" (Wicklund & Gollwitzer, 1982, p. 31). A self-definition can be universal such as being intelligent, or very narrow, such as being a skateboarder. The building blocks of the self-definition are symbols (Wicklund & Gollwitzer, 1982). The purpose of the symbol is to get a response from the general public regarding the self-definition. When individuals are faced with threats to their self image they are more likely to seek a strong preference for self-expressive brands. When faced with powerlessness, consumers are generally willing to pay more for an item that is status related (Chernov & Hamilton). Dittmar, Beattie, and Friese (1996) found that items that were most likely to be bought on impulse were items that symbolize a self-definition such as jewelry and sporting equipment.

One such example of symbolic self-completion was found by Arthur (1997) in a study with sorority pledges. In this study symbolic self-completion was supported by role theory. The role of being part of a sorority was viewed as highly salient and was embraced through the adoption of the idealized images and symbols associated with the sorority they were joining. When these women were nearing the end of their college career, the role became less important or they were more secure in themselves and self-symbolized less (Arthur, 1997). Another study by Kang, Sklar, and Johnson (2011) had similar results with men and their work definitions.

In the event of a traumatic event, a victim can use certain buying behaviors to manage mood and emotional states. Sneath, Lacey, and Kennet-Hensel (2009) found that with disaster victims, impulse buying was actually beneficial. Hurricane Katrina victims
were quoted as saying they were buying “comfort items” that were not “necessarily essential” and that buying back items that were destroyed helped them feel as if they were gaining some control over their lives. In previous consumer behavior research it is often stated that possessions are more than just items, but part of the individual’s self-identity (Sneath et al., 2009). By buying back the “comfort items” these individuals are essentially filling the void in their self-identity that was taken from them. The loss of control and possessions results in stress which turns to depression. In order to cope with the depression the disaster victims then result to various consumer behaviors such as impulse buying or compulsive buying. Because buying on impulse satisfies a hedonic need, it can alleviate feelings of depression (Sneath et al., 2009).

Methods

The measurements of the experiment is done in a 2 x 2 manner set within a survey. The first stimulus is stress and the second is the presence of external impulse cues. There are many ways to define stress. Thoits (1995; p. 65) defines stress as "any environmental, social or internal demand that require the individual to adjust his/her usual behavioral patterns." Stress in turn motivates a person to cope. Coping, then, is a way for an individual to use actions or thoughts to handle a situation, solve problems, and even reduce stress (Lee et al., 2007). People often make decisions under stress that are financial, physical, or mental in nature. Dual process approach believes that if the conditions are stressful, there is an interference with rational thought and deliberate processes. This causes the individual to fall back on their instincts (Porcelli et al., 2009). Previous research has found that individuals engage in an array of consumption related
activities in order to reduce stress and that these activities may actually be helpful (Lee et al., 2007).

The survey starts out with information stating that:

“This study is focused on the relationship between intelligence and consumer decisions in online purchases. We are going to ask that you complete a simple intelligence test, a questionnaire, and view photos of a retail website and answer questions about the website.”

On the next page of the survey, participants are told why they are taking an intelligence test and what kind they will be taking. In order to control for stress participants are randomly assigned to stress and non-stress groups. The stress group is given an anagram test that is not solvable and the non-stress group is given a solvable anagram test.

Participants in the group assigned to stress are told;

“Anagrams are sets of letters when unscrambled form a common English word. For example, “cefr” unscrambles to create the word “free.” Anagram tests are a popular intelligence test that is frequently used by psychologists to measure verbal intelligence. Verbal intelligence is one of the most important qualities that determine a person’s future success. Individuals who do well on anagram tests go on to be very successful in their careers and in life. Please unscramble the following anagrams. Please don’t spend more than 30 seconds on each word. Speed is crucial in this test.”

Because there was no correct answer and the participants believed the test was very important the test resulted in higher levels of stress.
Participants assigned to the non-stress group are told:

“Anagrams are sets of letters when unscrambled form a common English word. For example, “eefr” unscrambles to create the word “free.” Anagram tests are a popular intelligence test that is frequently used by psychologists to measure verbal intelligence. Verbal intelligence is one of the most important qualities that determine a person’s future success. Individuals who do well on anagram tests go on to be very successful in their careers and in life. Please unscramble the following anagrams.”

The difference is that the anagrams are solvable and the participants were given as much time as they liked. There was no pressure put on them to finish in a certain time span.

Directly following the introduction of stress, was the external impulse cue. Participants were also randomly assigned to either an external impulse cue group or a no external impulse cue group. This part of the experiment is completed by the participants looking at a predetermined photo of a webpage. While viewing the webpage participants answer a set of questions that were adapted from the Impulse Buying Tendency scale (Appendix C) developed by Martin, Weun, and Beatty (1993) and validated by Weun, Jones, and Beatty (1998). There were two sets of photos containing two different sets of impulse cues. One photo contained sales and promotions impulse cues. The other photo contained ideas and suggestions impulse cues. Sale, promotions, ideas, and suggestions were originally four different categories found by Dawson and Kim (2010). These groups were put together for this study as they were groups that were often found to be together on apparel websites and very similar.
Following the external impulse stimulation participants take a 15 item material values survey (Richins, 2004) (Appendix C). Previous research has found that materialism may lead to greater need to self-symbolize and attain status symbols (Goldsmith & Clark, 2012). During this time participants also complete a 20 item survey for extrinsic contingency focus (Williams et. al., 2010). Extrinsic contingency focus (Appendix C) was used as a measure because those who score high on this survey base their self-esteem on external contingencies (Williams et. al., 2010). Following the materialism and extrinsic contingency focus surveys participants complete a short section on demographics. The survey was ended with a debriefing section. Since participants were deceived when told the anagram test was an important tool for determining ones future endeavors, a detailed description of the study was included.

**Measurements**

Impulse tendency measure was modified from Weun, Jones, and Beatty (1998) where the authors developed and validated the impulse tendency scale, to create a new impulse tendency scale that fit the purposes of this study. A factor analysis was run and the results show the reverse coded item to be unreliable. This item was removed and leaves 5 items for each image, resulting in 10 items total. Reliability tests were run on each set of 5 items to find if they could be used as one scale item. Cronbach’s Alpha was significantly greater than .70 and both were found to be reliable (Set 1: coefficient $a = .867$, Set 2: coefficient $a = .886$). Reliability was also run on the sets together to put them as one scale to measure impulse tendency average. Cronbach’s Alpha was significantly greater than .70 and found to be reliable (coefficient $a = .889$).
Table 1

*Factor analysis for 6 items from the modified version of the Impulse Tendency Scale (N = 156) for the image of the shirt with ideas/suggestions cue*

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would buy things I had not intended to purchase.</td>
<td>.780</td>
</tr>
<tr>
<td>I would avoid buying things that are not on my shopping list. (r)</td>
<td>.477</td>
</tr>
<tr>
<td>I would think it was fun to buy spontaneously.</td>
<td>.777</td>
</tr>
<tr>
<td>I would make unplanned purchases.</td>
<td>.856</td>
</tr>
<tr>
<td>I see something that really interests me and would buy it without considering the consequences.</td>
<td>.790</td>
</tr>
<tr>
<td>I see something new that really interests me and would buy it without hesitation.</td>
<td>.806</td>
</tr>
</tbody>
</table>

Eigenvalue 3.446
Table 2

*Factor analysis for 6 items from the modified version of the Impulse Tendency Scale (N = 156) for the image of the Jacket with sales/promotions cue*

| Variables | 1 | 
|-----------|---|---|
| I would buy things I had not intended to purchase. |  | .825 |
| I would avoid buying things that are not on my shopping list. (r) |  | .361 |
| I would think it was fun to buy spontaneously. |  | .750 |
| I would make unplanned purchases. |  | .855 |
| I see something that really interests me and would buy it without considering the consequences. |  | .818 |
| I see something new that really interests me and would buy it without hesitation. |  | .875 |

| Eigenvalue | 3.539 |
Table 3

Reliability of Impulse Tendency Scale for each image and as one scale, Material Values Scale, and Extrinsic Contingency Focus

<table>
<thead>
<tr>
<th>Scale</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impulse Tendency</td>
<td></td>
</tr>
<tr>
<td>Image - Shirt</td>
<td>.867</td>
</tr>
<tr>
<td>Image - Jacket</td>
<td>.886</td>
</tr>
<tr>
<td>Whole Scale (10 items)</td>
<td>.889</td>
</tr>
<tr>
<td>Material Values</td>
<td>.836</td>
</tr>
<tr>
<td>Extrinsic Contingency Focus</td>
<td>.793</td>
</tr>
</tbody>
</table>

A 15 item material values scale modified by Richins (2004) was used and tested for reliability. Cronbach’s Alpha was significantly greater than .70 and thus was found to be reliable (coefficient $a = .836$). A material values scale was used in order to see the impact of materialism on impulse buying.

A reliability test of Extrinsic Contingency Focus (Williams et. al., 2010) was run and Cronbach’s Alpha was significantly greater than .70 (coefficient $a = .793$) and thus found reliable. A scale on Extrinsic Contingency Focus (Williams et. al., 2010) was used because if a participant’s self-esteem was highly contingent on outside or extrinsic items,
it was assumed that they would be more likely to impulse buy when their identity was threatened.
Chapter 4: Results

A total of 156 usable surveys were completed. All 156 participants were female as that was a main criterion. Ages ranged from 18 to 27 with the mean age of 21. Three quarters (76.30%) of respondents were born in or before 1990 meaning that 76 percent or respondents are between the ages of 18 and 22. Majority of respondents were sophomore, junior, or senior with only 11.5 percent freshman. Over half (54.5%) of the respondents work part-time and the mean income is between, approximately, $25,000 and $30,000. However, 27.1 percent of respondents have an annual household income of $100,000 or more. Complete demographic information is presented in tables 4,5, and 6.
Table 4

_Demographic Profile of Sample: Age_

<table>
<thead>
<tr>
<th>Year Born</th>
<th>Frequency</th>
<th>Age Range</th>
<th>Percent</th>
<th>Total Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>11</td>
<td>18-19</td>
<td>7.1</td>
<td>7.1</td>
</tr>
<tr>
<td>1992</td>
<td>36</td>
<td>19-20</td>
<td>23.1</td>
<td>30.1</td>
</tr>
<tr>
<td>1991</td>
<td>40</td>
<td>20-21</td>
<td>25.6</td>
<td>55.8</td>
</tr>
<tr>
<td>1990</td>
<td>32</td>
<td>21-22</td>
<td>20.5</td>
<td>76.3</td>
</tr>
<tr>
<td>1989</td>
<td>21</td>
<td>22-23</td>
<td>13.5</td>
<td>89.7</td>
</tr>
<tr>
<td>1988</td>
<td>3</td>
<td>23-24</td>
<td>1.9</td>
<td>91.7</td>
</tr>
<tr>
<td>1987</td>
<td>6</td>
<td>24-25</td>
<td>3.8</td>
<td>95.5</td>
</tr>
<tr>
<td>1986</td>
<td>3</td>
<td>25-26</td>
<td>1.9</td>
<td>97.4</td>
</tr>
<tr>
<td>1985</td>
<td>4</td>
<td>26-27</td>
<td>2.6</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td></td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
Table 5

Demographic Profile of Sample: Year in School

<table>
<thead>
<tr>
<th>Year in School</th>
<th>Frequency</th>
<th>Percent</th>
<th>Total Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>18</td>
<td>11.5</td>
<td>11.5</td>
</tr>
<tr>
<td>Sophomore</td>
<td>43</td>
<td>27.6</td>
<td>39.1</td>
</tr>
<tr>
<td>Junior</td>
<td>40</td>
<td>25.6</td>
<td>64.7</td>
</tr>
<tr>
<td>Senior</td>
<td>39</td>
<td>25.0</td>
<td>89.7</td>
</tr>
<tr>
<td>Graduate</td>
<td>7</td>
<td>4.5</td>
<td>94.2</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>5.8</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
Table 6

Demographic Profile of Sample: Work Status and Income

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Total Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Time</td>
<td>12</td>
<td>7.7</td>
<td>7.7</td>
</tr>
<tr>
<td>Part Time</td>
<td>85</td>
<td>54.5</td>
<td>62.2</td>
</tr>
<tr>
<td>Do Not Work</td>
<td>59</td>
<td>37.8</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under $25,000</td>
<td>54</td>
<td>34.6</td>
<td>34.6</td>
</tr>
<tr>
<td>$25,001-50,000</td>
<td>19</td>
<td>12.2</td>
<td>47.1</td>
</tr>
<tr>
<td>$50,001-75,000</td>
<td>26</td>
<td>16.7</td>
<td>63.9</td>
</tr>
<tr>
<td>$75,001-100,000</td>
<td>14</td>
<td>9.0</td>
<td>72.9</td>
</tr>
<tr>
<td>$100,001-150,000</td>
<td>22</td>
<td>14.2</td>
<td>87.1</td>
</tr>
<tr>
<td>$150,001 and over</td>
<td>20</td>
<td>12.9</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>155</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

An independent-samples t-test was conducted to compare impulse tendency in stress and no stress conditions. Impulse tendency was broken down into 5 sections: impulse tendency based on the image of the shirt, impulse tendency based on the image of the jacket, impulse tendency based on the first image viewed by participants, impulse tendency based on the second image viewed by participants, and impulse tendency average. There was a significant difference in scores for stress ($M = 3.1233$, $SD = .87027$)
and no stress ($M = 2.7036, SD = .91030$) conditions for the second image viewed; $t (154) = -2.933, p = .004$. These results suggest that stress played a role in impulse buying tendency for the second image that participants viewed. Participants were randomly assigned the order of images, so this does not refer to any particular image.

An independent-samples $t$-test was conducted to compare impulse tendency in the impulse cue and no impulse cue conditions. No significant results were garnered from this statistical test. There was no significant difference in impulse tendency from having an impulse cue, to having no impulse cue.
Table 7

Independent Samples t-test for stress groups and impulse cue groups

<table>
<thead>
<tr>
<th>Condition</th>
<th>Sig.</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Image</td>
<td>.673</td>
<td>.423</td>
<td></td>
</tr>
<tr>
<td>2nd Image</td>
<td>.004**</td>
<td>-2.933</td>
<td></td>
</tr>
<tr>
<td>Image – Shirt</td>
<td>.334</td>
<td>-.970</td>
<td></td>
</tr>
<tr>
<td>Image - Jacket</td>
<td>.162</td>
<td>-1.405</td>
<td></td>
</tr>
<tr>
<td>ImpTendAvg</td>
<td>.158</td>
<td>-1.418</td>
<td></td>
</tr>
<tr>
<td>Impulse Cue</td>
<td>154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Image</td>
<td>.132</td>
<td>-1.514</td>
<td></td>
</tr>
<tr>
<td>2nd Image</td>
<td>.364</td>
<td>.911</td>
<td></td>
</tr>
<tr>
<td>Image – Shirt</td>
<td>.213</td>
<td>-1.251</td>
<td></td>
</tr>
<tr>
<td>Image – Jacket</td>
<td>.473</td>
<td>.719</td>
<td></td>
</tr>
<tr>
<td>ImpTendAvg</td>
<td>.732</td>
<td>-.343</td>
<td></td>
</tr>
</tbody>
</table>

**p< 0.01.

A Multiple Analysis of Variance (MANOVA) was conducted in order to examine the effects of stress and presence of external impulse trigger cues on impulse tendency. Impulse tendency was broken down into 5 sections: impulse tendency based on the image of the shirt, impulse tendency based on the image of the jacket, impulse tendency based on the first image viewed by participants, impulse tendency based on the second image viewed by participants, and impulse tendency average. There was a main effect of stress and the second impulse tendency $F (3, 156) = 8.857, p = .003$. These results show that participants were more likely to impulse buy with the second image when stress was
These results verify the results of the independent-samples t-test that was conducted. There was no significant interaction when stress and impulse cue were combined on impulse tendency.

Table 8
Multivariate Analysis of Variance: Dependent Variable based on first image and second image

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sig.</th>
<th>F</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Image</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stress</td>
<td>.641</td>
<td>.218</td>
<td>1</td>
</tr>
<tr>
<td>Impulse Cue</td>
<td>.140</td>
<td>2.203</td>
<td>1</td>
</tr>
<tr>
<td>Stress*Impulse Cue</td>
<td>.570</td>
<td>.323</td>
<td>1</td>
</tr>
<tr>
<td>Second Image</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stress</td>
<td>.003**</td>
<td>8.857</td>
<td>1</td>
</tr>
<tr>
<td>Impulse Cue</td>
<td>.285</td>
<td>1.152</td>
<td>1</td>
</tr>
<tr>
<td>Stress*Impulse Cue</td>
<td>.700</td>
<td>.149</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>156</td>
<td></td>
</tr>
</tbody>
</table>

** p< 0.01.

Correlations

Pearson correlation coefficients were calculated to investigate the relationship among the variables (Extrinsic Contingency Focus, impulse tendency for the first image, impulse tendency for the second image, impulse tendency for the ideas impulse cue, impulse tendency for the sales impulse cue, impulse tendency average, presence of impulse cue, Material Values Scale, presence of stress, and the order the images). The results are presented in Table 9.
There was a positive correlation between stress ($M = 1.4679$, $SD = .50058$) and the second impulse tendency ($M = 2.90$, $SD = .91341$), $r = .230$, $p = .004$, $n = 156$. This correlation might suggest that there is a delay in the stress setting in. It may take time for the threat to their self to take effect and the time it took to look at image one and finish the questionnaire may have been just enough time.

There was a positive correlation between Material Values ($M = 2.9850$, $SD = .61357$) and Extrinsic Contingency Focus ($M = 3.1212$, $SD = .48177$), $r = .522$, $p = .000$, $n = 156$. A correlation between Material Values Scale and Extrinsic Contingency Focus was expected as they are similar scales. The difference is that the Material Values Scale focuses on material objects and happiness and feelings towards the material objects where Extrinsic Contingency Focus is about basing self-esteem on outside sources and not gaining self-esteem from internal sources.

There was a positive correlation between Material Values ($M = 2.9850$, $SD = .61357$) and impulse tendency for the shirt ($M = 2.7974$, $SD = .92394$), $r = .238$, $p = .003$, $n = 156$. This correlation may suggest that participants that value material objects respond well to the ideas and suggestions external impulse trigger cue. The ideas and suggestions external impulse trigger cue is when a retailer will show how one article of clothing will look as an outfit or show other products that a consumer may like if they like the original article.

There was a positive correlation between Material Values ($M = 2.9850$, $SD = .61357$) and Impulse Tendency Average ($M = 2.7788$, $SD = .78838$), $r = .158$, $p = .049$, $n = 156$. This correlation may suggest that those who value material objects are in fact
more likely to impulse buy. This supports previous research on materialism and consumer behaviors.

Table 9

Means, Standard Deviations, and Correlations of All Variables

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ECF Average</td>
<td>3.12</td>
<td>.48</td>
<td>-.082</td>
<td>.011</td>
<td>.038</td>
<td>-.097</td>
<td>-.041</td>
<td>.032</td>
<td>.522**</td>
<td>-.007</td>
<td>.134</td>
<td></td>
</tr>
<tr>
<td>2. 1st Image Viewed</td>
<td>2.66</td>
<td>.91</td>
<td>-.082</td>
<td>1</td>
<td>.492**</td>
<td>.773**</td>
<td>.706**</td>
<td>.864**</td>
<td>.121</td>
<td>.132</td>
<td>-.034</td>
<td>-.148</td>
</tr>
<tr>
<td>3. 2nd Image Viewed</td>
<td>2.90</td>
<td>.91</td>
<td>.011</td>
<td>.492**</td>
<td>1</td>
<td>.709**</td>
<td>.770**</td>
<td>.864**</td>
<td>.073</td>
<td>.141</td>
<td>.230**</td>
<td>-.057</td>
</tr>
<tr>
<td>4. Ideas Impulse Tend</td>
<td>2.80</td>
<td>.92</td>
<td>.038</td>
<td>.773**</td>
<td>.709**</td>
<td>1</td>
<td>.467**</td>
<td>.858**</td>
<td>.100</td>
<td>.238**</td>
<td>.078</td>
<td>.036</td>
</tr>
<tr>
<td>5. Sales Impulse Tend</td>
<td>2.76</td>
<td>.92</td>
<td>-.097</td>
<td>.706**</td>
<td>.770**</td>
<td>.467**</td>
<td>1</td>
<td>.855**</td>
<td>.058</td>
<td>.044</td>
<td>.112</td>
<td>-.237**</td>
</tr>
<tr>
<td>6. Impulse Tend Avg</td>
<td>2.78</td>
<td>.79</td>
<td>-.041</td>
<td>.864**</td>
<td>.864**</td>
<td>.855**</td>
<td>.855**</td>
<td>1</td>
<td>.028</td>
<td>.158*</td>
<td>.114</td>
<td>-.119</td>
</tr>
<tr>
<td>7. Impulse Cue</td>
<td>1.51</td>
<td>.50</td>
<td>.032</td>
<td>.121</td>
<td>-.073</td>
<td>.100</td>
<td>-.058</td>
<td>.028</td>
<td>1</td>
<td>.075</td>
<td>.040</td>
<td>.083</td>
</tr>
<tr>
<td>8. Material Values</td>
<td>2.99</td>
<td>.61</td>
<td>.522**</td>
<td>.132</td>
<td>.141</td>
<td>.238**</td>
<td>.044</td>
<td>.158*</td>
<td>.075</td>
<td>1</td>
<td>-.013</td>
<td>.093</td>
</tr>
<tr>
<td>9. Stress</td>
<td>1.47</td>
<td>.50</td>
<td>-.007</td>
<td>-.034</td>
<td>.230**</td>
<td>.078</td>
<td>.112</td>
<td>.114</td>
<td>.040</td>
<td>.013</td>
<td>1</td>
<td>-.025</td>
</tr>
<tr>
<td>10. Order</td>
<td>1.41</td>
<td>.49</td>
<td>.134</td>
<td>-.148*</td>
<td>-.057</td>
<td>.036</td>
<td>-.237**</td>
<td>-.119</td>
<td>.083</td>
<td>.093</td>
<td>-.025</td>
<td>1</td>
</tr>
</tbody>
</table>

**p < 0.01.
* p < 0.05.

Regression analysis was conducted in order to explore the relationship between two or more variables. In order to analyze for three way interactions, three linear regressions were run. The variables ‘stress’ and ‘impulse cue’ were transformed into
dummy variables in order to indicate the presence of or no presence of both variables (presence of stress or no stress; presence of impulse cue or no impulse cue).

To increase the interpretability of the interactions between variables, the predictor variables were centered. Centering the predictor variables is suggested by several researchers (Aiken & West, 1991; McClelland & Judd, 1993). When variables are not centered, there could be issues with multicollinearity. Multicollinearity is a state of very high inter-correlations between independent variables (Farrar & Glauber, 1967).

In order to center the variable, the mean of each is subtracted from the variable. New variables were created to reflect the two and three way interactions in the linear regression. For example, the new centered Extrinsic Contingency Focus is used to compute new variables such as: Dstress (dummy variable of stress) x C_ECF, Dcue (dummy variable of impulse cue) x C_ECF, and Dstress x Dcue x C_ECF. This is analyzed for both ECF and Material Values scale.

A linear regression was run for each impulse tendency (impulse tendency average, impulse tendency for image 1, impulse tendency for image 2, impulse tendency for image of shirt, and impulse tendency for image of jacket) with both centered Material Values Scale and centered Extrinsic Contingency Focus.

Impulse tendency average showed no significance with either Material Values or Extrinsic Contingency Focus (ECF). Impulse tendency for the first image viewed showed no significance with ECF, but there is a correlation between stress and material values on the first image ($r = .141$, $p = .040$, $n = 156$). Impulse tendency for the second image viewed does show significance with stress as found previously in t-tests. Impulse
tendency for the image of the shirt with ideas/suggestions impulse cues showed no significance with ECF. Impulse tendency for the suggestions cue (image of shirt) did show significance with stress and materialism. Impulse tendency for the sales cue (image of jacket) showed no significance with materialism and ECF. There was a significant interaction between the sales impulse cue and stress. Stress and materialism together had an impact on impulse tendency for the suggestions impulse cue. These results suggest that when threatened, those that are materialistic will impulse buy when presented with a specific type of impulse cue. In this case the impulse cue was being able to see suggestions of coordinating items and the items as an outfit. Stress appears to be a main effect in several cases as stated with previous tests that were run. All significant interactions of moderating variables are presented in table 10.

Table 10

*Linear Regression Analysis Predicting Moderating variables*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Moderators</th>
<th>B(SE)</th>
<th>Beta</th>
<th>pvalue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impulse Tendency of image of the shirt (ideas/suggestions cue)</td>
<td>DStress x CMaterialism</td>
<td>.741(.279)</td>
<td>.326</td>
<td>.009</td>
</tr>
</tbody>
</table>
Lastly, correlations between demographics of participants and the independent and dependent variables were analyzed. The results suggest that age is a significant factor in impulse tendency for the second image viewed, impulse tendency of the suggestions impulse cue (image of the shirt), and impulse tendency average.

There was a negative correlation between year born and the second impulse tendency image ($M = 2.90$, $SD = .91$), $r = -.195$, $p = .015$, $n = 156$. The younger participants were more likely to impulse buy when presented with the second image.

There was a negative correlation between year born and impulse tendency for the suggestions impulse cue (image of the shirt) ($M = 2.80$, $SD = .92$), $r = -.209$, $p = .009$, $n = 156$. Freshman participants were more likely to impulse buy when presented with the image of the shirt and the ideas/suggestions impulse trigger cues than their older counterparts such as seniors.

There was a negative correlation between year born and impulse tendency average ($M = 2.78$, $SD = .79$), $r = -.203$, $p = .011$, $n = 156$. This correlation suggests that as participants get older, they become less impulsive. This could simply be due to maturity. Freshman are still new to the idea of having freedom from their parents where a senior is on the verge of graduating and acclimating themselves to a new culture of “after college”.
Table 11

*Means, Standard Deviations, and Correlations of Demographics and All Other Variables*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Impt Tend 1st Image</td>
<td>2.66</td>
<td>.91</td>
<td>1</td>
<td>.492**</td>
<td>.773**</td>
<td>.706**</td>
<td>.864**</td>
<td>.132</td>
<td>-.082</td>
<td>.086</td>
<td>.043</td>
<td>-.056</td>
<td>-.156</td>
</tr>
<tr>
<td>2. Impt Tend 2nd Image</td>
<td>2.90</td>
<td>.91</td>
<td>.492**</td>
<td>1</td>
<td>.709**</td>
<td>.770**</td>
<td>.864**</td>
<td>.141</td>
<td>.011</td>
<td>.138</td>
<td>-.017</td>
<td>-.088</td>
<td>-.195*</td>
</tr>
<tr>
<td>3. Impt Tend Shirt</td>
<td>2.80</td>
<td>.92</td>
<td>.773**</td>
<td>.709**</td>
<td>1</td>
<td>.467**</td>
<td>.858**</td>
<td>.238**</td>
<td>.038</td>
<td>.125</td>
<td>.041</td>
<td>-.114</td>
<td>-.209*</td>
</tr>
<tr>
<td>4. Impt Tend Jacket</td>
<td>2.76</td>
<td>.92</td>
<td>.706**</td>
<td>.770**</td>
<td>.467**</td>
<td>1</td>
<td>.855**</td>
<td>.044</td>
<td>-.097</td>
<td>.099</td>
<td>-.013</td>
<td>-.039</td>
<td>-.145</td>
</tr>
<tr>
<td>5. Impt Tend Avg</td>
<td>2.78</td>
<td>.79</td>
<td>.864**</td>
<td>.864**</td>
<td>.858**</td>
<td>.855**</td>
<td>1</td>
<td>.158*</td>
<td>-.041</td>
<td>.130</td>
<td>.015</td>
<td>-.083</td>
<td>-.203*</td>
</tr>
<tr>
<td>6. MVS</td>
<td>2.99</td>
<td>.61</td>
<td>.132</td>
<td>.141</td>
<td>.238**</td>
<td>.044</td>
<td>.158*</td>
<td>1</td>
<td>.522**</td>
<td>.029</td>
<td>.069</td>
<td>-.017</td>
<td>-.106</td>
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<tr>
<td>7. ECF</td>
<td>3.12</td>
<td>.48</td>
<td>-.082</td>
<td>.011</td>
<td>.038</td>
<td>-.097</td>
<td>-.041</td>
<td>.522**</td>
<td>1</td>
<td>.066</td>
<td>.110</td>
<td>-.083</td>
<td>-.038</td>
</tr>
<tr>
<td>8. Household Income</td>
<td>2.94</td>
<td>1.83</td>
<td>.086</td>
<td>.138</td>
<td>.125</td>
<td>.099</td>
<td>.130</td>
<td>.029</td>
<td>.066</td>
<td>1</td>
<td>.174*</td>
<td>-.035</td>
<td>-.056</td>
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<tr>
<td>9. Work Status</td>
<td>2.30</td>
<td>.61</td>
<td>.043</td>
<td>-.017</td>
<td>.041</td>
<td>-.013</td>
<td>.015</td>
<td>.061</td>
<td>.110</td>
<td>.174*</td>
<td>1</td>
<td>-.256**</td>
<td>-.275**</td>
</tr>
<tr>
<td>10. Year in School</td>
<td>3.01</td>
<td>1.30</td>
<td>-.056</td>
<td>-.088</td>
<td>-.114</td>
<td>-.039</td>
<td>-.083</td>
<td>-.017</td>
<td>-.083</td>
<td>-.035</td>
<td>-.256**</td>
<td>1</td>
<td>.657**</td>
</tr>
<tr>
<td>11. Year Born</td>
<td>10.71</td>
<td>2.79</td>
<td>-.156</td>
<td>-.195*</td>
<td>-.209*</td>
<td>-.145</td>
<td>-.203*</td>
<td>-.106</td>
<td>-.038</td>
<td>-.056</td>
<td>-.275**</td>
<td>.657**</td>
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**p < 0.01.

*p < 0.05.
Chapter 5: Discussion and Conclusion

There were three purposes of this study: 1) to examine the effect of stress on impulse buying, 2) to explore the moderating role of support scales such as Material Values (Richins, 2004) and Extrinsic Contingency Focus (Williams et. al., 2010), on impulse buying, and 3) how external impulse trigger cues impact impulse buying. The study was an experimental design set up to test current theories in impulse buying and consumer behavior. Overall, the study found that: 1) materialistic individuals, when threatened, are likely to impulse buy under certain impulse trigger cue conditions, and 2) that stress did impact impulse buying but was a delayed reaction. A higher correlation between moderating variables and impulse buying tendency was expected.

The first main finding of the effect of stress and materialism on impulse buying tendency was only for the image of the shirt which had specific impulse trigger cues. These impulse trigger cues happened to be ideas and suggestions. The ideas and suggestions impulse trigger cue in this study was a basic striped shirt. The striped shirt was then framed by ideas of coordinating items and how they looked as an outfit. These results suggest that these individuals needed to “gain something back” from being threatened with the “intelligence test” they just took and failed. These findings support the theory of Symbolic Self-Completion by Wicklund & Gollwitzer (1982).

Symbolic Self-Completion theory suggests that each person has several self-definements and/or self-concepts and when one of them is threatened, the individual seeks to correct the balance (Wicklund & Gollwitzer, 1982). A self-definition can be anything from being a soccer player to being a Mac/Apple person. Self-concepts are highly
relevant to fashion products because of the importance dress and fashion plays on shaping one’s self-image and self-concept (Phau & Lo, 2004).

In the current study, the individuals taking the survey were mostly recruited from fashion related majors. These participants are more involved in fashion and could even be considered fashion leaders. By telling participants that “Individuals who do well on anagram tests go on to be very successful in their careers and in life” their self-concept is threatened when they cannot finish the simple intelligence test. Participants “remedied” there loss of self-concept by impulse buying with the image of the shirt.

The second main finding was that stress did influence impulse buying tendency but was a delayed reaction. Participants, when presented with the stress condition, were more likely to impulse buy from the second image that they viewed. The images were randomly ordered for each participant and thus the impulse cues and product did not matter. Previous research has found that individuals can have Delayed Stress Response Syndrome (DSRS) (Figley & Sprenkle, 1978). Figley & Sprenkle (1978) used DSRS to explain and help Vietnam combat veterans. Vietnam veterans are an extreme comparison to this study, but the idea is the same.

Normally, Delayed Stress Response Syndrome would affect a person who experienced a catastrophic event. As the name suggests, after the initial trauma, there is a state of “numbness” where the individual does not respond to what just happened (Figley & Sprenkle, 1978). In the case of this study, the participants thought the intelligence test they were taking was very important and they thought if they didn’t do well on the test then they were going to have a rough life. Directly after taking the intelligence (anagram)
test the participants were shown the first image and answered questions regarding impulse tendency for the image. There were no significant results with the first image. Stress did play a significant role with the second image viewed by participants. This suggests a form of Delayed Stress Response.

There were three other significant interactions found with the age of the participants, all of which were a negative correlation. The negative correlations showed that the younger participants were more likely to impulse buy and be impacted by the threat to their self-concept. These same results were found in a study done on sorority pledges and how they self-symbolized. The researcher found that as the sorority members got older they felt less need to wear and display the status that came with being in their sorority. The youngest and newest members of the sorority used status symbols much more as they were still getting acclimated into their new role and trying to make their place (Arthur, 1997).

Limitations and Implications

As previously stated, many participants were from a fashion related major. It can be assumed that the older students in these programs are aware of how retailers and companies in general market and advertise their products. This could make them less prone to the influence of the marketing and advertising strategies.

The present study could be expanded to include males and females instead of just females. Current research on males and impulse buying is quite limited. The majority of impulse buying research is targeted at females and how females shop. Perhaps the study would need to be expanded from just fashion and include other luxury items such as
electronics. A survey could also be conducted to find specific items/areas that males are more likely to impulse buy.

One issue that could have even skewed results is that students often are faced with minor stressors throughout the quarter or semester. The data of this study was gathered across more than one quarter. One might assume that stress is high during midterms and finals. If someone participated during midterms and was already stressed but not presented with the stress condition they might respond as if they were presented with the stress condition. The everyday stress might be able to be used for the stress condition if the study were duplicated. The timing of the study would have to be controlled, but might be another way to control for stress.

A second study may be run in order to recreate the results from this study. To confirm that there is in fact a delayed reaction to the threat to the participants self, a second study could be run with only one photo/shopping setting. In order to test for the delay, after the anagram test the participants would complete a distraction questionnaire. The distraction questionnaire could allow enough time for the stress to set in. If the results are similar to the first and present study, then the results that were found here would have more meaning.

Despite limitations, the present study provides an experimental insight into the field of impulse buying online. This information could be used to assist retailers in the layout of their online stores and could be a foundation for future studies. The main effects of this study were negative correlations with the younger participants. What this means is
that as age goes up, impulse tendency goes down. These results also suggest that maybe the younger participants are more likely to be influenced by stress and impulse cues.

These results might suggest that retailers and marketers already realize that the younger generations are more impulsive and that could account for ‘tweens’ and teens being what seems to be the focus of today’s media. The younger participants of the present study were more materialistic and more impulsive and thus, more likely to impulse buy when their self-identity was threatened. With today’s media being so focused on supermodel thin celebrities and perfection, this could be a constant threat to a young female’s self-esteem.
References


Appendix A: IRB

The following research study has been approved by the Institutional Review Board at Ohio University for the period listed below. This review was conducted through an expedited review procedure as defined in the federal regulations as Category(ies).

Project Title: Retail Therapy: The Impact of Stress and External Impulse Triggers on Online Impulse Buying

Primary Investigator: Britannie Moran
Co-Investigator(s): Lynn Eun Kwak

Faculty Advisor: Lynn Eun Kwak
Department: Human and Consumer Sciences Education

Rebecca Cale, AAB, CIP
Office of Research Compliance

Approval Date 5/8/12
Expiration Date 5/8/12

This approval is valid until expiration date listed above. If you wish to continue beyond expiration date, you must submit a periodic review application and obtain approval prior to continuation.

Adverse events must be reported to the IRB promptly, within 5 working days of the occurrence.

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the project must be approved by the IRB (as an amendment) prior to implementation.
Appendix B: Survey

You are being asked to participate in research. For you to be able to decide whether you want to participate in this project, you should understand what the project is about, as well as the possible risks and benefits in order to make an informed decision. This process is known as informed consent. This form describes the purpose, procedures, possible benefits, and risks. It also explains how your personal information will be used and protected. If you have additional questions about this study you may contact (Brittanie Moran, bm457804@ohio.edu) for clarification prior to your participation. If you have no additional questions or your questions about the study have been answered, you may begin the study. You may print this page for your records.

This study will contribute to the growing field of consumer behavior and how consumers' intelligence impact their online shopping decisions. If you agree to participate, you will be asked to complete a two part survey that will take approximately 10 minutes to finish.

The risks with this study are minimal.

The results of this study will add to the growing field of consumer behavior and will shed light on how retailers use website features.

Your study information will be kept completely anonymous. There will be no way to link your responses on the survey back to you.

If you have any questions regarding this study, please contact Brittanie Moran via email (bm457804@ohio.edu).

If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

By continuing with the survey, you are agreeing that:
- you have read this consent form (or it has been read to you) and have been given the opportunity to ask questions and have them answered
- you have been informed of potential risks and they have been explained to your satisfaction.
- you understand Ohio University has no funds set aside for any injuries you might receive as a result of participating in this study
- you are 18 years of age or older
- your participation in this research is completely voluntary
- you may leave the study at any time. If you decide to stop participating in the study, there will be no penalty to you and you will not lose any benefits to which you are otherwise entitled.

Please click the button below to continue
Survey: With Stress Condition

This study is focused on the relationship between intelligence and consumer decisions in online purchases. We are going to ask that you complete a simple intelligence test, a questionnaire, and view photos of a retail website and answer questions about the website.

Anagrams are sets of letters when unscrambled form a common English word. For example, “eefr” unscrambles to create the word “free.” Anagram tests are a popular intelligence test that is frequently used by psychologists to measure verbal intelligence. Verbal intelligence is one of the most important qualities that determine a person’s future success. Individuals who do well on anagram tests go on to be very successful in their careers and in life.

Please unscramble the following anagrams.

Please don’t spend more than 30 seconds on each word. Speed is crucial in this test.

1. LTEBULA
2. GROADN
3. LENPTAE
4. UOLDIBE
5. FSNAITE
6. OECARDE
7. TRAOTCR
8. MRBTHUE
9. AEDRNOM
10. ARVHTEL
Survey: No Stress Condition

This study is focused on the relationship between intelligence and consumer decisions in online purchases. We are going to ask that you complete a simple intelligence test, a questionnaire, and view photos of a retail website and answer questions about the website.

Anagrams are sets of letters when unscrambled form a common English word. For example, “eefr” unscrambles to create the word “free.” Anagram tests are a popular intelligence test that is frequently used by psychologists to measure verbal intelligence. Verbal intelligence is one of the most important qualities that determine a person’s future success. Individuals who do well on anagram tests go on to be very successful in their careers and in life.

Please unscramble the following anagrams.

1. ONCDES
2. EMKONY
3. SCULEM
4. IIDVED
5. OEFWLR
6. URHHCC
7. DOANMID
8. LLIMNOI
9. OMCNMO
10. PGROU
Survey: No Impulse Cue Condition

Now we would like you to view website photos and answer questions about them.

Figure 1. No Impulse Cue: Shirt, Ideas/Suggestions

Finish the statement
“If I were shopping on this website right now.…”

1  2  3  4  5
Strongly Disagree                      Strongly Agree

1. I buy things I had not intended to purchase.
2. I avoid buying things that are not on my shopping list. (r)
3. It is fun to buy spontaneously.
4. I will make unplanned purchases.
5. When I see something that really interests me, I buy it without considering the consequences.
6. If I see something new that really interests me, I would buy it without hesitation.

After seeing the site. (regarding/responding to this website) how much are you willing to pay?
($   )
Finish the statement
“If I were shopping on this website right now….”

1. I buy things I had not intended to purchase.
2. I avoid buying things that are not on my shopping list. (r)
3. It is fun to buy spontaneously.
4. I will make unplanned purchases.
5. When I see something that really interests me, I buy it without considering the consequences.
6. If I see something new that really interests me, I would buy it without hesitation.

After seeing the site. (regarding/responding to this website) how much are you willing to pay?
($ )
Survey: With Impulse Cue Condition

Now we would like you to view website photos and answer questions about them.

![Figure 3. With Impulse Cue: Shirt, Ideas/Suggestions](image)

Finish the statement
“If I were shopping on this website right now….“

1 2 3 4 5
Strongly Disagree 3 4 5 Strongly Agree

1. I buy things I had not intended to purchase.
2. I avoid buying things that are not on my shopping list. (r)
3. It is fun to buy spontaneously.
4. I will make unplanned purchases.
5. When I see something that really interests me, I buy it without considering the consequences.
6. If I see something new that really interests me, I would buy it without hesitation.

After seeing the site. (regarding/responding to this website) how much are you willing to pay?
($ )
Figure 4. With Impulse Cue: Jacket, Sales/Promotions

Finish the statement
“If I were shopping on this website right now….”

1  2  3  4  5
Strongly Disagree Strongly Agree

1. I buy things I had not intended to purchase.
2. I avoid buying things that are not on my shopping list. (r)
3. It is fun to buy spontaneously.
4. I will make unplanned purchases.
5. When I see something that really interests me, I buy it without considering the consequences.
6. If I see something new that really interests me, I would buy it without hesitation.

After seeing the site. (regarding/responding to this website) how much are you willing to pay?
($   )
1. If I could just improve my performance in life, people would respect me more.
2. I often get concerned with how others are evaluating me.
3. I would compete in a public event, even if I knew I couldn’t win.
4. I work hard at things because of the social approval it provides.
5. I would not bother trying to learn a music instrument if I knew that I would never be able to play well enough to impress people.
6. In social gatherings I hardly ever think about how other people are judging me.
7. Being recognized as a hero would be a very rewarding part of saving someone’s life.
8. I exercise because it makes me more attractive to others.
9. When I have done a good job, it is important that my supervisor acknowledges it.
10. I feel as though people will respect me whether I am a success or failure.
11. It is not important that I get recognition for the tasks I undertake.
12. I find I have little interest in a task unless there is the possibility that I will get recognition for doing it.
13. When I know I’m being evaluated, I feel uneasy until I receive feedback.
14. I interact with people at social gatherings without thinking about how they might affect my reputation.
15. I feel as though people like me less when I make mistakes.
16. Whenever I voice my opinion, I feel uneasy unless someone voices agreement.
17. I rarely think about how people are evaluating me.
18. I have an image to maintain.
19. I immediately think of what others will think when I accomplish something great.
20. I would go to my high school reunion to show everyone how well I have done since then.
1. I admire people who own expensive homes, cars, and clothes.

2. Some of the most important achievements in life include acquiring material possessions.

3. I don't place much emphasis on the amount of material objects people own as a sign of success.

4. The things I own say a lot about how well I'm doing in life.

5. I like to own things that impress people.

6. I try to keep my life simple, as far as possessions are concerned.

7. The things I own aren't all that important to me.

8. Buying things gives me a lot of pleasure.

9. I like a lot of luxury in my life.

10. I put less emphasis on material things than most people I know.

11. I have all the things I really need to enjoy life.

12. My life would be better if I owned certain things I don't have.

13. I wouldn't be any happier if I owned nicer things.

14. I'd be happier if I could afford to buy more things.

15. It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like.
1. What year were you born? _______

2. What year in school are you?
   - Freshman
   - Sophomore
   - Junior
   - Senior
   - Graduate
   - Other

3. What is your current work status?
   - Work full time
   - Work part time
   - Do not work

4. Please indicate your yearly household income before taxes (include total income of all adults living in your household).
   - Under $25,000
   - $25,001 - $50,000
   - $50,001 - $75,000
   - $75,001 - $100,000
   - $100,001 - $125,000
   - $125,001 - $150,000
   - $150,001 and over
Debriefing

Thank you for completing this study. You may have already noticed that there was more going on in this study than you were originally told. The information could not be fully disclosed in the beginning because knowing what we were looking for may have caused you to tailor your responses.

This study examined how stress and external impulse cues influence impulse buying. External impulse cues are simply ways in which a retailer sets up their website or store to make it easier for consumers to make impulsive decisions. Products near a cash register (e.g. chewing gum and candy) are a good example of external impulse cues that many stores employ. The decision to buy the gum is made fast and the product wasn't given much thought until you saw it in that last second. When some individuals feel a discrepancy with some part of themselves or their lives (e.g. stress), they use coping methods. One of these coping methods may be what is sometimes referred to as “retail therapy.” This study will contribute to the growing field of consumer behavior and help understand the decision making process of an impulse buying situation. It is important to understand impulse buying because impulse purchases account for a substantial amount of goods sold every year.

Hypotheses

The hypotheses sought to find out 1) how stress by itself influences impulse buying, 2) how stress paired with the impulse cues influences impulse buying (impulse cues being the way the apparel is set up on the website, e.g. by outfit.) 3) whether a person's impulse tendency affects how stress and impulse cues influence impulse buying.

The study

You were asked to complete one of two anagram tests which was the independent variable. The anagram test you took contained anagrams that were NOT solvable while others who participate in this study will have anagrams that are solvable. You were told that individuals who do well on this test are intelligent. This is a lie because this was done
to stress you or frustrate you (if you completed the unsolvable anagram test). There is no connection between anagram tests and intelligence.

The dependent variable was the impulse decision. This was where you viewed apparel websites one of two ways; with impulse cues, and without impulse cues.

This was done because those of you who were exposed to the stressful anagram test were expected to make more impulsive decisions, especially when presented with certain website features such as shopping by outfit. Shopping by outfit is a feature a retailer uses in order to show many items that may be desirable to the shopper and show how to wear them. This causes consumers to want all of the items in order to complete the whole look.

We feel that this research is important and ask that you do not discuss what you did here today with anyone who might participate in this study in the next few quarters. We ask that you do not talk about the study for the same reason that we did not tell you everything upfront. If future participants know about what we are looking for, they might tailor their response accordingly.

If you have any further questions or are just interested in this research you may contact Brittanie Moran (bm457804@ohio.edu).

Thank you again for your participation.
Appendix C: Measurements

Extrinsic Contingency Focus


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<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1. If I could just improve my performance in life, people would respect me more.
2. I often get concerned with how others are evaluating me.
3. I would compete in a public event, even if I knew I couldn’t win.
4. I work hard at things because of the social approval it provides.
5. I would not bother trying to learn a music instrument if I knew that I would never be able to play well enough to impress people.
6. In social gatherings I hardly ever think about how other people are judging me.
7. Being recognized as a hero would be a very rewarding part of saving someone’s life.
8. I exercise because it makes me more attractive to others.
9. When I have done a good job, it is important that my supervisor acknowledges it.
10. I feel as though people will respect me whether I am a success or failure.
11. It is not important that I get recognition for the tasks I undertake.
12. I find I have little interest in a task unless there is the possibility that I will get recognition for doing it.
13. When I know I’m being evaluated, I feel uneasy until I receive feedback.
14. I interact with people at social gatherings without thinking about how they might affect my reputation.
15. I feel as though people like me less when I make mistakes.
16. Whenever I voice my opinion, I feel uneasy unless someone voices agreement.
17. I rarely think about how people are evaluating me.
18. I have an image to maintain.
19. I immediately think of what others will think when I accomplish something great.
20. I would go to my high school reunion to show everyone how well I have done since then.
Material Values Scale


1  2  3  4  5
Strongly Disagree Strongly Agree

1. I admire people who own expensive homes, cars, and clothes.

2. Some of the most important achievements in life include acquiring material possessions.

3. I don't place much emphasis on the amount of material objects people own as a sign of success.

4. The things I own say a lot about how well I'm doing in life.

5. I like to own things that impress people.

6. I try to keep my life simple, as far as possessions are concerned.

7. The things I own aren't all that important to me.

8. Buying things gives me a lot of pleasure.

9. I like a lot of luxury in my life.

10. I put less emphasis on material things than most people I know.

11. I have all the things I really need to enjoy life.

12. My life would be better if I owned certain things I don't have.

13. I wouldn't be any happier if I owned nicer things.

14. I'd be happier if I could afford to buy more things.

15. It sometimes bothers me quite a bit that I can't afford to buy all the things I'd like.
Impulse Buying Tendency


Items 2, 3, 4, 6, 9, and 10 from the original scale were adapted to be answered as "If I were shopping right now," and made into a 6 item scale by adding the first question.

1  2  3  4  5
Strongly Disagree  Strongly Agree

1. I would buy things I had not intended to purchase.

2. I would avoid buying things that are not on my shopping list.

3. I would think it was fun to buy spontaneously.

4. I would make unplanned purchases.

5. I see something that really interests me and would buy it without considering the consequences.

6. I see something new that really interests me and would buy it without hesitation.