

**THE MEANINGS OF CREDIT CARDS IN CONSUMERS' MINDS AND  
ITS EFFECTS ON CONSUMERS' PERCEPTIONS AND BEHAVIORS**

A Dissertation

Presented to the Faculty of the Graduate School

Of Cornell University

In Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

By

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Jan 2015

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# **THE MEANINGS OF CREDIT CARDS IN CONSUMERS' MINDS AND ITS EFFECTS ON CONSUMERS' PERCEPTIONS AND BEHAVIORS**

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Cornell University 2015

This dissertation comprises three essays about credit cards. Taking a qualitative approach, the first essay investigated the meanings of credit cards in consumers' minds by conducting 19 photo-elicitation interviews. Three themes emerged from the data. They were Easy Money (a theme about informants' feelings on the ease of spending, and the ease of gaining access to money by using credit cards), Indebtedness (a theme about informants' sensitivity to indebtedness when using credit cards), and Relationship (a theme about informants' perceived relationships with credit cards). Implications for credit card education were drawn from these emerged themes.

The second essay further explored the theme of Easy Money as found in the first essay by studying the easy money effect of credit cards cue and the effectiveness of reminding consumers of their hard work in weakening the easy money effect. The easy money effect was proposed to occur when consumers associated money with easy and had a lower perceived value of money. Based on the proposed conceptual framework, one of the effective ways in weakening the easy money effect of credit cards cue is by reminding consumers of their hard work as to suppress their thoughts about easy money and to increase their perceived value of money. Findings from two experimental studies revealed that when being shown with credit cards cue, spendthrift

participants associated money with easy more and spent more as compared to tightwad participants as well as when they were not shown with credit cards cue. However, when the spendthrift participants were reminded of their hard work after being shown with credit cards cue, their spending was significantly reduced. The results suggested that the easy money effect of credit cards cue did exist and reminding consumers of their hard work was effective in weakening such effect.

As inspired by the theme of Indebtedness found in the first essay, the third essay investigated if a mere exposure to credit cards cue promoted consumers' perceived financial well-being and hence facilitated their spending. Findings from an experimental study showed that after being shown with credit cards cue, spendthrift participants had more spending-related thoughts and less debt-related thoughts than tightwad participants; spendthrift participants also perceived themselves having a better financial well-being and spent more than tightwad participants. Further analyses revealed that consumers' perceived financial well-being mediated the credit cards cue effect on spending.

## **BIOGRAPHICAL SKETCH**

King Yin Wong received her bachelor degree in Hotel and Tourism Management, and M.Phil degree in Marketing from The Chinese University of Hong Kong. Awarded senior tutorship scholarship by Nanyang Technological University (NTU), Singapore, she pursued her Ph.D in Hospitality Management at Cornell University. She is currently a lecturer at NTU teaching both tourism and marketing courses.

King Yin's research has been presented at American Marketing Association Conference. She has had published a book chapter in Encyclopedia of Mobile Computing and Commerce. She has consulting experiences with hotels in Hong Kong and Singapore Tourism Board. Prior to pursuing her postgraduate degrees, King Yin had been working in the tourism and hospitality industry during her summer internship, and had been working as a marketing executive and merchandiser in international companies.

To my father and mother, for everything they have done for me

## ACKNOWLEDGMENTS

Eight years ago, it has been an honor for me to receive a scholarship offered by Nanyang Technological University, Singapore (NTU) to pursue my Ph.D. study in Cornell Hotel School. Today, after my exceptionally long Ph.D. journey, I deeply understand that it is more than an honor. It is also a blessing that I can have all the support and encouragement from the members of my committee, my mentors, as well as my family and friends throughout the years. It would not have been possible for me to write this doctoral dissertation without their help.

First and foremost, I would like to express my gratitude to my committee chair, Prof. Michael Lynn, who was responsive whenever I sought advice from him, providing me timely and constructive comments in improving the quality of my research. I appreciate his patience and support throughout the eight years for allowing me to sometimes fall behind the schedule so as to explore more possibilities of my research. I would like to thank Prof. Rohit Verma for guiding me on how to conduct empirical research in his seminar course, giving me a necessary foundation in completing my dissertation. The experience of learning from him has been intellectually stimulating. I am especially grateful to Prof. Lee Humphreys for bringing me to the world of qualitative research. Her guidance, support and encouragement have been invaluable to me on both an academic and a personal level. I am thankful to Prof. Michael McCall, who is the external member of my committee, for providing me a lot of insights in the research on the topic of credit cards. Without the extraordinary patience and continuous support of all my committee members, this dissertation would not have been possible.

Throughout the pursuit of my Ph.D. study, I am particularly indebted to NTU. The scholarship offered by NTU kept me free from financial worries in the days I studied in Cornell

and its offering of a lecturer position in the Marketing and International Business Division (MIB) of Nanyang Business School (NBS) has greatly supported me financially in the later stage of my study. My sincere appreciation goes to MIB Head of Division, Prof. Wee Chow Hou, for recommending me to the MIB Division as a lecturer. Without his trust and support, it would be impossible for me to sustain my dissertation research. His assistance and encouragement have been extremely invaluable to me both emotionally and intellectually during my prolonged pursuit of study.

I would also like to acknowledge those who have led me to the doctoral program of Cornell. My heartfelt thanks to Prof. Lee Kam Hon for recommending NTU's senior tutorship program to me and being my referee in the application process. I am grateful to Prof. Judy Siguaw, the Dean of Cornell Nanyang Institute of Hospitality Management (CNI), for recognizing my ability and choosing me among the candidates to receive the scholarship provided by the program. I would like to thank Roy Alvarez for encouraging me to pursue my doctoral study in Cornell and writing me an academic referral letter in this regard. My special thanks go to all his assistance and guidance when I first settled in Cornell and Ithaca.

In regards to the participants of my study, I would also like to thank all the informants, who have been interviewed by me on their credit cards usage behaviors and financial conditions, and other participants of my various experiment studies, for their contributions of time and ideas.

I want to thank my fellow Ph.D. colleagues, Elisa Chan, Iris Lui, Kim Jin Young, Liu Zhao Ping, Mike Dixon, Shao Lian, Sybil Yang, Wang Shuo and Xie Xiao Qing, and my friends in Cornell, David & Mavis, Joseph & Sarah, Tony & Jenny, Xiao Shan & Zhu Fei, Adam, Arielle, Carolle, Collin, David, Hywel, John, Julia, Kenny, Macro, Melanie, Patrick, Rex, Sunny

and Wallace, for their intellectual and emotional support in the days I spent in Ithaca. I would like to express my gratitude to Candy, Lisa and Felix, my former colleagues working in G19 of the Chinese University of Hong Kong, for their remote but good advice and encouragement during my doctoral study. I also thank my friends in Hong Kong and Singapore, Alan, Jolian, Kari, Kevin, Natalie, Pan, Rita, Vivien, Hiu Ying, and Francis, for their caring and heartwarming support throughout all these years.

Last but not least, I am very grateful to Aunt Rainbow for supporting me financially when I was in need. My gratitude goes to her and Aunt Wai Man for being the surety of my bond with NTU.

Most importantly, I thank my parents immensely for all their support and trust. They have been by my side and gave me the confidence to finish my doctoral study without asking. Their understanding gave me motivations to persist until the completion of this journey.

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## CHAPTER 1

### THE MEANINGS OF CREDIT CARDS IN CONSUMERS' MINDS

#### INTRODUCTION

Today the importance and ubiquity of credit cards as an alternative form of payment to cash is unquestionable. The estimated number of credit cards in circulation worldwide has grown about 86% from 2009 reaching 2.5 billion in 2014 (Euromonitor International, 2014). In U.S., as opposed to an expected drop in the in-person sales share of cash purchase from 27% to 23%, that of credit cards purchase is expected to grow from 29% to 33% by 2017 (Javelin Strategy & Research, 2012). With the high acceptance and adoption rate of credit cards among consumers, this research seeks to understand more about what credit cards mean to consumers.

For the past half a century since the modern credit card came into existence in the late 1940s and early 1950s (Ritzer, 1995; Woolsey & Gerson, 2009), many financial, psychological and sociological phenomena about credit cards have emerged, drawing the attention of both policymakers and scholars from different disciplines. Economists focus on examining the credit card industry structure (Ausubel, 1991; Calem & Mester, 1995), and the credit scoring system (Agarwal, Skiba, & Tobacman, 2009; Marron, 2007). Sociologists and historians are concerned about how credit card debt and consumer loan have been legitimized becoming a norm, and how credit cards have become part of the American culture (Calder, 1999; Ritzer, 2001; Manning, 2000). Consumer researchers and marketers spend effort understanding how credit cards as a payment mechanism and as a cue influence individual consumer's judgment and behavior (Chatterjee & Rose, 2012; Soman & Cheema, 2002; Thomas, Desai, & Seenivasan, 2011), and how credit card consumers can be profiled (Kinsey, 1981; Zhao, Zhao, & Song, 2009). There is

also a stream of work which aims to impact policymaking, studying what can be done to help protecting consumers from accruing unmanageable credit card debt (Gal & Mcshane, 2012; Soll, Keeney, & Larrick, 2013). Looking at credit cards from a perspective closest to those of consumer researchers and marketers, this research tries to develop a framework that can promote the understanding of how consumers think about credit cards, and suggest some policymaking implications for consumer education regarding a beneficial and responsible use of credit cards.

## **LITERATURE REVIEW**

### **Sociological, Cultural and Psychological Study of Credit Cards**

Researchers from different disciplines have employed different theoretical approaches and methodologies when studying topics about credit cards. Among qualitative consumer studies on credit cards, most of them adopt sociological perspectives, focusing on the underlying collective and inter-personal values of credit card activities (Oishi, Kesebir, & Snyder, 2009; Penaloza & Barnhart, 2011). For example, Bernthal et al. (2005) investigates how U.S. consumers use credit cards to craft their lifestyles; Wang (2009) examines how college students and young adults use credit cards to manage their social relationship with parents and peers. Unlike previous qualitative work which pays more attention to studying credit card practices as sociological and cultural phenomena, this research attempts to study them as psychological phenomena. We try to focus more on potential intra-psychic processes which may mediate individuals' activities regarding credit cards. We believe that studying the meanings of credit cards from an angle different from that adopted in previous qualitative work can offer a complementary view on the topic, bringing out new insights that might not be seen if we keep employing the sociological perspectives.

Adopting a psychological orientation, the theoretical framework of this research draws largely from research on how credit cards and other payment mechanisms affect individual's decision-making processes and behaviors. Three characteristics of credit cards have been found to be important factors that facilitate consumers' spending, including the low payment transparency (the relative low salience of the payment in terms of its difficulty to see that money is being spent and its difficulty to remember the amount being spent), the payment decoupling (the temporal separation of the purchase decision and the actual payment), and the high credit limit (Raghubir & Srivastava, 2008; Soman, 2003; Soman & Cheema, 2002). These credit card features as identified in prior studies guide us to raise relevant questions during the interview and increase our theoretical sensitivity when analyzing the data, helping us to discover the meanings of credit cards in consumers' minds. Research work that looks into how individual differences affect consumer behaviors regarding credit cards also gives us insights when developing the theoretical framework. Not surprisingly, consumers' income, occupation, and education are found to influence their credit card practices (Kinsey, 1981). Consumers' financial literacy, knowledge about credit cards, self-control ability and sensitivity to pain of payment are also shown to have robust effects on consumption behaviors regarding credit cards (Gathergood, 2012; Norvilitis, et al., 2006; Thomas, Desai, & Seenivasan, 2011; Wickramasinghe & Gurugamage, 2012). These findings from previous work help us to recognize relevant concepts and individual differences that may account for the variances of the data.

Nevertheless, regardless of taking a sociological or a psychological approach, we expect that the meanings of credit cards to consumers change over times. A recent psychological study finds that more college students associated credit cards with debt than with spending, contrary to the results from a similar survey conducted two decades ago (Lie, Hunt, Peters, Veliu, & Harper,

2010). The researchers suggest that the change may be due to the negative portrayal of credit cards by the media such as the coverage about the sharply rising card debt during the economic downturn. In other words, how consumers think about credit cards or what credit cards mean to consumers may change with times due to the social and economic variations in their environment. On the other hand, prior sociological and cultural study suggests that the meanings of credit cards to consumers may change with their personal experience of using credit cards. Consumers may think about credit cards differently when they need to deal with life transitions, or when they learn a lesson after struggling long with card debt (Bernthal, Crockett, & Rose, 2005; Penalosa & Barnhart, 2011). Therefore, both macro-environmental changes and individual's experience may influence how consumers think about credit cards. We attempt to look at both when interpreting informants' accounts.

### **Credit Card Use and Behaviors**

Credit cards, as well as debit cards, alleviate consumers' need to carry cash around, help consumers to keep track of every purchase, and offer consumers attractive rewards for their spending (Manning, 2000; Ritzer, 1995). What makes credit cards unique and different from debit cards and other forms of electronic payment is its credit feature, which allows consumers to borrow from their future income and to build a history of credit worthiness. Theoretically, a rational consumer can use this credit feature for "consumption smoothing", maximizing their lifetime utility by reallocating their income inter-temporally (Shefrin & Thaler, 1988; Soman & Cheema, 2002). That is, they make purchases or continue to live the same lifestyle by using credit cards during times when their incomes are low or disrupted, with a realistic anticipation that they are able to pay off the card balances when they have a pay rise or when they are back to

work. In reality, however, many consumers are incompetent in taking this advantage and are easy to accumulate unmanageable and perpetual debt when using credit cards (Scurlock, 2006). There are about 39% of U.S. families holding a credit card debt in 2010, with \$7,100 as the average debt amount (Bricker, Kennickell, Moore, & Sabelhaus, 2012). The real situation could be worse with substantially higher figures, because people are likely to under-report their debt in this kind of surveys (Zinman, 2009). Intrigued by the fact that some consumers are able to do the consumption smoothing successfully by using credit cards while some accumulate unmanageable debt, this research attempts to investigate the reasons behind.

When studying how consumers use credit cards and their behaviors regarding credit cards, the ways that practitioners and researchers classify credit card consumers draws our attention. Credit card consumers can be classified in various ways. The credit card industry usually categorizes cardholders according to their repayment pattern. Transactors and convenience users are those who pay their balance in full each month, while revolvers and installment users are those who typically carry a balance on their cards (Manning, 2000; Mathews & Slocum, Social Class and Commercial Band Credit Card Usage, 1969). Cardholders with a “charged off” account are those who repeatedly fail to pay, leading card companies to write off their card balance as bad debt (Bhakta, 2009). Revolvers and installment users who repay their loans by paying the minimum balance month by month contribute most to the card revenue through their payments of high interests and various financial charges, whereas transactors and convenience users who pay in full every month without paying any interests contribute less to the card revenue in forms of the interchange, transaction, and membership fees (Evans & Schmalensee, 2005). There are also revolvers who fully intend to borrow from credit cards. They do not intend to repay even the minimum balance, posing high risk of default to card companies. Classifying

credit card holders on the basis of their repayment behaviors helps the industry to identify profitable and low-risk consumers separately from high-risk consumers (Zhao, Zhao, & Song, 2009).

Apart from consumers' repayment behavior, when classifying credit card consumers, prior studies also bring social class into the picture suggesting that consumers' credit card practices are greatly affected by the social class they belong to (Bernthal, Crockett, & Rose, 2005; Mathews & Slocum, 1970; Penaloza & Barnhart, 2011). Credit cards not only enable consumers to habituate themselves within the social class they desire to be in, but also allow consumers to fabricate social class distinctions (Bernthal, Crockett, & Rose, 2005; Manning, 2000). For example, consumers with low and high cultural capital spend to "show off" and "keep up with the Joneses" respectively by using credit cards, striving to stay in their desired social class; the color of a credit card such as silver, gold, and platinum builds class divisions by signifying cardholder's status. Classifying credit card consumers according to their social class reveals that affluent consumers who can afford to pay in full every month enjoy many of the benefits offered by credit cards such as cash rebates, retail discounts, free air travel, and gift for volume purchases at a very low effective cost, whereas the struggling middle classes and the working poor whose card balance keeps rolling over need to pay many expensive financial charges for limited benefits (Manning, 2000; Scurlock, 2006). The findings of unequal access to and cost of using credit cards among different social class call for the consumer groups' attention to combat the inequality for the financially vulnerable.

Previous work that attempts to classify credit card consumers according to their similarities and differences not only offers valuable frameworks for better understanding credit

card consumers, but also helps uncovering hidden marketing and social issues such as identifying credit card consumers with different levels of profitability and risk (Zhao, Zhao, & Song, 2009), and realizing the unfair practices exercised by card companies (Manning, 2000). Drawing on the existing classification of credit card consumers, this research tries to look at how the practices and perceived meanings of credit cards vary among consumers and hope to reveal issues on credit card education that were unseen previously.

### **Credit Card Education**

Over the past decade, researchers have started to explore ways to assess consumers' financial literacy and its effects on financial behaviors such as saving, borrowing, and retirement planning (Lusardi, *The Economic Importance of Financial Literacy: Theory and Evidence*, 2013). Prior study on credit cards finds that there are links between consumers' financial literacy and their credit card practices such as repayment behavior and choice of cards (Gathergood, 2012; Huston, 2012). The results suggest that consumers who are more financially literate are more likely to repay their debt, more likely to pay less to borrow on credit, and less likely to be in excessive debt. Thus, it appears that improving consumers' financial literacy is an important part of credit card education. In addition to teaching consumers general financial knowledge (e.g. fundamental economic concepts, proficiency in basic financial numeracy, and knowledge of risk diversification), credit card education should not overlook the importance of improving consumers' "debt literacy" (e.g. ability to make decision regarding debt contracts, and capability in applying basic knowledge of interest compounding to financial choices in reality) (Lusardi, 2009). Both anecdotal and research-based evidence suggest that many consumers do not fully understand the costs and implications of using credit cards (d'Astous & Miquelon, 1991; Durkin,

2000; Soll, Keeney, & Larrick, 2013). Thus, educating consumers the specific numerical skills required in computing interests (Soll, Keeney, & Larrick, 2013), in managing debt portfolio (Amar, Ariely, Ayal, Cryder, & Rick, 2011), and in understanding the repayment information provided on the statement (Stewart, 2009) are all needed when developing education tools for credit card users.

Other than conveying financial knowledge about credit cards, existing literature suggests that educating consumers in how to control compulsive spending is also an important part of credit education (Anderson, 2013). Compulsive spending can be considered as an “incontrollable urge to buy” (d'Astous, Maltais, & Roberge, 1990), affecting about 1 to 6% of the adult population (Robert, 1998). The problem of compulsive buying was shown to be amplified by the usage of credit cards (Roberts & Jones, 2001). Thus, an effective credit education may need to involve asking students to track their own spending, and analyze their own compulsive spending behaviors so as to increase their awareness of the problem and then create changes (Anderson, 2013; Palmer, Bliss, Goetz, & Moorman, 2010).

Unfortunately, financial education tools provided by credit card issuers were blamed for not being able to help consumers avoid costly mistakes of using credit cards (Corporate Insight Inc, 2009). Although some credit card operators claimed that their credit education program is effective in promoting positive credit management behaviors such as paying card bills on time (Anonymous, 2007), little empirical research has been done in directly tracking consumers attitudes and behaviors before and after taking the credit education program (Clever & Martin, 1996). In view of the need of understanding more about how to increase the effectiveness of credit card education in promoting a beneficial and responsible use of credit cards, this research

tries to explore areas other than financial knowledge and self-control which have already been highlighted in current credit education.

## **RESEARCH QUESTIONS**

Building on the existing literature, the following research questions were developed for this study:

1. How do consumers think about credit cards during the economy downturn?
2. How do their perceived meanings of credit cards vary?
3. What insights can be drawn when examining the meanings of credit cards from a psychological perspective which focuses on potential intra-psychic processes (vs. sociological perspective focusing on collective and inter-personal values)?
4. What suggestions we can make for policymakers to encourage a beneficial and responsible use of credit cards that give mutual benefits to both consumers and card issuers/operators?

## **METHODS**

Instead of conventional discussion-based interviews, this research employed photo-elicitation interviews (PEI) to gather informants' thoughts about credit cards. Informants were asked to take photos before the interview to capture how they think about credit cards. The photos were then used as the probes for questions in the informant's interview. Nineteen PEIs were conducted, recorded, and transcribed. Table 1.1 summarizes the characteristics of all the informants in this study.

**Table 1.1: Informant Descriptions**

Name	Gender	Age	Race	Education	Marital Status	Occupation at time of interview	Self-perceived credit card usage at time of interview	Have been in credit card debt
Alex	M	NA	A	College+	M	U	Non-user	No
Betty	F	21	AA	HS+	S	S	Low	Yes
Cathy	F	28	C	College	UP	U	Low	Yes
Daisy	F	24	H	HS+	S	S	Moderate	Yes
Eva	F	21	H	HS+	S	S	Non-user	No
Flora	F	20	A	HS+	S	S	Low	No
Gary	M	20	A	HS+	S	S	Moderate	No
Hilda	F	NA	A	College+	M	S	Non-user	No
Ivan	M	34	C	College	UP	W	Non-user	Yes
Janet	F	NA	C	College+	M	S	Heavy	Yes
Ken	M	48	AA	College	M	B	Non-user	Yes
Lewis	M	28	C	College	S	W	Low	Yes
Mona	F	62	C	NA	M	W	Moderate	Yes
Nicole	F	74	C	College	W	W	Non-user	Yes
Olivia	F	34	C	College	D	W	Non-user	Yes
Patricia	F	28	A	College+	S	S	Moderate	No
Peter	M	NA	C	NA	M	B	Low	No
Roger	M	63	C	College+	D	R	Low	Yes
Stephanie	F	58	C	College+	W	W	Low	Yes

Note: Race (AA= African American, A= Asian, H= Hispanic, C= Caucasian); Education (HS+= at least some college education, College= college graduate, College+= at least some graduate work); Marital Status (S= Single, UP= Unmarried Partner, M= Married, D= Divorced, W= Widowed); Occupation (BC= Blue Collar, WC= White Collar, S= Student, R= Retired, U= Unemployed); NA= no answer

## **Photo-Elicitation Interview**

There are two main reasons for this research using PEI to collect data. Since talking about credit cards may involve a lot of personal sharing about one's financial condition which is a sensitive topic, it is very critical for the interviewer to gain trust from the informants in order to elicit truthful and complete responses. Using photos which are taken by informants themselves as interview stimuli can greatly reduce informants' anxiety and awkwardness in the interview, making it much easier for the interviewer to establish rapport with the informants (Clark, 1999; Heisley & Levy, 1991). Being able to facilitate rapport building between interviewer and informants, PEI is more preferable than discussion-based interviews as the data collection method for this research. Another reason for employing PEI in this research is its ability in helping informants to express their deeper thoughts about credit cards. The areas of the brain that process visual information are evolutionarily older than the areas that process verbal information, so using photos as interview stimuli is believed to "mine deeper shafts into a different part of human consciousness than do words-alone interviews" (Harper, 2002, p. 23). Photos as interview stimuli can help informants to dive deeper into their consciousness leading them to be aware of not only their surface-level daily observations but also their own submerged feelings, symbols, and metaphors (Collier & Collier, 1986; Zaltman, 2003). As a result, PEI is found to facilitate unpredictable answers and the discovery of hidden meanings (Clark-Ibanez, 2004; Heisley & Levy, 1991), making it a better option to collect data in this research.

## **Theoretical Sampling**

Rather than random or probability-based sampling, it is more appropriate to employ purposive or theoretical sampling in qualitative study in which the research aim is not

enumerative generalization but to gain a deeper understanding of analyzed cases (Lofland, Snow, Anderson, & Lofland, 2006). Theoretical sampling is a data collection process in which the researcher jointly collects, codes and analyzes the data and decides what data to collect next and where to find them so as to develop the theory as it emerges (Glaser & Strauss, 1967). Thus, in qualitative study, data are collected based on its theoretical purpose and relevance to the emerging theory but not a preplanned routine. Following the guidelines given by Glaser & Strauss (1967) on theoretical sampling, only Cornell students were recruited in the early stage of the study to minimize differences among informants so that basic categories could be generated and their properties could be established. The sampling criteria then turned to maximizing differences among informants so that the diversity in data could force further development and refinement of the established categories increasing their generality and explanatory power. This was done by recruiting Ithaca residents of various ages, occupations and self-perceived credit card usages, in an attempt to expand the density of the initial categories formed by the student sample and to attain theoretical saturation for the categories. Data were collected until theoretical saturation of each category was reached - when no new or relevant data seem to emerge regarding a category, and when the category development is dense with categories' properties, dimensions, and variations accounted for (Strauss & Corbin, 1990). Finally, nineteen PEIs were conducted in the main study.

### **Recruitment Procedures**

All informants in this research were either student studying in or residents living in a small city of central New York. Upon receiving the IRB approval, student informants were recruited by advertisements posted on bulletin boards around a university campus in the area,

whereas residents were recruited by advertisements placed on classifieds and craigslist of the area. To compensate informants' time and effort, student and non-student informants were given \$30 and \$60 cash respectively upon their completion of the interview. During the initial contact with the informants, either via email or phone, they were informed of the purpose of the study and the confidentiality of all their responses. They were asked to take photos, in which the visual images capture how they think about credit cards, by the disposable camera provided or their own digital camera if they preferred. They were told that there was no restriction in the number of photos they needed to take, they could take as many and as few photos as they wanted. Each informant was given a week to take photos. They needed to send the used disposable camera or the softcopy of digital photos taken by their own camera to the interviewer before the interview.

### **Interview Procedures**

Since the photos taken by each informant were submitted to the interviewer before the interview, the interviewer had a chance to go through all the photos before the interview, getting a rough idea on what the informant might want to talk about during the interview. Each PEI was begun with asking the informant to draw and write down anything that was in her/his mind, yet s/he did not take a photo of, when thinking about credit cards. Photos taken by each informant were then shown on a computer display one by one in an order that they desired, forming a semi-structured interview. Informants were asked to describe each photo and how they related it to credit cards. They were also asked to describe the drawings and writings they did at the beginning of the interview after all the photos were shown. Other interview questions regarding informant's possession, use, and evaluation of credit cards were also asked either as follow-up questions for the photos or at the end of the interview if they had not been touched on when

discussing about the photos. The interview guide is shown in Appendix A. All the interviews were audio recorded and transcribed. The duration of the interviews lasted from 45 minutes to 2 hours.

### **Analysis Procedures**

The textual data generated from the 19 transcribed interviews were analyzed by the constant comparative method suggested by Glaser (1965). Instead of collecting all the data before analyzing it, the use of theoretical sampling in this study means that the data were analyzed once an interview was completed and transcribed so that the analysis can guide subsequent data collection making integration and expansion of theory more likely (Glaser & Strauss, 1967; Strauss & Corbin, 1990). Categorization, abstraction, and dimensionalization were the basic analytical operations this study used to analyze the data (Spiggle, 1994). By constant comparisons, the data were categorized to represent concepts which were higher in abstraction than the empirical data (categorization and abstraction). The characteristics of each category were systematically explored by identifying incidents along different emerging dimensions of the category (dimensionalization). As the categories became more and more well-defined, its connections with other categories also became clearer suggesting possible integration of different concepts leading to discovery of grounded theory.

### **An Analysis Example**

To better illustrate the analytical procedures, an example is given as follows. Starting with the student sample, the data were first coded into as many categories as possible whenever a category emerged. The category “luxurious products” emerged quickly from comparisons of student informants’ thoughts about the use of credit cards. Five out of the five student informants

associated credit cards with expensive clothes and accessories, fancy dining or high-end stores. On the other hand, some of them talked about how credit cards enabled "access to cash" by taking pictures of ATM machines and describing the processes of obtaining cash by using credit cards. By constant comparisons of incidents within and across categories, knowledge about the properties of each category had been accumulated. A new category "Money In/Out" which represented a more abstract concept than "luxurious products" and "access to cash" was generated, integrating the two categories previously formed. The emergence of this new category led to the recruitment of non-student informants, because the thoughts about "Money In/Out" of a student should be very different from that of a married couple or a retiree. As more data were collected from the non-student sample, the property of "easy money" was identified for the category of "Money In/Out". Informants from the non-student sample talked about their past experiences of spending easily and their feelings of easily obtaining money by using credit cards. Putting these emerging categories together, we got the theme "easy money" with two dimensions, "outflow" and "Inflow" of money.

## **FINDINGS**

By doing constant comparative analysis, three themes emerged from the data, namely Easy Money, Indebtedness, and Relationship.

### **Easy Money**

The theme about informants' feelings on the ease of spending, and the ease of gaining access to money by using credit cards emerged from the data. Two emerging dimensions were identified in this category. We created our terms and labelled these two dimensions as "outflow"

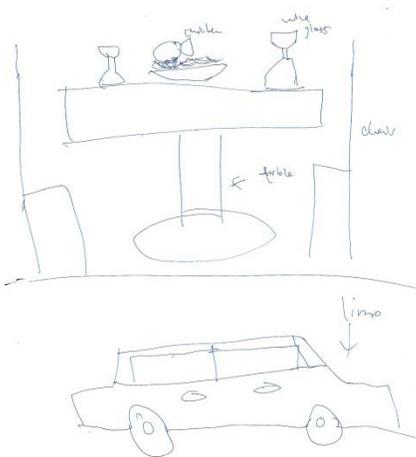
and “inflow” of money. When explaining their views on credit cards, some informants describe more about the ease to spend by using credit cards, while some of them describe more about the ease to obtain money by using credit cards. Existing literature has not yet made any connection and differentiation between spending money (outflow of money in our term) and obtaining money (inflow of money in our term) of credit cards. However, we found that the meanings of credit cards that the informants were trying to describe when using examples of easy spending versus easy obtaining might be different.

***Outflow of Money.*** The concept of “outflow of credit card money” has been studied extensively in various contexts such as how credit cards reduce the pain of payment (Thomas, Desai, & Seenivasan, 2011; Raghubir & Srivastava, 2008), how credit cards encourage compulsive spending (Robert, 1998; Roberts & Jones, 2001), and how credit cards facilitate spending when compared to cash (McCall & Belmont, 1996; Soman, 2003). Informants in this study drew or/and took pictures of storefront, luxurious brands, various products, various leisure activities, and the swiping action to describe and show their thoughts about easy spending when using credit cards. Some of the drawings and pictures are shown in Figure 1.1. Some informants also describe their splurge experiences revealing their perceptions about easy spending by using credit cards. Informants note,

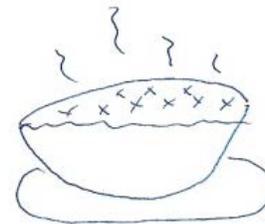
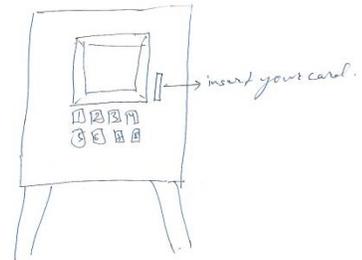
Daisy: Before, it’s just wow, cool, great, I just spent \$500 on stuff that I actually don’t need. I didn’t have to worry about paying. This is awesome. It’s just the freedom to buy. I swiped [the credit card] and spent. After [I have accumulated a substantial amount of card debt], it’s a hole that is going to get you in trouble. You got to be responsible to swipe that card.

Ken: The car cost \$1,800, though in the end I really paid over \$3,000 for it. I didn’t think about anything, I just bought it [by my credit card] at the spot. I also bought clothes and many other things – just going into debt, just completely out of control.

## Outflow of Money



## Inflow of Money



**Figure 1.1: Examples of Pictures and Drawings Under the Theme of Easy Money**

Both Daisy and Ken mention how they have learned their lesson in a hard way, realizing the consequences of overspending by using credit cards only through mistakes. Both of them are still paying the card debt they had accumulated previously.

***Inflow of Money.*** On the other hand, the concept of “inflow of money” has received little research attention. The ease of obtaining credit cards with high credit limit was often mentioned in media as one of the major causes for consumers to overspend (Scurlock, 2006). However, only a few academic research has investigated credit card behaviors from the perspective of “inflow of money” such as how the credit limit affects consumer spending through influencing their perceived future income (Soman & Cheema, 2002). Informants in this study drew or/and took pictures of ATM, bank drive-thru, and a pie to describe and show their thoughts about the ease of obtaining money when using credit cards. Some of the drawings and pictures are shown in Figure 1.1. Informants who took pictures of an ATM note how easy it is to withdraw cash by using credit cards. Janet who took a picture of a bank drive-thru and drew a pie uses metaphors to express how she feels about the ease of obtaining money through credit cards, she notes:

The bank drive-through, you can just go through and get your money and drive out. Kind of similar to credit cards, an easy access to cash and being able to be a consumer buying anything.....It's so easy to make pie.....People say, it's easy as pie, and that's credit card. You just apply and get the money you want.

Some informants also note about the problems of the easy inflow of money enabled by credit cards,

Lewis: I think it's sort of unfortunate in our country that credit cards are so readily available, and really so easy to get. It seems to me there need to be more filters. It needs to be more difficult to get a credit card, because sometimes it can be misleading. If you don't quite understand that you don't have the money to be spending, as much as one would choose to with a credit card, you can easily get yourself into a hole.

Mona: They make it so easy to get the cards. It's just so easy. They're trying to get kids to get it at an early age. As soon as they hit college, they're sending them cards. That's terrible.

Based on the data from this study, it seems that informants are more likely to elaborate on their own responsibilities for excessive spending when describing the outflow of money, whereas they are more likely to elaborate on the responsibilities of credit card issuers/operators for excessive spending when describing the inflow of money enabled by credit cards. This suggests that asking informants to think about their behaviors of spending and obtaining money by using credit cards may be helpful in understanding their perceptions about individual responsibility and consumer protection in the credit card domain, which is an area under-researched yet being able to provide many insightful implications to public policymakers (Henry, Garbarino, & Voola, 2013).

### **Indebtedness**

The theme about informants' sensitivity to indebtedness when using credit cards, as reflected from their attitudes towards card debt and their sense of urgency to repay it emerged from the data. Two emerging dimensions were identified in this category, namely Debt Averse and Debt Neutral. Previous research has paid more attention to investigate the factors that influence the "actual indebtedness" of consumers when using credit cards, objectively measuring it by consumers' delinquency rate, and the amount of revolving card balance (Gathergood, 2012; Wang & Xiao, 2009). There has been little research examining the "perceived indebtedness" of consumers when using credit cards. In this study, some informants talk about their strong aversion to outstanding credit card balance, while some informants mention how insensitive they or their family and friends have been to credit card debt.

*Debt Averse.* Consumers in general have strong debt aversion, preferring to pay before consumption avoiding the feeling of being in debt even for just a short time, unless they are capable to push payments out of mind (Prelec & Loewenstein, 1998). In line with this notion, a minority of informants are highly sensitive to financial indebtedness and cannot stand being in debt even for the grace period granted by credit cards. Rather than paying the outstanding card balance before the due date every month, they choose to pay immediately after the purchase, as Gary notes:

Actually, as soon as I incur the balance, I try to pay it as soon as possible just to avoid any interest rate or get it out of the way. . . I try and leave no balance before the (current monthly statement) deadline is due (even though the balance will only be charged next month). I pay it twice or three times a month now.

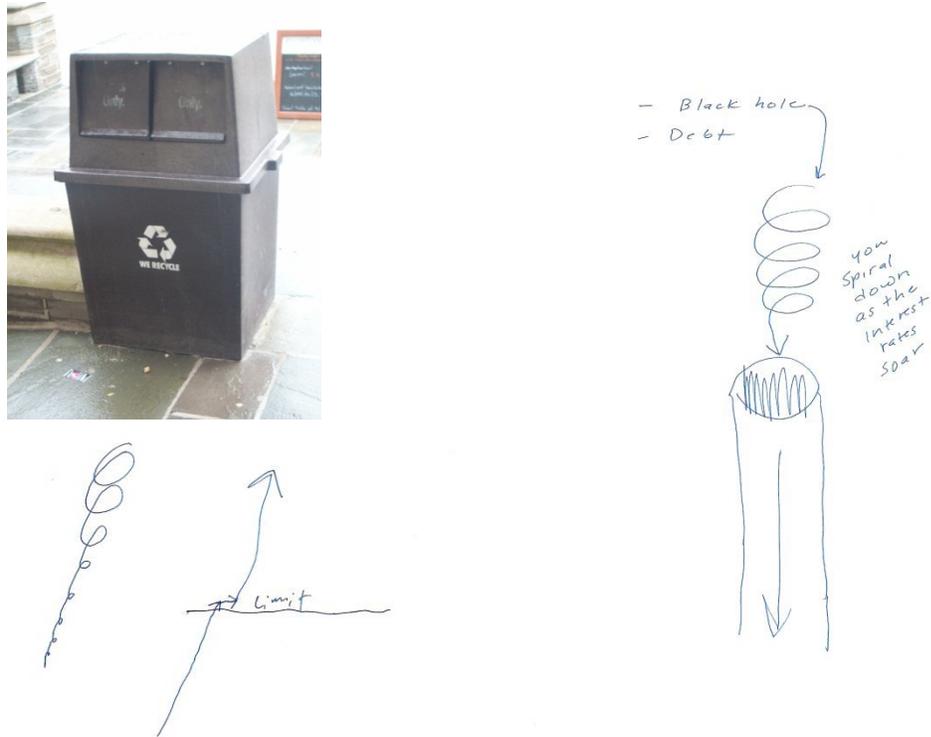
Informants also took or/and drew pictures to show their debt aversion. Betty took a picture of a garbage can, while both Olivia and Ivan drew a spiral, as shown in Figure 1.2, to express their thoughts about debt. They note:

Betty: When you can't pay it off, you end up in this big slump, in like the middle of nowhere. You can't really afford things like you used to afford them. And it's like, you're in a dump.

Olivia: Once you have debt, it doesn't get smaller. It just gets bigger.

Ivan: You just keep getting into debt and then you keep getting in more debt and then more debt and more debt and more debt, and it just seems like there's just someone in a dark room.

Although they may not be as debt averse as those informants who pay immediately whenever there is a card balance, they see debt as something they want to avoid.



**Figure 1.2: Examples of Pictures and Drawings Under the Theme of Indebtedness**

*Debt Neutral.* On the other hand, some informants talk about how insensitive they or their family and friends have been to financial indebtedness when using credit cards. Roger mentions the case of his brother, he describes,

I had a brother who passed away in 1991. He had a completely different attitude about credit cards. His goal, a spoken goal, was that he wanted to be - when he took his last breath, he wanted to have his credit cards all maxed out to the last penny. He had 8 cards, and they were all maxed out when he died. So I think he was successful (laugh) . . . He borrowed from one (card) to pay one (another card), and just kept everything up in the air, rolling.

Betty also notes that she has friends who just signed up for credit cards when it came in the mail.

Then they used the money without any intention of paying the money back. With some

informants being strongly debt averse and some being numb with indebtedness, this theme suggests that how informants perceive their indebtedness and their obligation to repay may be a possible individual difference that influences their decision-making regarding credit cards, which seems to be under-researched.

## **Relationship**

The theme about informants' perceived relationships with credit cards emerged from the data. Three emerging dimensions were identified in this category, namely Trustable Helper, Tool and Trap. Some informants perceive credit cards as a trustable source of financial help, some perceive credit cards as a financial tool, and some believe that they are traps.

***Trustable Helper:*** Existing literature suggests that consumers may associate human characteristics with brands (Aaker, 1997), and may form relationships with brands in a similar way to how we form interpersonal relationships with each other (Fournier, 1998). Consumers may also interact with brands according to their perceived relationships with the brands (Aggarwal, 2004; Aggarwal & Law, 2005; Aggarwal & Zhang, 2006). Some informants in this study believe that credit cards issuers/operators are trustable and are willing to offer help whenever they need it. When she was a novice card user, Daisy expected credit cards or its issuers to demonstrate a concern for her and be willing to attend to her needs. Thus, when she did not have a job and could not pay the card balance, she called the credit card company. She tried to explain her situation and ask for its help in setting up a plan for her to pay the bill later, expecting that the credit card company would focus on not only its self-interest but also her needs. However, the credit card company did not want to help her. Finally, she went to a debt consolidation company to consolidate all her card debts and repay it monthly. She notes,

I felt like I could trust them, but then after this experience, now I had to rely on consolidating kind of services and ended up paying their fees so I am finally able to pay this bill. After that, I guess I learned my lesson. I wouldn't go through this if I really needed money. I would like borrow from a friend, my mom.....They are now in my wallet just in case.

Daisy's relationship with and so does her perceptions of credit cards have changed over time, from being a trustable helper in finance to simply a financial tool just in case.

**Tool.** To some informants, credit cards mean a financial tool – a medium for completing monetary transactions and a tool used for better personal financial management. Informants note,

Gary: A credit card is a financial instrument similar to these (dollar bills), so you can say that I use credit cards alongside cash or in substitution of, or it is supposed to be a replacement (of cash).

Hilda: Credit card can in a sense be called a kind of machine because it records my transactions with the bank. I define machine as anything that makes life simpler and does the activities that would have been very difficult for a human to do.

Informants who consider credit cards as a financial tool pay more attention to compare and contrast the functional aspects of credit cards and cash. They see credit cards simply as an alternative payment method to cash, without too much concern about the fact that they are actually borrowing and are able to pay later. They value the transaction convenience, the automatic bookkeeping, and the buildup of personal credit history provided by using credit cards.

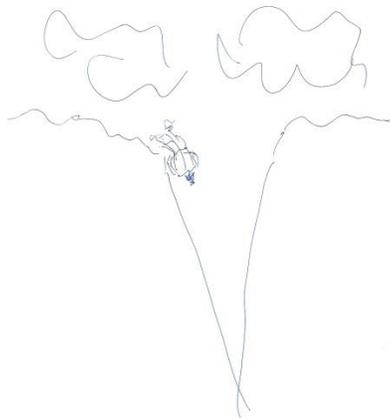
**Trap.** To some informants, credit cards mean a trap – a financial pitfall that can deceive and catch consumers. Informants note,

Peter: Credit card lets them get a false belief of a) what's possible, b) what's necessary, c) what's practical. People are being led into this concept that you don't need practicality. These companies are making billions off the card debts. That's why they keep creating this illusion.

Betty: Ever since I was younger, my father always told us not to get credit cards, they're horrible, their interest rates are high, you'll be in debt for a long time. . . . he didn't want

us to fall into the trap of, 'oh, this is money, I can use it now and not worry about paying it later,' when the truth is you should pay it off. If you don't, it's going to mess up your future.

Informants who consider credit cards as a trap have a very negative impression about credit cards. These negative impressions may come from their own experiences, the experiences of their family and friends, and the media. Other than the word “trap”, metaphors such as “gilded cage”, “candy coating something that doesn't exist”, and “playground” with “caution tape” are used by informants to describe how they feel about credit cards as a hidden danger with attractive cover tricking them to fall into. Some informants took or/and drew pictures to show how they perceive credit cards as a trap, as shown in Figure 1.3.



**Figure 1.3: Examples of Pictures and Drawings Under the Theme of Relationship**

## DISCUSSION

In this study, we explore the meanings of credit cards in consumers' minds by taking a psychologically oriented approach, in an attempt to complement previous qualitative study on credit cards which mainly adopt a sociological or cultural approach. As opposed to sociologically or culturally oriented study which focuses more on examining the underlying collective and inter-personal values of credit card activities (Bernthal, Crockett, & Rose, 2005; Oishi, Kesebir, & Snyder, 2009; Penaloza & Barnhart, 2011), the present study focuses more on analyzing individual's perceptions and behaviors regarding credit cards. Three themes related to Easy Money, Indebtedness, and Relationship emerged from the data. Based on the research questions developed previously, several implications for credit card education can be drawn from our findings and are discussed in the followings.

Undeniably, educating consumers about the risks and the responsibilities they have to take when using credit cards is imperative (Henry, Garbarino, & Voola, 2013; Soll, Keeney, & Larrick, 2013). The emerged theme of Easy Money reveals that when informants ruminate on how they spend the easy money by using credit cards, they are more likely to reflect on themselves and elaborate on their own responsibilities on overspending and unnecessary spending. On the other hand, when informants think about how they obtain the easy money available from credit cards, they are more likely to detach themselves and elaborate on the responsibilities of credit cards issuers/operators for encouraging consumer overspending. Consistent with previous study on credit education, this research also suggests that an effective credit education may need to include tasks asking consumers to ruminate on their own spending though for a different reason, which is to enhance their sense of responsibilities to the card debt versus just to increase their awareness of their overspending problems (Anderson, 2013; Palmer,

Bliss, Goetz, & Moorman, 2010). Furthermore, this research suggests that it may also be helpful to ask consumers to think about the process of getting credit cards approved when doing credit education so that they may have a more balanced view on the perceived responsibility regarding issues of excessive spending when using credit cards. Educating consumers to have a more balanced view on this issue is important, because there are many people holding moral evaluations of the indebted consumers, blaming their irresponsible use of credit cards and indulgence in having instant gratification without much sympathy (Henry, Garbarino, & Voola, 2013; Manning, 2000). However, we believe that the situation might have changed after the economic downturn and the bursting of credit bubble in U.S. and Europe, because many informants attributed the problem of card debt to the credit cards issuers/operators when being interviewed in this study.

The emerged theme of Indebtedness suggests that not only the actual indebtedness matters, but also the perceived indebtedness matters in affecting consumers' spending and repayment behaviors. For credit card marketers, they may want to develop a tool to assess consumers' perceived indebtedness to the credit card spending so that they may send special education materials to consumers who have a low sense of perceived indebtedness, trying to increase their sense of obligation to repay. They can also try to avoid approving applications from potential customers who have a low sense of perceived indebtedness to reduce the default risk. Interestingly, debt averse consumers probably bring least profits to the credit cards issuers/operators, because they are less likely to incur any financial charges and interests. Debt neutral consumers, on the other hand, may bring much more profits, because of their higher tendency to accumulate debt and need to pay the interest fees. Thus, there may not be enough incentives for the credit card marketers to target consumers having low sense of perceived

indebtedness for a proper credit education. Government and consumer welfare group may need to take the role in identifying consumers who have a low sense of perceived indebtedness and reach out them proactively to prevent them from accumulating unmanageable debt.

The emerged theme of Relationship reveals that informants' relationship with credit cards may change with time. Although some informants think of credit cards as a trap preventing them from getting into the troubles of debt, some informants believe credit cards to be a trustable source of financial help encouraging them to pile up their debts. Informants who have viewed credit cards as trustable helper may change their view with time when they have more experiences in using credit cards and interacting more with the credit cards issuers/operators. If their expectations of credit cards being a trustable helper are not satisfied, their perceived relationship with credit cards may change to tool or trap. However, none of the informants in this study seems to have changed from viewing credit cards as a trap to viewing it as a trustable helper. This finding further highlight the crucial importance of credit card education. On one hand, some informants realized that their expectations of credit cards being a trustable helper were indeed difficult to meet only after they have accumulated a considerable amount of card debt. They could only learn it through mistakes, in which the card debt might take them a few decades to repay. Targeting the inexperienced credit cards users, credit card education may consider including simulation exercises which can help these consumers to practice "learning from mistakes". This kind of simulation exercises may complement the financial knowledge part which focuses only on numbers by engaging consumers more. Consumers who are weak in numbers may find this kind of exercises much more useful. On the other hand, informants who viewed credit cards as a trap at the beginning may not even give credit cards a try. A minority of informants in this study never use credit cards, because they want to avoid the trap. In this case,

they might have lost chances to use credit cards for consumption smoothing. Therefore, credit card education should emphasize the goal of promoting a responsible use of credit cards that can bring mutual benefits to both consumers and credit card companies. Not only the risks of using credit cards are taught, the benefits should also be carefully explained.

The three themes emerged in this study enrich our understanding on how consumers think about credit cards and reveal possible ways to improve the effectiveness of credit card education. In order to understand more fully the link between how consumers think about credit cards and their consumption behaviors, further research employing a quantitative approach may be needed to verify and extend the findings in the present study. Promising research directions for future study include empirically testing the suggestions for credit card education described previously. It is also important to test if these meanings of credit cards are similar across countries with different levels of credit cards adoption. Hopefully, the lessons we have learnt from countries with high adoption rates can help other countries to better protect and serve the credit cards holders.

## APPENDIX A

### **Interview Outlines and Script**

There are **no right or wrong answers**. I am only interested in your opinions and personal experiences. Everything we are going to talk about is **confidential**. I am the only person who has access to the research records. During the interview, if you feel uncomfortable to answer any question I asked, you can **skip that question**. Also, you can **withdraw from the interview** whenever you wish. Please feel free to **interrupt, ask for clarification**, etc.

Before I record the interview, I would like you to look at this image. What comes to your mind? Please use this pen and paper to write or draw anything that comes in your mind. We can discuss it right away after I start recording the interview.

### **Questions:**

#### **About taking photos**

- **What was your approach of taking photos?** Walking around, when seeing something which can relate to your thoughts and feelings about credit card, take a picture OR thinking about what kinds of things you want to take pictures, go and take picture of it OR Combine these two approaches?

#### **About the Photos**

- Please describe this photos to me
- Please use taste, touch, smell, sound, color, and other sensory images to elaborate your description
- What do you see here?
- What can be excluded in this photos and what must be included?
- How do you relate this photos to your feelings and thoughts about credit cards?
- What made you take this photo?
- What happened right before or right after you took this photo?
- Is there anything else you would like to tell me about this photo?
- Was there anything you wanted to take a photo of, but couldn't or didn't?

#### **Credit Card Possession**

- How many credit cards do you have?
- What are they? (Visa/Master/AE/Discover? Brand/Airline/Bank?)
- Do you remember why you apply for this/these credit card(s)? Why?

#### **Credit Card Use**

- How often do you use your credit card?
- What kinds of goods and services do you pay by credit card?
- What kinds of occasions do you use your credit card most?

- How do you decide when to use credit card, debit card, cash, or check to pay?
- How do you keep track of your credit card use?
- What is your routine in paying your credit card bill?
- How has your credit card use changed over time?
- How would you describe your credit card usage, too much, too little or about right? Why?

### **Credit Card Knowledge**

- Do you know your credit limit?
- How would you describe the percentage of credit limit you use on average?
- Do you know the interest rate you have to pay if you can't pay the balance by the due date?
- How would you describe your frequency of not paying the full balance by the due date?
- Could you tell me more about your experience of not paying the full balance by the due date?

### **Credit Card Evaluation**

- What benefits do you value most about using credit cards?
- What do you think are the risks, if any, of using credit cards?
- How would your life be changed if you do not have any credit card?
- What differences do you see between paying credit card and debit card?
- If you are a salesperson selling credit card service, what kinds of people will you target at and persuade them to apply for the credit card?
- Do you believe that you will spend more when you see a credit card?

### **Final Questions**

- Is there anything I didn't ask that you want to talk about or anything else that you want to add?
- Do you have any questions for me?

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## **CHAPTER 2**

### **THE EASY MONEY EFFECT:**

#### **TRY TO REMIND YOURSELF OF YOUR HARD WORK**

#### **TO SPEND LESS ON CREDIT CARDS**

### **INTRODUCTION**

Consumers tend to spend more when being exposed to credit cards cue and when using credit cards to pay (Feinberg, Credit Card as Spending Facilitating Stimuli: A Conditioning Interpretation, 1986; Hirschman, 1979; McCall & Belmont, 1996; Raghurir & Srivastava, 2008; Shimp & Moody, 2000; Soman, 2001; Soman & Cheema, 2002). Given the fact that credit cards cue is omnipresent in our daily lives (e.g. credit card advertising in different media, in-store signs of different credit cards) and the average debt amount among all credit cards holders in U.S. is as high as \$5,438 (U.S. Census Bureau, 2012), it is important to explore ways to curtail the spending-stimulating effect of credit cards so that consumers would not always overspend when seeing and using credit cards.

Existing research on credit cards focuses on studying the underlying reasons for consumers to spend more when being exposed to credit card cue and when using credit cards to pay (Raghurir & Srivastava, 2008; Shimp & Moody, 2000; Soman, 2001; 2003; Soman & Cheema, 2002), leaving a research gap to be filled - what kinds of practical tactics can help consumers to spend less in face of the spending-stimulating effect of credit cards? Although this stream of research has suggested a few ways to reduce the spending-stimulating effect of credit cards, for example, increasing the salience of parting with the money available from credit cards

(Raghubir & Srivastava, 2008), and keeping records of the expenses paid by credit cards (Soman, 2001), very little of them empirically tested the practical tactics that they suggested.

Inspired by the notion of “easy come easy go”, the present research proposes that the relative ease of getting credit cards and high credit limit may lead consumer to perceive the money available from credit cards as coming easily, which in turn encourages consumers to let go the money easily. Whenever consumers are exposed to credit cards cue or using credit cards to pay, thoughts about easy money are likely to be activated causing consumers to momentarily underestimate the effort required to earn money, which then lowers their perceived value of money. As a result, consumers spend more due to this “easy money effect”. The idea – easy money easy go – brings up a practical and easy to implement tactic which may work in reducing the spending-stimulating effect of credit cards. That is to remind consumers of their hard work so that the easy money effect can be weakened.

This article has two objectives. First, the proposed easy money effect brought by credit cards is tested to see if it really exists. If credit cards really bring the easy money effect, we then examine if reminding consumers of their hard work can reduce the spending-stimulating effect of credit cards by weakening the easy money effect.

## **CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT**

### **The Spending-Stimulating Effect of Credit Cards**

Decades of research on credit cards shows that consumers may spend more when they are paying by credit cards (Hirschman, 1979; Raghubir & Srivastava, 2008; Soman, 2001; 2003; Soman & Cheema, 2002), and when they are simply exposed to credit cards cue (Feinberg, 1986; McCall & Belmont, 1996; Shimp & Moody, 2000). The former stream of research focuses more

on examining how credit cards as a payment mechanism differs from cash, check, and other methods of payment and how these unique characteristics of credit cards facilitate spending, whereas the latter focuses more on how the mere exposure to credit cards cue such as logos of credit card companies and replicas of actual credit cards induce people to spend more. The first stream of research suggests that, for example, the low vividness in allowing consumers to feel the outflow of money (Raghubir & Srivastava, 2008), the delay in depleting consumers' wealth (Soman, 2001), and the lack of counting or writing down the amount paid in the payment procedures when paying by credit cards as compared with other methods of payment contributes to the spending-stimulating effect of credit cards (Soman, 2001; 2003). On the other hand, the second stream of research explains the spending-stimulating effect of credit cards by drawing on learning theories such as conditioning which suggests that credit card stimuli have acquired the ability to elicit spending behavior as a conditioned response (Feinberg, 1986), and social learning which suggests that the learned behavior associated with credit cards is spending which may become the default behavior whenever cue of credit cards are present (McCall & Belmont, 1996).

The majority of study in the first stream of research investigates how the “outflow of money” when paying by credit cards versus other payment methods differs. In the present research, we look into the differences among different payment methods from another angle – how consumers perceive the “inflow of money” differently when using credit cards versus cash - and subsequently influences spending. Drawing on the second stream of research which supports the learning theories to explain the credit cards effect, we speculate that the lack of difficulty or effort in getting credit cards and high credit limit may cause consumers learning to regard credit card money as easy money. The easy money from credit cards will then be spent more easily

than cash. The easy money effect may even occur when consumers are not using credit cards but only exposed to credit cards cue which brings the thoughts of easy money up to mind.

### **Credit Cards As Easy Money With Lower Perceived Value**

In our daily lives, the media often regards credit cards as easy money – money that comes easily without much effort (Boshara & Longman, 2007; Fox, 2007; Frainee, 2010; Lakshmi, 2008). Past study shows that the valuation of an object may depend on how it is obtained (Loewenstein & Issacharoff, 1994). Extensive research on cognitive dissonance and self-perception have demonstrated that the more effort (whether in the form of time, physical exertion, pain, or money) individuals invest, the more positively would they evaluate the product of that effort (Aronson & Mills, 1959; Bem, 1972; Feinberg, 1986; Gerrard & Mathewson, 1966). A more recent study further shows that people may use effort as a heuristic for quality – the more effort invested in an object, the better it is deemed to be (Kruger, Wirtz, Van Boven, & Altermatt, 2004). Based on these findings, it is possible that people may evaluate money in the same way as they evaluate other objects. Following this line of reasoning, people may evaluate the money earned from work, which requires them to invest more effort, more positively than the money available from credit cards, which can be easily obtained with less effort. As a result, people may value the money available from credit cards lower which results in greater spending.

### **Source of Money and Spending**

Economists argue that people should spend their income earned by working and available money obtained from credit cards in exactly the same way since a dollar should be completely interchangeable with another dollar despite the fact that they are acquired by different amount of difficulty or effort. This argument is based on the assumption that money is fungible, which

means money has no labels attached to it, so that money from any sources is pooled together to become one's overall wealth on which consumer decisions are based (Thaler, 1990). However, it has been experimentally well established that consumers do label money and place money in separate mental accounts according to their sources and uses (Heath & Soll, 1996; Kahneman & Tversky, 1984; Shefrin & Thaler, 1988; Thaler, 1999; 2008). More importantly, such labelling on money affects how easy the money is to be spent. For example, current income is more tempting to be spent than current assets and future income (Shefrin & Thaler, 1988); unanticipated income is spent more readily than anticipated income (Arkes, et al., 1994); different sources of money such as gift, work bonus, debt repaid, inheritance etc. are ranked differently when the goal is to spend on oneself versus to invest in a certificate of deposit (Henderson & Peterson, 1992). Therefore, it is plausible that consumers consider the money available from credit cards and the money earned from work being in separate mental accounts with different labels.

In fact, the processes underlying mental accounting such as how or why mental accounts are formed, or what their contents consist of are found to be similar to those of categorization, in which mental accounts are simply a type of category (Henderson & Peterson, 1992). If people do open a mental account exclusively for money available from credit cards, looking into what kinds of properties people may attach to this mental account or category helps understanding the spending-stimulating effect of credit cards. In this article, we propose easy money as one of the properties of this category.

To summarize our discussion thus far, the lack of difficulty or effort in obtaining money available from credit cards can lead people to label the money in the mental account of credit

cards as easy money. When paying by credit cards or when credit cards are brought to minds, the mental account or category of credit cards is activated, in which the money is perceived as easy money being of lower value. This gives us the first hypothesis:

***H1: When consumers are shown with credit cards cue (cash cue/control), they are more (less) likely to associate money with easy.***

### **Individual Differences in Sensitivity to Pain of Payment**

Extant literature suggests that consumers often experience a pain of paying, which can undermine their pleasure derived from consumption, when they make purchases (Prelec & Loewenstein, 1998). Further study shows that people vary in their sensitivity to pain of payment, with tightwads being more sensitive and spendthrifts being less sensitive (Rick, Cryder, & Loewenstein, 2008). In this study, we posit that individuals' sensitivity to pain of payment may moderate the easy money effect of credit cards. Specifically, we propose that tightwads who are more sensitive to pain of payment are less prone to the easy money effect, because their high sensitivity and strong feelings about loss of money may prevent them from underestimating the value of money; spendthrifts who are less sensitive to pain of payment are more prone to the easy money effect, because their insensitivity and inattentiveness to loss of money may encourage them to underestimate the value of money. The moderating role of individual's sensitivity to pain of payment on the easy money effect is formulated as:

***H2: When being shown with credit cards cue, spendthrifts (tightwads) are more (less) likely to associate money with easy.***

With our conceptual framework positing that the easy money effect as one of the underlying pathways for the spending-stimulating effect of credit cards, we further propose that individual's sensitivity to pain of payment also moderates the spending-stimulating effect of credit cards through its moderating role on the easy money effect. Similar to its influence on the easy money effect, individual's sensitivity to pain of payment affects consumer spending in this way:

***H3: When being shown with credit cards cue, spendthrifts (tightwads) spend more (less).***

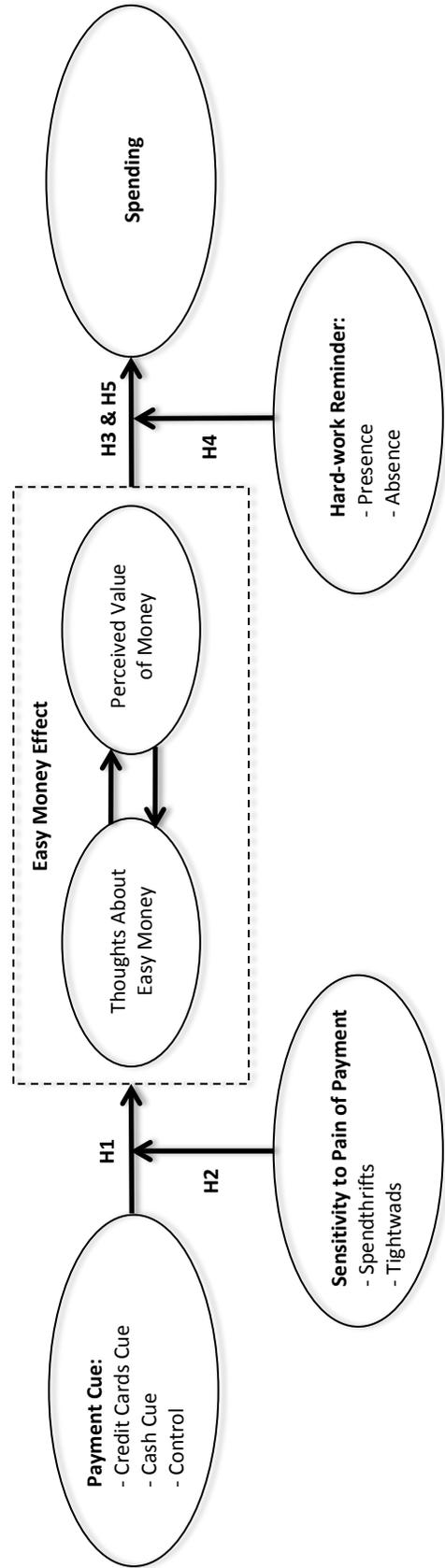
Based on our conceptual framework, intervention that can weaken the easy money effect can in turn reduce the spending-stimulating effect of credit cards. Following the logic previously described on effort and how people evaluate a product based on the effort, we put forward that reminding consumers of their hard work can direct their attention to the effort they need to invest in earning money, preventing them from underestimating the value of money. Consequently, the easy money effect is weakened which then reduce consumer spending. We hypothesize:

***H4: When being shown with credit cards cue, consumers who are (not) reminded of their hard work spend less (more).***

Since spendthrifts are supposed to be more prone to the easy money effect of credit cards than tightwads, the influence of hard-work reminder in weakening the easy money effect on spending may also be stronger on spendthrifts than tightwads. Therefore, H4 is moderated in this way,

*H5: The effect of reminding consumers of their hard work when being shown with credit cards cue in reducing spending is greater (weaker) on spendthrifts (tightwads).*

The conceptual framework discussed above is presented in Figure 2.1. We conduct two experimental study to test these hypotheses, with study 1 testing H1 and H2 while study 2 testing H3 to H5. The two study are described as follows.



**Figure 2.1: The Conceptual Framework of the Easy Money Effect**

## STUDY 1

### Method

In study 1, the easy money effect of credit cards (H1) and the moderating role of individual's sensitivity to pain of payment on the effect (H2) were tested by using the Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998). Participants were invited to participate in a "Consumer Attitudes" study. They were asked to list their thoughts for either credit cards or nature. They were then led to complete the Implicit Association Test (IAT) online by categorizing words and pictures into groups as fast as possible. Respondent's latencies were recorded to assess their association between Easy versus Hard and Money versus Non-money respectively.

**Participants.** Amazon's Mechanical Turk (MTurk), an online marketplace open for getting work done by others, was used to collect data for this experiment. The quality of the web-based data collected by MTurk is suggested to be at least as reliable as those obtained by traditional methods (Buhrmester, Kwang, & Gosling, 2011). Participants were "workers" (paid task completers) who registered with MTurk for being able to browse available tasks and set up an account for receiving monetary compensation upon successful completion of each task. One hundred and sixty-nine workers (57% women) completed the questionnaire and test for a small sum of money. The average age of participants was 40, and 78% of them had a household annual income of \$20,001 or more.

**Credit Cards Cue Manipulation.** There were two conditions for the credit cards cue manipulation, credit cards cue (Card) vs. neutral cue (Control). In the Card condition, participants were presented with a picture showing different types of credit cards including

MasterCard, Visa, Discover, and American Express. They were asked to list the things that come to their mind when hearing the word “credit card”, each thought on a separate line. In the Control condition, participants were presented with a picture showing a nature scene of mountains and lake. They were then asked to list the things that come to their mind when hearing the word “nature”, each thought on a separate line. The stimuli employed in these two conditions are shown in Figure 2.2 (Card condition) and Figure 2.3 (Control Condition).

**Procedure.** Participants needed to complete two parts, questionnaire and IAT, in this study. The questionnaire part was created by using an online survey software which randomly assigned the participants to one of the 2 conditions (Card vs. Control). The IAT part was administered by using the web version of an IAT software, Inquisit, which automatically run the whole IAT itself after the participants had downloaded the plug-in file. Firstly, participants were presented with either the Card or the Neutral stimuli. They were asked to list out their thoughts about it. Following the thought-listing task, participants were asked to click the given link going to complete the IAT. They were required to download a plug-in file of small size (1.82KB) before they could start doing the IAT. After completing the IAT, they were asked to return to the online questionnaire to answer the remaining questions.

**Implicit Association Test.** IAT measures the strength of automatic association by asking participants to categorize stimuli such as words and pictures into one of four categories as fast and as accurate as possible (Greenwald, McGhee, & Schwartz, 1998). In this study, the four categories were Easy, Hard, Money, and Non-money. We selected 6 phrases to represent Easy and Hard respectively, and selected 6 pictures to depict Money and Non-money respectively. The stimuli used in each category were presented in Figure 2.4. There were altogether 7 blocks

What comes to your mind when I say the word “credit-card”?



Please list each thing that comes to your mind on a separate line.  
Leave the lines empty and go to the next question when nothing else comes to your mind.

Line 1	<input type="text"/>
Line 2	<input type="text"/>
Line 3	<input type="text"/>
Line 4	<input type="text"/>
Line 5	<input type="text"/>
Line 6	<input type="text"/>

Figure 2,2: The Webpage Screenshot For the Card Condition

**What comes to your mind when I say the word “nature”?**



**Please list each thing that comes to your mind on a separate line.  
Leave the lines empty and go to the next question when nothing else comes to your mind.**

Line 1	<input type="text"/>
Line 2	<input type="text"/>
Line 3	<input type="text"/>
Line 4	<input type="text"/>
Line 5	<input type="text"/>
Line 6	<input type="text"/>

**Figure 2.3: The Webpage Screenshot For the Control Condition**

Words		Picture	
Easy	Hard	Money	Non-money
Watching TV	Running a marathon		
Taking a nap	Becoming a doctor		
Taking a stroll	Lifting weights		
Listening to music	Climbing a mountain		
Browsing magazine	Doing brain surgery		
Surfing the Internet	Solving a jigsaw puzzle		

**Figure 2.4: The Stimuli Used in IAT**

to complete this test. Table 2.1 summarizes the procedures for this test. Instructions about the response key and the item categorization task were given at the beginning of each block. The first two blocks of the IAT were practice blocks which required participants to categorize all of the picture stimuli as either Money or Non-money (Block 1), and all the word phrase stimuli as either Easy or Hard (Block 2). Participants used the response keys, which were “E” and “I” on the keyboard, to perform the categorization. Pressing “E” categorized the stimuli into the category shown at the left top corner, while pressing “I” categorized the stimuli into the category shown at the right top corner. Block 5 was also a practice block, with the key pairings reversed from block 1.

Block 3, 4, 6, and 7 were critical combined blocks used to assess the strength of association between the categories. Two categories were mapped onto the same response key in the following two combinations: Easy and Money onto “E” vs. Hard and Non-money onto “I” (the compatible block), and Easy and Non-Money onto “E” vs. Hard and Money onto “I” (the incompatible block). For example, when Easy and Money were mapped onto “E”, participants were required to press “E” whenever they saw stimuli related to Easy or Money displayed on the screen. The faster the response, the stronger the association between the two categories paired onto the same response key, Easy and Money in this case. Participants were randomly assigned to one of the two conditions: Condition A with block 3 and 4 as the compatible blocks and block 6 and 7 as the incompatible blocks, whereas Condition B with block 3 and 4 as the incompatible blocks and block 6 and 7 as the compatible blocks. Sample screens of the IAT were shown in Appendix A.

We expected that participants who were in the Card condition would respond faster in the

**Table 2.1: IAT Procedures in 7 Test Blocks**

Block	No. of Trials	Condition A			Condition B		
		Function	Items assigned to left key ‘E’	Items assigned to right key ‘I’	Function	Items assigned to left key ‘E’	Items assigned to right key ‘I’
1	20	Practice	Money pictures	Non-money pictures	Practice	Non-money pictures	Money pictures
2	20	Practice	Easy activities in words	Hard activities in words	Practice	Easy activities in words	Hard activities in words
3	20	Compatible	Easy activities + Money pictures	Hard activities + Non-money pictures	Incompatible	Easy activities + Non-money pictures	Hard activities + Money pictures
4	40	Compatible	Easy activities + Money pictures	Hard activities + Non-money pictures	Incompatible	Easy activities + Non-money pictures	Hard activities + Money pictures
5	20	Practice	Non-money pictures	Money pictures	Practice	Money pictures	Non-money pictures
6	20	Incompatible	Easy activities + Non-money pictures	Hard activities + Money pictures	Compatible	Easy activities + Money pictures	Hard activities + Non-money pictures
7	40	Incompatible	Easy activities + Non-money pictures	Hard activities + Money pictures	Compatible	Easy activities + Money pictures	Hard activities + Non-money pictures

Note:

In condition A, compatible blocks precede incompatible blocks.

In condition B, incompatible blocks precede compatible blocks.

compatible blocks when Easy and Money (and Hard and Non-money) were paired and slower in the incompatible blocks when Hard and Money (and Easy and Non-money) were paired. Participant's response times were computed and converted into D-score, which basically measures the difference in response times between the incompatible and compatible blocks, in an algorithm excluding latencies above 10,000ms and including latencies for correct responses only (Greenwald, Nosek, & Banaji, 2003). The higher the D-score, either the faster the responses in the compatible blocks or the slower the responses in the incompatible blocks. This indicates a stronger association between Easy and Money (and Hard and Non-money) or/and weaker association between Hard and Money (and Easy and Non-money).

***Individual's Sensitivity to Pain of Payment.*** After completing the IAT, participants were asked to go back to the questionnaire part. The "spendthrift-tightwad" (ST-TW) scale developed by Rick, Cryder, and Loewenstein (2008) was used to assess participants' sensitivity to pain of payment. The ST-TW scale consists of four questions. The total score for all four questions ranges from 4 to 26. Participants with higher scores tend to be Spendthrifts (ST) who are proposed to be more prone to the easy money effect of credit cards, whereas participants with lower scores tend to be Tightwads (TW) who are proposed to be less prone to the easy money effect of credit cards. Participants with intermediate scores tend to be Unconflicted (UC) who are proposed to be influenced by the easy money effect at a level in between ST and TW.

***Other Measures.*** Finally, participants' gender, age, and income were asked at the end of the survey.

## Results

Linear regression analysis was conducted to test H1 and H2. The focal independent variable was Credit Cards Cue Manipulation (X), represented by a dummy variable scored as 0=Card condition and 1=Control condition. The moderator variable was Individual's Sensitivity to Pain of Payment (M), measured by the ST-TW scale with the total score ranging from 4 to 26 (spendthrift and tightwad being the anchor for highest and lowest score respectively). The product of the two (XM), which was the interaction effect between the Credit Cards Cue Manipulation and Individual's Sensitivity to Pain of Payment, was another predictor variable. The dependent variable was the computed D-score. One hundred and sixty-nine responses were submitted for the regression analysis. The mean and standard deviation of the ST-TW score were 12.88 and 4.91 respectively; those of the D-score were -0.349 and 0.483 respectively.

**Table 2.2: Summary of Regression on the D-Score in the IAT (N = 169)**

Predictor	B	SE B	$\beta$	t
X: Credit Cards Cue	-.411	.206	-.427	** -1.993
M: ST-TW Score (Card condition = 0)	.022	.011	.221	** 1.923
XM: Credit Cards Cue x ST-TW Score	.040	.015	.269	*** 2.655

One-tailed p-value: \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

We regressed the D-score onto X, M, and XM. The results for the unstandardized coefficients were summarized in Table 2.2. As predicted, the regression coefficient for XM was significant, suggesting the presence of a two-way interaction. Further analysis revealed that the slope of the ST-TW score in the Card condition was significant and positive on the D-score ( $t=1.92$ ,  $p < .05$ ), indicating that in the Card condition, the higher the ST-TW score or the higher tendency to be a spendthrift, the higher the D-score. The higher D-score indicated that spendthrift participants in the Card condition were more likely to associate money with easy than

tightwad participants, supporting H2. A spotlight analysis was performed to further understand the differences of D-score across the Card and Control conditions along the ST-TW scale. The statistics of the spotlight analysis was summarized in Table 2.3. A significant difference was found at one standard deviation above mean ST-TW score ( $t=2.86$ ,  $p<.01$ ), showing that spendthrift participants in the Card condition associate money with easy more than those in the Control condition, supporting H1. The easy money effect of credit cards cue was weaker on unconflicted participants, as reflected from the marginally significant ( $t=1.40$ ,  $p<.1$ ) results on the D-score difference across the Card and Control condition. The easy money effect of credit cards cue reversed in direction on tightwad participants but not in a significant way. The spotlight analysis is graphically presented in Figure 2.5.

**Table 2.3: Spotlight Analysis on the D-Score of IAT at Selected Levels of Sensitivity to Pain of Payment (N=169)**

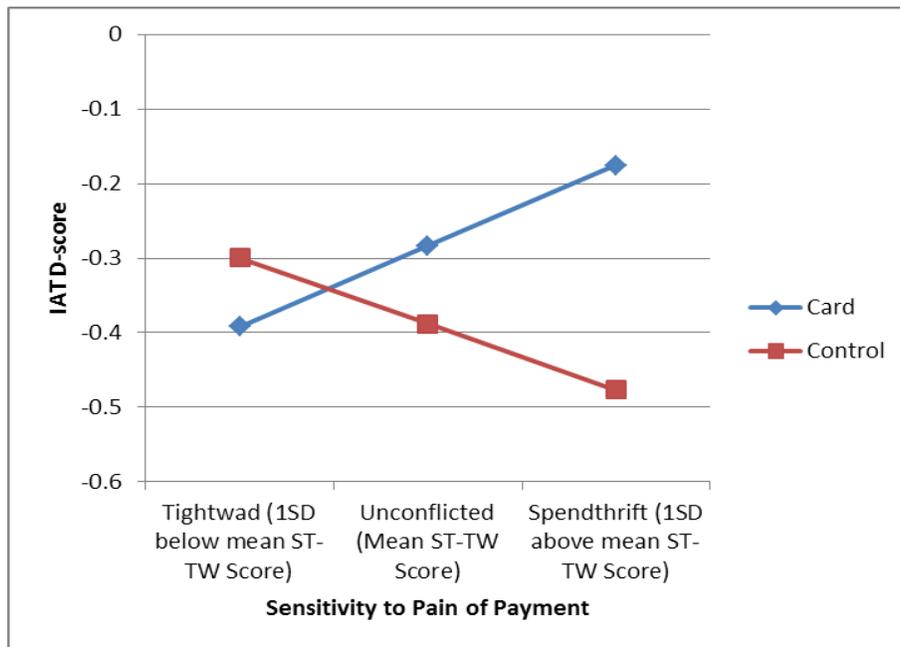
<b>Sensitivity to Pain of Payment</b>	<b>Control Mean</b>	<b>Card Mean</b>	<b>Mean Difference (Card-Control)</b>	<b>t</b>
<b>Tightwads</b> (1SD below mean ST-TW score)	-.299	-.392	-.093	-.897
<b>Unconflicted</b> (Mean ST-TW score)	-.388	-.284	.104	*1.404
<b>Spendthrifts</b> (1SD above mean ST-TW score)	-.476	-.176	.300	***2.862

One-tailed p-value: \* $p<=.1$ , \*\* $p<=.05$ , \*\*\* $p<=.01$

## **Discussion**

The results of study 1 suggest that the easy money effect of credit cards cue exists. The first two hypotheses are supported. However, rather than concluding that spendthrifts associate money with easy more after being shown with credit cards cue, the results of study 1 only

support that they associated money with hard less, as reflected from the negative mean D-score. Since participants in general tended to associate money with hard as suggested by the sample mean D-score being negative (-0.349), the easy money effect we proposed may take the form of weakening participants' association between money and hard but not promoting their association between money and easy. Interestingly, spendthrift participants associated money with hard more than tightwads in the control condition, as reflected from the significant and negative slope of the ST-TW score in the regression analysis on D-score ( $B=-.018$ ,  $t=-1.83$ ,  $p<.05$ ). Perhaps, due to their insensitivity to spending, spendthrift participants spent too easily feeling that they never have enough money to spend, resulting in a perception of hard to get money.



**Figure 2.5: Predicted Mean IAT D-score Across Card vs. Control Condition at Selected Levels of Sensitivity to Pain of Payment**

## STUDY 2

### Method

In study 2, the moderating role of individual's sensitivity to pain of payment on the spending-stimulating effect of credit cards (H3) and the effectiveness of hard-work reminder in weakening the easy money effect of credit cards on spending (H4 & H5) were tested in the context of restaurant dining. Participants were invited to participate in a "Restaurant Dining Study", which was ostensibly conducted to understand consumers' food choice for a tapas menu. They were asked to order from a hypothetical restaurant menu. The total spending of their order was then calculated, serving as the dependent measure.

**Participants.** Similar to study 1, MTurk was used to collect data for this experiment. Three hundreds and sixty-five workers (55% women) participated in this study for a small sum of money. The average age of participants was 33, and 79% of them had a household annual income of \$20,001 or more.

**Payment Cue Manipulation.** When investigating the effect of credit cards, prior study compares participants who are shown with credit cards cue either with participants who are informed that only cash payment is accepted, or with participants in the control condition who are not shown with any payment cue. There has not been any research attempt comparing participants across all these three conditions within one study. Since past study on money suggests that people behave differently when they are primed with the concept of money by cash images (Vohs, Mead, & Goode, 2006; Vohs, Mead, & Goode, 2008), we speculate that people who are informed that only cash payment is accepted may also be primed with the concept of money causing them to spend differently from people in the control condition. Although we do not have any specific

predictions regarding the priming of money by cash cue, we are interested in examining whether people may spend differently across the “cash only” group and the control group. Therefore, the payment method was manipulated by having three conditions: participants assigned to the credit card condition (Card condition) were shown with the logos of four credit card operators – MasterCard, Visa, Discover, and American Express – accompanied by the statement “We accept all major credit cards”; participants assigned to the cash cue condition (Cash condition) were shown with the statement “We accept cash only”; participants assigned to the control condition were not shown with any stimuli related to payment methods.

***Hard-work Reminder (HWR) Manipulation.*** Participants were reminded of their hard work by a picture showing a man buried in a pile of paperwork accompanied by a statement with the phrase “after a day of hard work”. Since this study was conducted in a restaurant dining context, the manipulation of the payment cue and the hard-work reminder were done by integrating the stimuli previously described into the menu as a banner being placed across the top of the menu. The banner of the menu for the six (3 Payment Cue x 2 Hard-work Reminder) different conditions are shown in Figure 2.6. The whole menu for the six different conditions are presented in Appendix B.

***Procedure.*** The experiment used a 3 (Payment Cue: Credit Cards Cue vs. Cash Cue vs. Control) x 2 (Hard-Work Reminder: Absence vs. Presence) between subjects design. Similar to study 1, the questionnaire was created using an online survey software which randomly assigned the participants to one of the six between-subjects conditions. They were told to imagine that they were dining in a tapas restaurant with three other friends, who asked the participant to be fully in charge of what to order for their party of four so that they could share the tapas for the dinner.

**Credit Cards Cue and Presence of Hard-Work Reminder**



*Welcome*

to our restaurant after a day of hard work!



**Credit Cards Cue and Absence of Hard-Work Reminder**



*Welcome*

to our restaurant!

**Cash Cue and Presence of Hard-Work Reminder**

WE ACCEPT CASH ONLY

*Welcome*

to our restaurant after a day of hard work!



**Cash Cue and Absence of Hard-Work Reminder**

WE ACCEPT CASH ONLY

*Welcome*

to our restaurant!

**Control and Presence of Hard-Work Reminder**

*Welcome*

to our restaurant after a day of hard work!



**Control and Absence of Hard-Work Reminder**

*Welcome*

to our restaurant!

**Figure 2.6: The Six Different Banners of the Menu for Manipulating Payment Cue and Hard-work Reminder**

Participants were informed that a party of four usually ordered 8 to 12 tapas to share. They were then asked to order from a tapas menu which includes 31 menu items with price ranging from \$4 to \$11. By being part of the banner across the top of the menu, the payment cue and the hard-work reminder were manipulated immediately before the menu items were shown. Restaurant ambience sound effect was automatically played as the background music for the menu page in order to better resemble the real restaurant environment when people are reading menu and deciding which dishes to order. Participants could then order any items by checking the box of the item.

***Individual's Sensitivity to Pain of Payment.*** After making their dinner order, participants were asked to complete the four-item ST-TW scale to assess their sensitivity to pain of payment.

***Self-Estimated Spending.*** They were also asked about how much they think they have spent on their order without looking back at the menu. The online survey was set in a way that participants were unable to go back to the menu when answering this question.

***Other Measures.*** Finally, questions about participants' dietary requirements (e.g. vegan, vegetarian, etc.) and demographics (i.e. gender, age, and income) were asked at the end of the survey.

***Total Spending.*** The price of the selected items were summed up to become the total spending of each participant, serving as the dependent measure.

## **Results**

Participants who indicated that they have special dietary requirements such as vegan, vegetarian, Muslim, etc. were excluded from the analysis, because our pre-test showed that these

participants were only concerned with choosing the “correct” menu items according to their own diet rules making them almost immune to the effect of credit cards cue and hard-work reminder. As a result, 309 responses were remained for further analysis. Linear regression analyses were conducted to test H3 to H5.

The focal independent variable was Payment Cue Manipulation, represented by two dummy variables. One was the dummy variable for the Card condition (X1) in which responses in the Card condition received a 1 and all others (both Cash and Control condition) received a 0; another one was the dummy variable for the Cash condition (X2) in which responses in the Cash condition received a 1 and all others (both Card and Control condition) received a 0. The first-order moderator variable was Individual’s Sensitivity to Pain of Payment (M1), measured in the same way as in study 1. The second-order moderator variable was HWR Manipulation (M2), represented by a dummy variable scored as 1=Presence and 0=Absence of Hard-Word Reminder. The products of X1(X2) and M1, which were the two-way interaction effects between the Card (Cash) condition and Individual’s Sensitivity to Pain of Payment, were two other predictor variables. The products of X1(X2) and M2, which were the two-way interaction effects between the Card (Cash) condition and Hard-Work Reminder, were two other predictor variables. The products of X1(X2), M1, and M2, which were the three-way interaction effects among the three independent variables, were also included as predictor variables. Finally, the age and income of the participants were also included as predictor variables. The dependent measure was Total Spending. The means and standard deviations of variables and measures are shown in Table 2.4.

***Total Spending for the Dinner.*** We regressed Total Spending onto X1, X2, M1, M2, X1M1, X2M1, X1M2, X2M2, M1M2, X1M1M2, X2M1M2, age, and income. The results for the

unstandardized coefficients were summarized in Table 2.5. As predicted, the regression coefficient for X1M1M2 is significant on the total spending ( $t=-4.32$ ,  $p<.01$ ), suggesting the presence of a three-way interaction. The squared multiple correlation for the model that omits X1M1M2 was .124, whereas the full model yields a squared multiple correlation of .177. The difference between these squared multiple correlations was .053, indicating that the three-way interaction accounted for 5.3% of the variance in the total spending.

**Table 2.4: Means and Standard Deviations for Variables and Measures**

Variable/Measure	Mean	SD
ST-TW Score	14.15	4.29
Age	33.27	12.45
Income	2.84	1.53
Total Spending	53.04	23.16

Note: Income Category: 1. \$20,000 or less, 2. \$20,001 to \$40,000, 3. \$40,001 to \$60,000, 4. \$60,001 to \$80,000, 5. \$80,001 to \$100,000, 6. More than \$100,000

**Table 2.5: Summary of Regression on Total Spending (N = 309)**

Predictor	B	SE B	$\beta$	t
X1: Card Cue	-43.212	14.498	-.865	***-2.980
X2: Cash Cue	-21.059	14.261	-.438	** -1.477
M1: ST-TW Score	-.449	.643	-.084	-.699
M2: Hard-Work Reminder (HWR)	-39.377	14.769	-.855	***-2.666
X1M1: Card Cue x ST-TW Score	3.105	.965	.922	***3.218
X2M1: Cash Cue x ST-TW Score	.736	.989	.224	.744
X1M2: Card Cue x Hard-Work Reminder	85.975	21.776	1.270	***3.948
X2M2: Cash Cue x Hard-Work Reminder	18.233	20.274	.308	.899
M1M2: Hard-Work Reminder x ST-TW Score	1.944	.958	.656	**2.029
X1M1M2: Card Cue x HWR x ST-TW Score	-6.284	1.454	-1.352	***-4.322
X2M1M2: Cash Cue x HWR x ST-TW Score	-.883	1.370	-.225	-.644
Age	-.036	.102	-.019	-.355
Income	1.747	.828	.116	**2.111

One-tailed p-value: \* $p<=.1$ , \*\* $p<=.05$ , \*\*\* $p<=.01$

To further test the moderating role of Individual's Sensitivity to Pain of Payment, its effect on Total Spending across the six conditions were derived by transforming the ST-TW score and recoding the dummy variables to change the reference level for comparisons, as shown in Table 2.6 and Figure 2.7. As predicted, in the absence of HWR, spendthrift participants spent more than tightwads when being shown with credit cards cue, as reflected by the positive slope of ST-TW score ( $t=3.69$ ,  $p<.01$ ). This result supports H3.

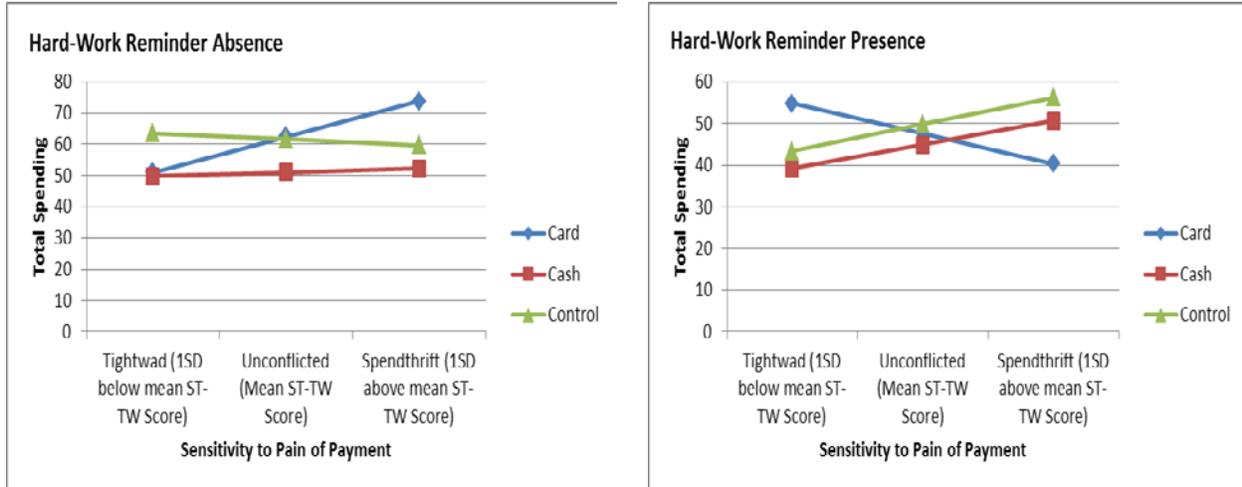
**Table 2.6: Slopes for Total Spending Regressed Onto Individual's Sensitivity to Pain of Payment (N=309)**

	Slope	SE	t
Card and HWR Absence	2.656	.721	***3.685
Card and HWR Presence	-1.685	.824	**2.044
Cash and HWR Absence	.287	.757	.379
Cash and HWR Presence	1.348	.630	**2.14
Control and HWR Absence	-.449	.643	-.699
Control and HWR Presence	1.494	.712	**2.100

One-tailed p-value: \* $p<=.1$ , \*\* $p<=.05$ , \*\*\* $p<=.01$

To further test the effectiveness of the HWR in weakening the easy money effect of credit cards cue, its effect on Total Spending across the three payment cue manipulation at the three selected level of sensitivity to pain of payment were derived, as shown in Table 2.7 and Figure 2.8. In the Card condition, there were significant difference between the Absence and Presence of HWR condition at the mean and at one standard deviation above mean ST-TW score ( $t=3.32$ ,  $p<.01$ ;  $t=5.07$ ,  $p<.01$ ). The results showed that both unconflicted and spendthrift participants in the Card condition spent less when being reminded of their hard work, supporting H4. For the tightwad participants in the Card condition, however, reminding them of their hard work did not influence their spending ( $t=-.59$ ,  $p>.1$ ). These results support H5, suggesting that

when being exposed to credit cards cue the effect of HWR in reducing spending is stronger on spendthrifts and weaker on tightwads.



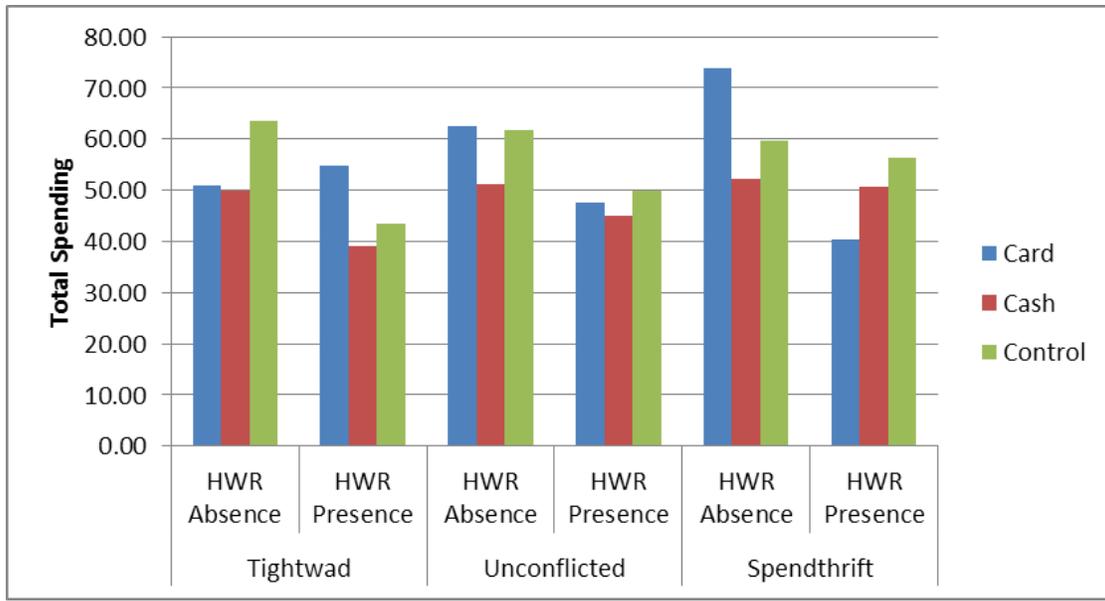
**Figure 2.7: Side-by-Side Plot for the Regression Lines of Total Spending on Individual's Sensitivity to Pain of Payment as a Function of Payment Cue and Hard-Work Reminder Manipulation (N=309)**

**Table 2.7: Cell Means and Simple Effect Parameters of HWR on Total Spending at Selected Levels of Sensitivity to Pain of Payment Across the Three Different Conditions (N=309)**

Sensitivity to Pain of Payment	Payment Cue Manipulation	HWR Absence	HWR Presence	Mean Difference (HWR Absence–HWR Presence)	t
Tightwads (1SD below mean ST-TW score)	Card	51.05	54.85	-3.8	-.594
	Cash	49.84	39.16	10.68	**1.945
	Control	63.64	43.43	20.21	***3.206
Unconflicted (Mean ST-TW score)	Card	62.44	47.63	14.81	***3.318
	Cash	51.07	44.94	6.13	*1.458
	Control	61.72	49.85	11.87	***2.810
Spendthrifts (1SD above mean ST-TW score)	Card	73.83	40.40	33.43	***5.073
	Cash	52.30	50.72	1.58	.247
	Control	59.79	56.26	3.53	.648

Note: The means shown above are predicted means at the mean level of age and income.

One-tailed p-value: \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$



**Figure 2.8: Predicted Mean Total Spending Across the Six Conditions at Selected Level of Individual’s Sensitivity to Pain of Payment (N=309)**

## Discussion

The results of study 2 support our hypotheses, showing that individual’s sensitivity to pain of payment moderates the spending-stimulating effect of credit cards cue with spendthrift participants spending more than tightwad participants when being exposed to credit cards cue.

We further show that reminding participants of their hard work can weaken the spending-stimulating effect of credit cards cue, but only on spendthrift and unconflicted participants.

Interestingly, reminding participants in the cash and control condition of their hard work can also reduces their spending, but this only works for tightwad and unconflicted participants but not spendthrift participants.

## GENERAL DISCUSSION

Our first research attempt in testing the easy money effect across different payment cue conditions and the effectiveness of the hard-work reminder in reducing the spending-stimulating effect of credit cards cue gets positive results. Firstly, results of study 1 suggests that the proposed easy money effect of credit cards cue exists, with spendthrift participants associate money with hard less in an IAT after being shown with credit cards cue versus neutral cue. Secondly, results of study 2 show that individual's sensitivity to pain of payment moderates the spending-stimulating effect of credit cards cue in a restaurant dining context. In particular, spendthrift participants spent more on their dinner than tightwad participants when being shown with credit cards cue. Thirdly, results of study 2 demonstrate that, when being shown with credit cards cue, participants who were reminded of their hard work by a picture with words stimuli spent less. However, this happened to spendthrift and unconflicted participants only, but not tightwad participants.

The results of the two study together provide convergent support to the easy money effect of credit cards cue. This paper contributes theoretically by shedding light on the underlying process of the long established spending-stimulating effect of credit cards cue. The notion of "easy come easy go" seems to be applicable to the money available from credit cards, becoming "easy money easy go". Since money from credit cards could be obtained with relatively less effort when compared to money earned by working, very often, consumers regard it as easy money. Due to the less effort invested in obtaining money from credit cards, consumers may evaluate it in a less positive way, just similar to when they evaluate objects obtained by less effort to be of lower quality (Aronson & Mills, 1959; Gerrard & Mathewson, 1966; Kruger, Wirtz, Van Boven, & Altermatt, 2004). The less positive evaluation on money from credit cards may lead

consumers to perceive it to be of lower value and spend it more easily. This effect may also occur when consumers are only exposed to credit cards cue but not using credit cards, because the credit cards cue can activate the concept of easy money if credit cards are mentally associated with easy money in a consumer's mind. The results further suggest that individual's sensitivity to pain of payment plays a role in moderating the easy money effect of credit cards cue, because consumers with different sensitivity to pain of payment may have different vulnerabilities to the easy money effect. This is how "easy money easy go" comes into play in providing a possible underlying mechanism to explain the spending-stimulating effect of credit cards cue.

Unlike previous research on credit cards which focuses on examining the spending-stimulating effect without empirically testing how its theory could be applied in reducing the effect, this paper contributes to consumer welfare by suggesting a practical tactic that can be used to reduce the spending-stimulating effect of credit card cue. Based on our conceptual framework of the easy money effect, we propose that reminding consumers of their hard work can weaken the easy money effect of credit cards cue and hence consumer spending. Results of study 2 support this proposition, offering consumers a practical way to discourage spending when credit cards are involved. Consumers who do not want to overspend because of using or being exposed to credit cards can consider keeping a hard-work reminder in their wallet just next to their credit cards.

Although the results of this paper suggest the existence of the easy money effect of credit cards cue and its underlying role in stimulating consumer spending, there was no direct test examining the mediating role of the proposed easy money effect in the study. Also, the easy money effect was assessed by participants' implicit association between easy/hard and money

without directly testing their perceived value of money. Future research may consider examining the easy money effect by measuring participants' perceived value of money directly such as asking them to set prices for selling certain products. Supposedly, under the influence of the easy money effect, consumers who perceive the value of money to be lower are more likely to set the prices higher for the same item.

Also, even though the results from study 1 reveal that participants associate money with hard less when being exposed to credit cards cue, it does not necessarily mean that they perceive the money to be easier to obtain as proposed by our conceptual framework. Participants associate money with hard less may simply because they perceive that money is easier to spend after being exposed to credit cards cue. Thus, future research on the topic may need to show more clearly that the easy money effect is due to consumer's association between easy and getting money, but not between easy and spending money.

Results from study 2 show that reminding participants in the Card condition of their hard work can reduce their spending. However, it is also possible that reminding one of their hard work can give them reasons to reward themselves and hence spend more. Thus, future research may want to test the robustness of the HWR effect and when the hard-work reminder does not work in weakening the easy money effect.

Interestingly, the sample mean D-score found in study 1 was negative, reflecting that participants in general have a strong association between money and hard. Perhaps, MTurk workers who earn a small sum of money by completing our study online are already working in an environment that promotes thoughts about money being earned hard. Future research may explore the easy money effect of credit cards cue by collecting responses from people who are

more likely to associate money with easy. The IAT can also be conducted by a within-subject design, studying participants' associations between money and easy before and after showing the credit cards cue, to test the robustness of the credit cards cue effect on mental associations.

Finally, it would be interesting to explore behavioral consequences of the easy money effect of credit cards cue other than spending. It is possible that credit cards cue may lead people to associate not only money with easy, but also other objects with easy, causing people to underestimate the effort required to obtain something or to complete something.

## APPENDIX A: IAT SAMPLE SCREENS

### Instructions:

Put your middle or index fingers on the E and I keys of your keyboard. Pictures or words representing the categories at the top will appear one-by-one in the middle of the screen. When the item belongs to a category on the left, press the E key; when the item belongs to a category on the right, press the I key. Items belong to only one category. If you make an error, an X will appear - fix the error by hitting the other key.

This is a timed sorting task. GO AS FAST AS YOU CAN while making as few mistakes as possible. Going too slow or making too many errors will result in an uninterpretable score. This task will take about 5 minutes to complete.

**Money**

**Non-money**



**Instructions:**

See above, the categories have changed. The items for sorting have changed as well. The rules, however, are the same.

When the item belongs to a category on the left, press the E key; when the item belongs to a category on the right, press the I key. Items belong to only one category. An X appears after an error - fix the error by hitting the other key. GO AS FAST AS YOU CAN.

**Easy**

**Hard**

**Running a marathon**

**Instructions:**

See above, the four categories you saw separately now appear together. Remember, each item belongs to only one group. For example, if the categories Money and Easy appear on the separate sides above - pictures or words meaning Money would go in the Money category, not the Easy category.

The green and white labels and items may help to identify the appropriate category. Use the E and I keys to categorize items into four groups left and right, and correct errors by hitting the other key.

**Money**

**Non-money**

**Easy**

**Hard**



**Instructions:**

See above, the four categories now appear together in a new configuration. Remember, each item belongs to only one group.

The green and white labels and items may help to identify the appropriate category. Use the E and I keys to categorize items into the four groups left and right, and correct errors by hitting the other key.

**Money**

**Non-money**

**Hard**

**Easy**

**Taking a nap**

# APPENDIX B: THE WHOLE MENU FOR THE SIX DIFFERENT CONDITIONS

## Credit Cards Cue and Presence of Hard-Work Reminder



*Welcome*

to our restaurant after a day of hard work!



- CRAB CAKES** - Miniature Sweet Rock Crab Cakes served with drizzled Remoulade 4
- OLIVES** - Black & Green Olives marinated in Garlic with a touch of Citrus 4
- SPRING ROLLS** - Fresh Vegetable Rolls served with a tiny Spinach Salad and Sweet & Hot Sauce 5
- POTATOES WEDGES** - Wedges of Roasted Potatoes with Herbs & Spices 5
- MUSSELS** - Gypsy Mussels Served in a Spicy Red Broth with Baguettes for dipping 5
- SICILIAN SKEWERS** - Two Skewers with Tomato, Basil and Mozzarella 5
- ASPARAGUS** - Grilled Asparagus with shaved Manchego Cheese and a Balsamic Reduction 5
- TILAPIA** - Crispy Tilapia with Buttermilk Herb Dressing with Cucumber 6
- PORK MEATBALLS** - Pork Meatballs in Sweet & Spicy Butternut Squash Curry 6
- SHRIMPS** - Shrimps Sautéed with Garlic and Sherry 6
- CHICKEN WINGS** - Deep Fried Chicken Wings tossed in Sweet and Spicy Chili Sauce and Fresh Basil 6
- BRIE** - Warm Brie with Melon and Crostini 6
- CLAMS** - Cherrystone Clams tossed with butter, garlic and topped with Crispy Bacon 7
- PORTABELLA** - Grilled Portobello Mushroom with Roasted Red Peppers, Gorgonzola Cheese and Sautéed Spinach with Garlic 7
- THREE CHEESE GARLIC BREAD** - Cheddar, Mozzarella and Asiago cheese melted over a French baguette with garlic butter 7
- CLASSIC POTATOE SKINS** - Smoked Bacon, Scallions, Cheddar & Mozzarella cheese, served with sour cream 7
- TRUFFLE RISOTTO BALLS** - Parmesan Truffle Risotto lightly breaded and served with Truffle Greens 7
- CALAMARI** - Fried Calamari with Mango Salsa and Cilantro Jalapeño Aioli 8
- CRAB BISQUE** - Creamy Bisque with Corn and fresh Crab 8
- SPINACH DIP** - Four-Cheese Spinach Dip served with Toasted Pita Points and Cherry Tomatoes 8
- JERK PORK TENDERLOIN** - Marinated Jerk Pork Tenderloin served with Raspberry Dijon Sauce 8
- SATAY OF CHICKEN** - Chicken Breast Strips on a stick, served with oriental Peanut-Butter sauce 8
- TANDOORI BEEF SKEWERS** - Skewered Tenderloin, Grilled with Tandoori Sauce 9
- LAMB RACK CHOPS** - Grilled Lamb Rack Chops with Grilled Zucchini and Roast Red Pepper-Caper Relish 9
- MUSHROOMS FLORENTINE WITH LOBSTER** - Mushroom cups filled with Spinach, Lobster meat and Cream Cheese, topped with Mozzarella, Baked with Garlic Butter 9
- MINI PIZZETTAS CAPRESE** - Two Mini Pizzettas with Spinach, Tomato and Bocconcini Cheese, served with a Small Salad and a drizzle of Sweet Balsamic reduction 9
- MEDITERRANEAN BRUSCHETTA** - Fresh Diced Tomato, Basil, Capers and Black Olives, served in a Crispy Tortilla shell with Catalan toast 9
- SMOKED SALMON ROLLS** - Filled with dill Creme Fraiche and topped with fresh Sprouts 10
- MARINATED AHI TUNA** - Sashimi Grade Tuna Marinated in a Pineapple Soy Sauce topped with Sriracha Mayo and Unagi Sauce 10
- SPANISH PAELLA** - Spanish Rice with Bits of Chicken, Chorizo and Seafoods in tapas portion 11
- SEA SCALLOPS** - Pan-Seared Sea Scallops served on a bed of Sautéed Spinach and Julienne Peppers over a Grilled Portobello mushroom 11

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## Credit Cards Cue and Absence of Hard-Work Reminder



*Welcome*

to our restaurant!

- CRAB CAKES** - Miniature Sweet Rock Crab Cakes served with drizzled Remoulade 4
- OLIVES** - Black & Green Olives marinated in Garlic with a touch of Citrus 4
- SPRING ROLLS** - Fresh Vegetable Rolls served with a tiny Spinach Salad and Sweet & Hot Sauce 5
- POTATOES WEDGES** - Wedges of Roasted Potatoes with Herbs & Spices 5
- MUSSELS** - Gypsy Mussels Served in a Spicy Red Broth with Baguettes for dipping 5
- SICILIAN SKEWERS** - Two Skewers with Tomato, Basil and Mozzarella 5
- ASPARAGUS** - Grilled Asparagus with shaved Manchego Cheese and a Balsamic Reduction 5
- TILAPIA** - Crispy Tilapia with Buttermilk Herb Dressing with Cucumber 6
- PORK MEATBALLS** - Pork Meatballs in Sweet & Spicy Butternut Squash Curry 6
- SHRIMPS** - Shrimps Sautéed with Garlic and Sherry 6
- CHICKEN WINGS** - Deep Fried Chicken Wings tossed in Sweet and Spicy Chili Sauce and Fresh Basil 6
- BRIE** - Warm Brie with Melon and Crostini 6
- CLAMS** - Cherrystones tossed with butter, garlic and topped with Crispy Bacon 7
- PORTABELLA** - Grilled Portabella Mushroom with Roasted Red Peppers, Gorgonzola Cheese and Sauteed Spinach with Garlic 7
- THREE CHEESE GARLIC BREAD** - Cheddar, Mozzarella and Asiago cheese melted over a French baguette with garlic butter 7
- CLASSIC POTATOE SKINS** - Smoked Bacon, Scallions, Cheddar & Mozzarella cheese, served with sour cream 7
- TRUFFLE RISOTTO BALLS** - Parmesan Truffle Risotto lightly breaded and served with Truffle Greens 7
- CALAMARI** - Fried Calamari with Mango Salsa and Cilantro Jalapeño Aioli 8
- CRAB BISQUE** - Creamy Bisque with Corn and fresh Crab 8
- SPINACH DIP** - Four-Cheese Spinach Dip served with Toasted Pita Points and Cherry Tomatoes 8
- JERK PORK TENDERLOIN** - Marinated Jerk Pork Tenderloin served with Raspberry Dijon Sauce 8
- SATAY OF CHICKEN** - Chicken Breast Strips on a stick, served with oriental Peanut-Butter sauce 8
- TANDOORI BEEF SKEWERS** - Skewered Tenderloin, Grilled with Tandoori Sauce 9
- LAMB RACK CHOPS** - Grilled Lamb Rack Chops with Grilled Zucchini and Roast Red Pepper-Caper Relish 9
- MUSHROOMS FLORENTINE WITH LOBSTER** - Mushroom cups filled with Spinach, Lobster meat and Cream Cheese, topped with Mozzarella, Baked with Garlic Butter 9
- MINI PIZZETTA S CAPRESE** - Two Mini Pizzettas with Spinach, Tomato and Bocconcini Cheese, served with a Small Salad and a drizzle of Sweet Balsamic reduction 9
- MEDITERRANEAN BRUSCHETTA** - Fresh Diced Tomato, Basil, Capers and Black Olives, served in a Crispy Tortilla shell with Catalan toast 9
- SMOKED SALMON ROLLS** - Filled with dill Creme Fraiche and topped with fresh Sprouts 10
- MARINATED AHI TUNA** - Sashimi Grade Tuna Marinated in a Pineapple Soy Sauce topped with Sriracha Mayo and Unagi Sauce 10
- SPANISH PAELLA** - Spanish Rice with Bits of Chicken, Chorizo and Seafoods in tapas portion 11
- SEA SCALLOPS** - Pan-Seared Sea Scallops served on a bed of Sauteed Spinach and Julienne Peppers over a Grilled Portobello mushroom 11

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## Cash Cue and Presence of Hard-Work Reminder

WE ACCEPT CASH ONLY

# Welcome

to our restaurant after a day of hard work!



- CRAB CAKES** - Miniature Sweet Rock Crab Cakes served with drizzled Remoulade 4
- OLIVES** - Black & Green Olives marinated in Garlic with a touch of Citrus 4
- SPRING ROLLS** - Fresh Vegetable Rolls served with a tiny Spinach Salad and Sweet & Hot Sauce 5
- POTATOES WEDGES** - Wedges of Roasted Potatoes with Herbs & Spices 5
- MUSSELS** - Gypsy Mussels Served in a Spicy Red Broth with Baguettes for dipping 5
- SICILIAN SKEWERS** - Two Skewers with Tomato, Basil and Mozzarella 5
- ASPARAGUS** - Grilled Asparagus with shaved Manchego Cheese and a Balsamic Reduction 5
- TILAPIA** - Crispy Tilapia with Buttermilk Herb Dressing with Cucumber 6
- PORK MEATBALLS** - Pork Meatballs in Sweet & Spicy Butternut Squash Curry 6
- SHRIMPS** - Shrimps Sautéed with Garlic and Sherry 6
- CHICKEN WINGS** - Deep Fried Chicken Wings tossed in Sweet and Spicy Chili Sauce and Fresh Basil 6
- BRIE** - Warm Brie with Melon and Crostini 6
- CLAMS** - Cherrystones tossed with butter, garlic and topped with Crispy Bacon 7
- PORTABELLA** - Grilled Portabella Mushroom with Roasted Red Peppers, Gorgonzola Cheese and Sautéed Spinach with Garlic 7
- THREE CHEESE GARLIC BREAD** - Cheddar, Mozzarella and Asiago cheese melted over a French baguette with garlic butter 7
- CLASSIC POTATOE SKINS** - Smoked Bacon, Scallions, Cheddar & Mozzarella cheese, served with sour cream 7
- TRUFFLE RISOTTO BALLS** - Parmesan Truffle Risotto lightly breaded and served with Truffle Greens 7
- CALAMARI** - Fried Calamari with Mango Salsa and Cilantro Jalapeño Aioli 8
- CRAB BISQUE** - Creamy Bisque with Corn and fresh Crab 8
- SPINACH DIP** - Four-Cheese Spinach Dip served with Toasted Pita Points and Cherry Tomatoes 8
- JERK PORK TENDERLOIN** - Marinated Jerk Pork Tenderloin served with Raspberry Dijon Sauce 8
- SATAY OF CHICKEN** - Chicken Breast Strips on a stick, served with oriental Peanut-Butter sauce 8
- TANDOORI BEEF SKEWERS** - Skewered Tenderloin, Grilled with Tandoori Sauce 9
- LAMB RACK CHOPS** - Grilled Lamb Rack Chops with Grilled Zucchini and Roast Red Pepper-Caper Relish 9
- MUSHROOMS FLORENTINE WITH LOBSTER** - Mushroom cups filled with Spinach, Lobster meat and Cream Cheese, topped with Mozzarella, Baked with Garlic Butter 9
- MINI PIZZETTAS CAPRESE** - Two Mini Pizzettas with Spinach, Tomato and Bocconcini Cheese, served with a Small Salad and a drizzle of Sweet Balsamic reduction 9
- MEDITERRANEAN BRUSCHETTA** - Fresh Diced Tomato, Basil, Capers and Black Olives, served in a Crispy Tortilla shell with Catalan toast 9
- SMOKED SALMON ROLLS** - Filled with dill Creme Fraiche and topped with fresh Sprouts 10
- MARINATED AHI TUNA** - Sashimi Grade Tuna Marinated in a Pineapple Soy Sauce topped with Sriracha Mayo and Unagi Sauce 10
- SPANISH PAELLA** - Spanish Rice with Bits of Chicken, Chorizo and Seafoods in tapas portion 11
- SEA SCALLOPS** - Pan-Seared Sea Scallops served on a bed of Sautéed Spinach and Julienne Peppers over a Grilled Portobello mushroom 11

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## Cash Cue and Absence of Hard-Work Reminder

WE ACCEPT CASH ONLY

*Welcome*

to our restaurant!

- CRAB CAKES** - Miniature Sweet Rock Crab Cakes served with drizzled Remoulade 4
- OLIVES** - Black & Green Olives marinated in Garlic with a touch of Citrus 4
- SPRING ROLLS** - Fresh Vegetable Rolls served with a tiny Spinach Salad and Sweet & Hot Sauce 5
- POTATOES WEDGES** - Wedges of Roasted Potatoes with Herbs & Spices 5
- MUSSELS** - Gypsy Mussels Served in a Spicy Red Broth with Baguettes for dipping 5
- SICILIAN SKEWERS** - Two Skewers with Tomato, Basil and Mozzarella 5
- ASPARAGUS** - Grilled Asparagus with shaved Manchego Cheese and a Balsamic Reduction 5
- TILAPIA** - Crispy Tilapia with Buttermilk Herb Dressing with Cucumber 6
- PORK MEATBALLS** - Pork Meatballs in Sweet & Spicy Butternut Squash Curry 6
- SHRIMPS** - Shrimps Sautéed with Garlic and Sherry 6
- CHICKEN WINGS** - Deep Fried Chicken Wings tossed in Sweet and Spicy Chili Sauce and Fresh Basil 6
- BRIE** - Warm Brie with Melon and Crostini 6
- CLAMS** - Cherrystones tossed with butter, garlic and topped with Crispy Bacon 7
- PORTABELLA** - Grilled Portabello Mushroom with Roasted Red Peppers, Gorgonzola Cheese and Sauteed Spinach with Garlic 7
- THREE CHEESE GARLIC BREAD** - Cheddar, Mozzarella and Asiago cheese melted over a French baguette with garlic butter 7
- CLASSIC POTATOE SKINS** - Smoked Bacon, Scallions, Cheddar & Mozzarella cheese, served with sour cream 7
- TRUFFLE RISOTTO BALLS** - Parmesan Truffle Risotto lightly breaded and served with Truffle Greens 7
- CALAMARI** - Fried Calamari with Mango Salsa and Cilantro Jalapeño Aioli 8
- CRAB BISQUE** - Creamy Bisque with Corn and fresh Crab 8
- SPINACH DIP** - Four-Cheese Spinach Dip served with Toasted Pita Points and Cherry Tomatoes 8
- JERK PORK TENDERLOIN** - Marinated Jerk Pork Tenderloin served with Raspberry Dijon Sauce 8
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## Control and Presence of Hard-Work Reminder

# Welcome

to our restaurant after a day of hard work!



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## **CHAPTER 3**

### **CREDIT CARDS CUE EFFECT:**

#### **HOW A MERE EXPOSURE TO CREDIT CARDS CUE PROMOTES CONSUMERS' PERCEIVED FINANCIAL WELL-BEING AND SPENDING**

##### **INTRODUCTION**

Credit cards have gained much popularity as an alternative payment media to cash during the past few decades (Manning, 2000). Today, credit cards have become a very common form of payment and are frequently used by consumers. In everyday life, consumers encounter credit cards or its cues repeatedly - when they pay by credit cards, when they see logos of acceptable credit cards in stores, or when they see credit cards advertisements. Drawing on the priming paradigm (Bargh & Chartrand, 2000), any credit cards cue may bring the concept of credit cards to mind so that other related concepts are activated, unconsciously influencing the interpretation of information encountered later. Thus, not only can a possession of credit cards influence consumers' decision making, but also can a mere exposure to credit cards cue. Prior literature has shown that a mere exposure to credit cards cue may increase consumers' monetary valuation of products (Feinberg, 1986; Shimp & Moody, 2000), increase consumers' attention to product benefits (Chatterjee & Rose, 2012), and increase consumers' purchase intentions for unhealthy food products (Thomas, Desai, & Seenivasan, 2011). Given the omnipresence of credit cards cues surrounding consumers nowadays and the robust evidence of credit cards cues being able to affect consumer behavior from previous literature, we consider it worthwhile to further explore how a mere exposure to credit cards cues may affect consumer decision-making.

Prior study suggests that the size of financial resources considered to be available by consumers is quite malleable, depending on which mental account (e.g. money in the wallet vs. credit card account) is activated and made cognitively accessible at that moment (Morewedge, Holtzman, & Epley, 2007). Besides, previous study reveals that consumers use the size of the credit limit available to them as a signal of their future earnings potential (Soman & Cheema, 2002). In view of these findings, we speculate that priming consumers credit cards cue may direct their attention towards their credit card account and the credit limit available to them, encouraging them to believe that they have a larger size of financial resource and a higher future income. In addition to boosting consumers' current and future wealth perceptions in the way just described, priming consumers credit cards cue may also affect consumers' sense of financial security. Consumers often regard credit cards as their "safety net" which protects them against personal financial crisis such as unexpected medical expenses, emergency car and home repairs, and job loss (Bernthal, Crockett, & Rose, 2005; Traub & Ruetschlin, 2012). It is plausible that a mere exposure to credit cards cues may activate consumers' thoughts about the financial security provided by credit cards, which in turn may positively influence consumers' sense of financial security. Since there has not been any study directly testing the relationship between an exposure to credit cards cue and the subsequent financial well-being perceptions, this study tries to fill this void in the literature by looking into how a mere exposure to credit cards cue may affect consumers' perceptions about their financial well beings including current wealth, future wealth, and financial security.

Consumers' attitude towards credit cards varies (Richins, 2011; Xiao, Tang, Serido, & Shim, 2011). Previous study suggests that, when being exposed to credit cards cue, consumers who possess positive associations with credit cards are willing to spend more, while consumers

who possess negative associations with credit cards are willing to spend less (Feinberg, 1990; Lie, Hunt, Peters, Veliu, & Harper, 2010). How consumers think and feel about credit cards, and how they associate credit cards play an important role in moderating the effects of credit cards (Incekara-Hafalir & Loewenstein, 2009; Kamleitner & Erki, 2013). As suggested in literature, consumers can be identified as tightwads or spendthrifts, based on their sensitivity to pain of payment (Rick, Cryder, & Loewenstein, 2008). The distinction between tightwads and spendthrifts has been shown to be relevant in moderating the credit cards effect on unhealthy food purchases in prior study (Thomas, Desai, & Seenivasan, 2011). Extending the application of this individual difference as a moderator of credit cards effects, in the current study, we want to further test its relevance in the domain of personal finance.

The purpose of this study is threefold. First, we attempt to fill the literature gap by investigating how consumers perceive their own financial well-beings after being exposed to credit cards cue. Second, we want to examine how the individual difference in associating credit cards may moderate the proposed credit cards cue effects. Finally, by investigating consumers' perceptions of their own financial well-being after being primed with credit cards cue, the current study attempts to shed light on the underlying processes responsible for the credit cards cues effect in stimulating spending, which has been found extensively in previous literature (Feinberg, 1986; McCall & Belmont, 1996; Raghurir & Srivastava, 2008; Shimp & Moody, 2000).

## **CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT**

### **Payment Cues Priming Study**

Extant literature suggests that a mere exposure to payment cues such as monetary cues and credit card cues can influence a variety of human behaviors. For example, reminders of money may reduce participants' helpfulness toward others (Vohs, Mead, & Goode, 2006; Vohs, Mead, & Goode, 2008), reduce participants' social distress and physical pain (Zhou, Vohs, & Baumeister, 2009), and increase participants' level of mental construal (Hansen, Kutzner, & Wnke, 2012). On the other hand, reminders of credit cards may increase participants' spending (Feinberg, 1986; McCall & Belmont, 1996), reduce participants' feelings of pain of payment (Thomas, Desai, & Seenivasan, 2011), and increase participants' attention to product benefits (Chatterjee & Rose, 2012). Implicit in this stream of research is the use of the priming paradigm, which concerns about how an individual's recent experience could affect his or her perception, evaluation, motivation, and behavior in a passive and unintended way by temporarily activating related mental representations and creating internal readiness to respond in certain ways (Bargh & Chartrand, 2000). Given the abundant empirical support, previous priming study on payment cues provides a promising research direction to this study for investigating how credit cards cue may exert a mere exposure effect on consumers influencing their perceptions.

### **Credit Cards Cue and Financial Well-Being**

With credit cards in hand, consumers can access to a larger level of liquidity. The presence of such additional liquidity may give consumers an impression that they can afford a more sophisticated lifestyle, passing them a feeling that they are wealthier than they actually are (Gross & Souleles, 2000; Manning, 2000). On the other hand, the accessible account effect (Morewedge, Holtzman, & Epley, 2007), and the credit limit effect (Soman & Cheema, 2002) described previously imply that not only possessing actual credit cards may lead consumers to

have a sense of better financial well-being, but a mere exposure to credit cards cue may suffice to have such an effect.

Consumers' decision on consumption is influenced by their perceived total resources available for consumption (e.g. money in the wallet vs. savings account; time available on a day vs. in a week; calorie intake needed daily vs. weekly), which can be manipulated by varying the temporary accessibility of resource accounts in consumers' minds (Morewedge, Holtzman, & Epley, 2007). The accessible account effect suggests that when a relatively large financial resource account such as credit card account is made more accessible by priming consumers the relevant concept, consumers will spend more due to the larger financial resource account activated in their minds. In other words, the size of financial resources considered to be available by consumers is quite flexible, subject to environmental influence. Thus, it is plausible to put forward that credit cards cue activates consumers' thoughts about their credit card account, which in turn may increase the size of financial resources considered to be available by consumers resulting in an inflated current wealth perception.

Other than the inflated current wealth perception, consumers may also perceive a boost in their future wealth when being primed with credit card cues. Prior study suggests that consumers use the size of the credit limit available to them as a signal of their future earnings potential, the higher the credit limit available to them, the higher their expectations of future salary (Soman & Cheema, 2002). Consistent with this finding, there is a longitudinal study showing that the higher the credit limit available to consumers, the higher their likelihood to incur credit card debt (Gross & Souleles, 2000). This reflects how consumers may over rely on credit limit as a clue of their future spending power (Soman, Cheema, & Chan, 2012). Based on this finding, we speculate

that a mere exposure to credit cards cue can cause consumers to be aware of the credit limit available to them provided by credit cards. Consequently, they expect an inflated future wealth when compared with consumers who are not primed with credit cards cue and are not aware of any available credit limit.

In addition to the inflated perceptions of current and future wealth, consumers may also perceive themselves being more financially secure after seeing credit cards cue. Consumers often describe credit cards as “security blanket” and “safety net”, which shield them from the impact of running out of money when coping with contingency issues such as being in medical emergency, car in need of repairs, and not having enough cash on hand when situating in a foreign country (e.g. Bernthal, Crockett and Rose 2005; Traub and Ruetschlin 2012). It is possible that such frequent association between credit cards and “security blanket”/“safety net” may cause consumers to actually feel more financially secure when they are exposed to credit cards cue.

Since perceptions about current wealth, future wealth, and financial security are all related to one’s financial well-being, by putting the previous arguments together, we hypothesize:

***H1: Consumers perceive that they have a better (worse) financial well-being after being exposed to credit cards cue (control).***

### **Individual Difference in Credit Cards Associations**

The credit cards cue effect we just proposed, however, have not taken individual differences in attitude towards credit cards into considerations. Taking the most established credit cards cue effect - the spending-stimulating effect - as an example, there has been mixed

results for this effect. Some research findings support the spending-stimulating effect (Feinberg, 1986; McCall & Belmont, 1996; Raghurir & Srivastava, 2008), while some of them fail to replicate the effect (Hunt, Florsheim, Chatterjee, & Kernan, 1990; Prelec & Simester, 2001). Feinberg (1990) attributed the failure to replicate the spending-stimulating effect of credit cards cue to the different associations people may have with credit cards. He presented empirical evidence from both his published and unpublished work, and suggested that when being primed with credit cards cue, whether consumers associated credit cards positively or negatively would influence consumer spending (Feinberg, 1990). A more recent study also suggests that people of different cultures may have different meanings ascribed to credit cards resulting in different levels of perceived ownership of a purchased product (Kamleitner & Erki, 2013). Therefore, in order to fully examine the proposed credit cards cue effect, we need to also consider how credit cards are represented differently among consumers' minds and what the corresponding mental associations may be activated when the concept of credit cards is primed.

With abundant empirical support, credit cards cue have been shown to encourage consumer to spend more (Feinberg, 1986; McCall & Belmont, 1996; Shimp & Moody, 2000; Raghurir & Srivastava, 2008). Researchers try to explain the spending-stimulating effect of credit cards cue by using learning theories. Some suggest that credit cards cue, through conditioning, may have obtained the ability to elicit spending behavior as a conditioned response (Feinberg, 1986); some suggest that consumers, through social learning, may have learned to associate credit cards with spending which then become the default behavior whenever credit cards cue are present (McCall & Belmont, 1996). Regardless of the underlying mechanism for the spending-stimulation effect of credit cards cue, it seems that the concept of spending is strongly associated with the mental representations of credit cards in consumers' mind. Besides

associating credit cards with spending, consumers seem to also have a strong mental connection between credit cards and debt (Bernthal, Crockett, & Rose, 2005; Manning, 2000). Interestingly, a recent study found that more college students associated credit cards with debt than with spending, contrary to the results from a similar survey conducted two decades ago (Lie, Hunt, Peters, Velu, & Harper, 2010). The reason for the dramatic change of college students' perception of credit cards is not the focus of this study. However, this finding gives further support to how debt is strongly associated with credit cards in consumers' minds.

Drawing on the findings in existing literature, it seems that spending and debt are two of the most strongly associated concepts with credit cards in consumers' minds. Depending on their social and financial experiences with credit cards, some consumers may associate credit cards with spending more than debt, while others may associate credit cards with debt more than spending. Consumers who differ in associating credit cards with spending and debt will behave differently when being primed with credit cards cue. Nevertheless, there has been very limited research looking into how individuals may differ in forming these two mental associations. Individual's credit history, individual's experience of using credit cards, and economic environment are three of the possible factors that may affect the formation of credit cards associations (Feinberg, 1990; Lie, Hunt, Peters, Velu, & Harper, 2010). In the current study, we try to bring the individual's sensitivity to pain of payment into the picture, because it has been proven to be a relevant and important moderator influencing the credit cards cue effect on unhealthy food purchase (Thomas, Desai, & Seenivasan, 2011). We found that there may be some potential links between one's sensitivity to pain of payment and how strong the credit card-spending/debt associations one has.

As suggested in literature, consumers often experience a pain of paying, which can undermine their pleasure derived from consumption, when they make purchases (Prelec & Loewenstein, 1998; Zellermayer, 1996). Further study shows that people vary in their sensitivity to pain of payment, with spendthrifts being less sensitive and tightwads being more sensitive (Rick, Cryder, & Loewenstein, 2008). Being less sensitive to pain of payment, spendthrifts do not feel hard when parting with money, which may lead them to enjoy spending more and concern about debt less than tightwads. Consequently, spendthrifts may form stronger mental connections between credit cards and spending, and weaker mental connections between credit cards and debt. On the contrary, tightwads who are more sensitive to pain of payment feel hard when parting with money, which may lead them to think less about spending and care more about avoiding debt than spendthrifts. As a result, tightwads may form stronger mental connections between credit cards and debt, and weaker mental connections between credit cards and spending. Formally,

*H2a: Spendthrifts have a stronger mental association between credit cards and spending than Tightwads.*

*H2b: Tightwads have a stronger mental association between credit cards and debt than Spendthrifts.*

### **Moderating Role of Credit Cards Associations**

Since spendthrifts and tightwads associate credit cards with spending and debt to different degrees, we believe that they will give different responses to the proposed credit cards cue effect on financial well-being perceptions. In other words, the proposed H1 will be moderated by individual difference of sensitivity to payment.

Drawing on the findings of accessible account effect (Morewedge, Holtzman, & Epley, 2007), we propose that priming consumers the credit cards cue may bring the credit card account to their minds, driving up their perceived current wealth. How the higher accessibility of credit card account in one's mind affects one's perception of current wealth depends primarily on how large s/he views the credit card account as a financial resource. Spendthrifts who have stronger mental connections between credit cards and spending appear to view the credit card account as a larger financial resource than do tightwads, because spendthrifts tend to focus on how the credit card account enables them to splurge. On the contrary, when compared with spendthrifts, tightwads who have stronger mental connections between credit cards and debt appear to view the credit card account as a smaller financial resource, because they tend to focus on the possible debt and interest incurred when using this financial resource. Thus, the proposed credit cards cue effect in boosting perceived current wealth is stronger (weaker) for Spendthrifts (Tightwads).

Based on the results of credit limit effect (Gross & Souleles, 2000; Soman & Cheema, 2002), we propose that priming consumers the credit cards cue may cause them to be aware of the credit limit available, which in turn will influence their perceived future earnings power. To which extent can a credit limit enhance one's perceived future earnings potential depends on whether s/he may discount the credit availability as a predictor of her/his future earning power. Spendthrifts who associate credit cards with spending more tend to view credit limit as a reliable signal of their future spending power without considering its potential to be an interest-bearing debt. However, tightwads who associate credit cards with debt more tend to view credit limit as a potential debt which bears interest. Thoughts pertaining to debt and its interest probably attenuate the credit limit effect in signaling one's future earnings power. Hence, the proposed

credit cards cue effect in boosting perceived future wealth is stronger (weaker) for Spendthrifts (Tightwads).

Although consumers may consider credit cards as their “security blanket” and “safety net” which protects them against personal financial crisis (Bernthal, Crockett, & Rose, 2005; Traub & Ruetschlin, 2012), they may also view credit cards as huge risks because of its escalating interests and hidden terms which make it very easy to accumulate an unmanageable debt (Scurlock, 2006). Putting these two contradictory characteristics of credit cards into one dimension, previous qualitative study suggests that consumers may view the meaning of credit cards differently along a continuum with *security* as one end and *threat* as another end (Penaloza & Barnhart, 2011). In the current study, we propose that spendthrifts who have stronger credit card-spending and weaker credit card-debt associations are more likely to view credit cards as security, whereas tightwads who have stronger credit card-debt and weaker credit card-spending associations are more likely to view credit cards as threat. Therefore, the credit cards cue effect in promoting the sense of financial security is stronger (weaker) for Spendthrifts (Tightwads).

Considering the influences of individuals’ sensitivity to pain of payment on ones’ credit cards associations and hence their perceived current wealth, future wealth, and financial security after being exposed to credit cards cue, H1 is moderated. We hypothesize:

***H3: The credit cards cue effect in promoting consumers’ perceived financial well-being is stronger (weaker) for Spendthrifts (Tightwads).***

Similar to how the credit cards cue is proposed to promote the perceived financial well-beings (including perceived current wealth, future wealth, and sense of financial security) under

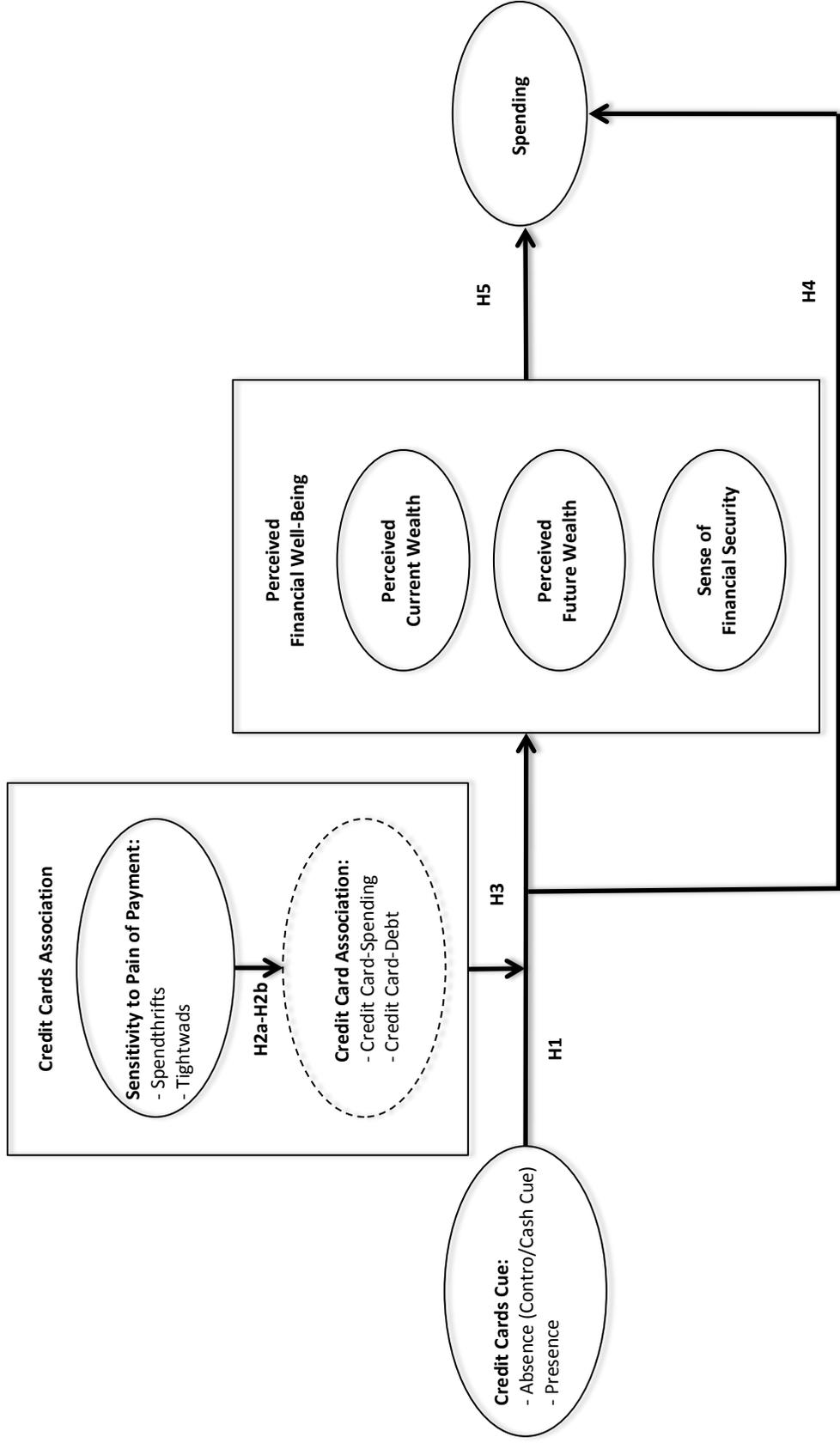
the influence of individuals' sensitivity to pain of payment, the credit cards cue effect in stimulating the spending is also proposed to be moderated by individuals' sensitivity to pain of payment. Given the mixed results in prior study when examining how credit cards cue affects spending, we attempt to test if individuals' sensitivity to pain of payment can be one of the possible underlying factors contributing to the mixed results. With stronger credit card-spending associations, spendthrifts are more likely to spend and spend more than tightwads who have weaker credit card-spending associations. Formally,

***H4: The credit cards cue effect in stimulating the spending is stronger (weaker) for Spendthrifts (Tightwads).***

One of the objectives of this study is trying to provide a possible underlying explanation for the credit cards cue effect in stimulating spending. In this study, we propose that consumers' inflated perceptions about their financial well-being mediate the credit cards cue effect in stimulating consumers' spending behavior. Thus, we hypothesize:

***H5: The credit cards cue effect in stimulating the spending is mediated by the perceived financial well-being.***

The conceptual framework developed is depicted in Figure 3.1. The hypotheses are tested through an experimental study as described below.



**Figure 3.1: The Conceptual Framework of The Credit Cards Cue Effect On Perceived Financial Well-Being and Spending**

## **EXPERIMENTAL STUDY**

### **Method**

An experimental study was conducted to test all the hypotheses. Participants were invited to participate in a “Consumers’ Attitudes and Purchase Behaviors on Natural and Man-Made Products Study”, which was ostensibly conducted to understand consumers’ attitudes towards natural versus man-made products. Being randomly assigned to different conditions, participants were firstly asked about their thoughts on either credit cards or cash. They were then asked to rate their perceptions on their own financial well-beings, and their willingness to pay for a total of ten products.

***Participants.*** Amazon’s Mechanical Turk (MTurk), serving as an online marketplace open for getting work done by others, was employed as a platform to collect data for this experiment. Some doubts had been cast upon the quality of web-based data, but it has been shown that data collected via MTurk is at least as reliable as those obtained by traditional methods (Buhrmester, Kwang, & Gosling, 2011). Participants in the current study were registered MTurk “workers” (paid task completers) residing in U.S., who were able to browse available tasks and receive monetary compensation by their MTurk account. Three hundreds and thirty-seven workers (42% women) participated in this study for a small sum of money. The average age of participants was 31 (18-70), and about 69% of them had a household annual income of \$20,001 or more.

***Credit Cards Cue Manipulation.*** There were two conditions for the credit cards cue manipulation, credit cards cue (Card) vs. cash cue (Cash). In the Card condition, participants were presented with a picture showing different types of credit cards including MasterCard, Visa, Discover, and American Express. They were asked to list the things that come to their mind

when hearing the word “credit card”, each thought on a separate line. In the Cash condition, participants were presented with a picture showing U.S. currency notes of different values including \$1, \$5, \$10, \$20, and \$50 note. They were then asked to list the things that come to their mind when hearing the word “cash”, each thought on a separate line. The stimuli employed in these two conditions are shown in Figure 3.2 (Card condition) and Figure 3.3 (Cash Condition).

**Procedure.** The questionnaire was created by using an online survey software which randomly assigned the participants to one of the two conditions (Card vs. Cash). As a cover story, participants were asked to list out their thoughts about “nature” and “science” at the beginning. They were then presented with either the Card or the Cash stimuli and were asked to list out their thoughts about it. After completing the tasks of thoughts listing, participants were asked to indicate the amount they are willing to pay for a total of ten products which were presented in a random order. The products were either natural (e.g. plants, herbal tea bag, wooden chair) or digital products (e.g. laptop computer, coffee maker, digital cook) so that the theme of the cover story could be matched to avoid participants from suspecting the true purpose of the study. The screen shots of the ten products are shown in Appendix A.

**Perceived Current Wealth.** Subsequently, participants were asked to indicate how they felt about their financial situation. They were asked to rate their current wealth on two 7-point semantic differential scales, with one anchored at 1 = “Small” and 7 = “Large”, and another one anchored at 1 = “Poor” and 7 = “Rich”.

What comes to your mind when I say the word “credit-card”?



Please list each thing that comes to your mind on a separate line.  
Leave the lines empty and go to the next question when nothing else comes to your mind.

Line 1	<input type="text"/>
Line 2	<input type="text"/>
Line 3	<input type="text"/>
Line 4	<input type="text"/>
Line 5	<input type="text"/>
Line 6	<input type="text"/>

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**Figure 3.2: The Webpage Screenshot For the Card Condition**

What comes to your mind when I say the word “cash”?



Please list each thing that comes to your mind on a separate line.  
Leave the lines empty and go to the next question when nothing else comes to your mind.

Line 1	<input type="text"/>
Line 2	<input type="text"/>
Line 3	<input type="text"/>
Line 4	<input type="text"/>
Line 5	<input type="text"/>
Line 6	<input type="text"/>

---

**Figure 3.3: The Webpage Screenshot For the Cash Condition**

***Perceived Future Wealth.*** Then participants were asked to rate their future wealth on two 7-point semantic differential scales which were exactly the same as those used to measure perceived current wealth.

***Sense of Financial Security.*** Next, participants rated their sense of financial security on two 7-point semantic differential scales, with one anchored at 1 = “Susceptible to financial emergencies” and 7 = “Safe from financial emergencies”, and another one anchored at 1 = “Vulnerable” and 7 = “Secure”.

***Spendthrift-tightwad (ST-TW) Score.*** Following the measures about participants’ perceptions of their financial well-being, the “spendthrift-tightwad” (ST-TW) scale developed by Rick, Cryder, and Loewenstein (2008) was used to assess participants’ sensitivity to pain of payment. The ST-TW scale consists of four questions. The total score for all four questions ranges from 4 to 26. Participants with higher scores tend to be Spendthrifts (ST) who are proposed to have stronger credit card-spending associations and weaker credit card-debt associations, whereas participants with lower scores tend to be Tightwads (TW) who are proposed to have stronger credit card-debt associations and weaker credit card-spending associations. Participants with intermediate scores tend to be Unconflicted (UC) who are proposed to have credit card-spending and credit card-debt associations with similar strengths.

***Other Measures.*** Participants’ gender, age, and income were asked at the end of the survey.

***Credit Cards Association.*** The thoughts listed by the participants in both Card and Cash condition were analyzed by two raters separately who judged how many thoughts listed by each participant are related to spending and debt respectively. For example, spending-related thoughts might include spend, purchase, buy, shopping etc., while debt-related thoughts might include

debt, loan, interest, borrow etc. Their ratings were the same for 290 out of 337 participants (86% of inter-rater agreement). The disagreements were resolved after discussion. The numbers of spending-related and debt-related thoughts are then divided by the total number of thoughts written by the participants, giving a ratio of spending-related and debt-related thoughts to all triggered thoughts for each participant. These ratios were then served as the dependent measures for testing H2a and H2b.

***Perceived Financial Well-Being.*** Participants' ratings for perceived current wealth, future wealth, and financial security were highly correlated with Pearson coefficient over 0.5 for all pairs. The Cronbach's Alpha for the six-item scale was 0.92, indicating a high internal consistency. Thus, the six items were aggregated by taking an average of them, giving a measure of perceived financial well-being and would be used for testing H1, H3, and H5.

***Total Spending.*** Since the participants had indicated the amount they were willing to pay for each of the ten products shown, these amounts were added for each participants. The sum was taken as the total spending of each participant and would be used to test H4.

## **RESULTS**

A series of linear regression analyses were conducted to test H1 to H5. The focal independent variable was Credit Cards Cue Manipulation, represented by a dummy variable scored as 0=Card condition and 1=Cash condition. The moderator variable was Individual's Sensitivity to Pain of Payment, measured by the ST-TW scale with the total score ranging from 4 to 26 (spendthrift and tightwad being the anchor for highest and lowest score respectively). The product of the two, which was the interaction effect between the Credit Cards Cue Manipulation

and Individual's Sensitivity to Pain of Payment, was another predictor variable. The age and income of the participants were also included as predictor variables. The dependent variables included the ratio of spending- and debt-related thoughts, the measure of perceived financial well-being, and the total spending for the ten products. One respondent was excluded from further analysis, because his/her response of the total spending was found to be an outlier, which was more than 3 standard deviations above mean<sup>1</sup>. As a result, 336 responses were submitted for the regression analyses. The means and standard deviations for the ST-TW score, age, income, and all the dependent measures are shown in Table 3.1.

**Table 3.1: Means and Standard Deviations for Variables and Measures**

<b>Variable/Measure</b>	<b>Mean</b>	<b>SD</b>
ST-TW Score	13.75	4.33
Age	30.65	10.05
Income	2.5	1.45
Spending-related Thoughts Ratio	0.12	0.19
Debt-related Thoughts Ratio	0.14	0.22
Perceived Financial Well-being	3.72	1.35
Total Spending	833.57	535.05

Note: Income Category: 1. \$20,000 or less, 2. \$20,001 to \$40,000, 3. \$40,001 to \$60,000, 4. \$60,001 to \$80,000, 5. \$80,001 to \$100,000, 6. More than \$100,000

**Credit Cards Association.** Firstly, the assumptions that spendthrifts have a stronger credit card-spending association while tightwads have a stronger credit card-debt association were tested. We regressed the ratio of spending- and debt-related thoughts separately onto the Credit Cards Cue Manipulation dummy variable, ST-TW Score, the product of the two, age, and income. The results for the unstandardized coefficients were summarized in Table 3.2. As predicted, the

<sup>1</sup> The total spending of this respondent is \$25,360. When this respondent is included, the mean is \$906 and the standard deviation is \$1,439. S/he was the only respondent who gave a 5-digit spending amount. The mean and standard deviation after excluding this respondent is shown in Table 1.

regression coefficient for the interaction term was significant, suggesting the presence of a two-way interaction. Further analysis revealed that the slope of ST-TW Score in the Card condition was significant and positive (negative) for the ratio of spending- (debt-) related thoughts ( $t=2.30$ ,  $p<.05$ ;  $t=-3.01$ ,  $p<.01$ ), indicating that the higher (lower) the ST-TW score or the higher the tendency to be a spendthrift (tightwad), the higher the ratio of spending- (debt-) related thoughts when the credit cards cue was present, supporting H2a and H2b.

**Table 3.2: Summary of Regression on the Ratio of Spending- and Debt-Related Thoughts (N = 336)**

Predictor	B	SE B	$\beta$	t
<b>Dependent Variable: Ratio of spending-related thoughts</b>				
Credit Cards Cue	-.208	.081	-.464	***-2.548
ST-TW Score (Card condition =0)	.010	.004	.184	**2.296
Credit Cards Cue x ST-TW Score	.012	.006	.161	**2.166
Age	-.001	.001	-.034	-.626
Income	-.008	.008	-.054	-.991
<b>Dependent Variable: Ratio of debt-related thoughts</b>				
Credit Cards Cue	.341	.057	.885	***5.957
ST-TW Score (Card condition =0)	-.009	.003	-.196	***-3.006
Credit Cards Cue x ST-TW Score	-.009	.004	-.136	**2.239
Age	.002	.001	.112	***2.508
Income	.007	.006	.055	1.228

One-tailed p-value: \* $p<=.1$ , \*\* $p<=.05$ , \*\*\* $p<=.01$

**Perceived Financial Well-being.** The credit cards cue effect on perceived financial well-being moderated by individual's sensitivity to pain of payment was then tested. We regressed the perceived financial well-being onto the Credit Cards Cue Manipulation dummy variable (X), the mean centered ST-TW Score (MO), the product of the two (XMO), age, and income. The results were summarized in Table 3.3 as Equation 1. As predicted, the regression coefficient for XMO was significant ( $t=2.11$ ,  $p<.05$ ), suggesting the presence of a two-way interaction. Further analysis revealed that the slope of ST-TW Score in the Card condition was significant and

**Table 3.3: Summary of Regressions For Mediated Moderation Test (N = 336)**

Predictor	Equation 1: Criterion Perceived Financial Well-being				Equation 2: Criterion Total Spending				Equation 3: Criterion Total Spending			
	B	SE	B	t	B	SE	B	t	B	SE	B	t
X: Credit Cards Cue	.060	.140	.022	.425	47.577	57.813	.045	.823	33.857	57.516	.032	.589
MO: ST-TW Score	.018	.022	.059	.825	5.225	9.146	.042	.571	7.422	9.163	.060	.810
XMO: Credit Cards Cue x ST-TW Score	.069	.033	.150	<b>**2.109</b>	29.719	13.404	.164	<b>**2.217</b>	26.840	13.370	.148	<b>**2.008<sup>+</sup></b>
Me: Perceived Financial Well-being									37.583	22.477	.095	<b>**1.672</b>
MeMO: Perceived Financial Well-being x ST-TW Score									10.560	4.695	.123	<b>**2.249</b>
Covariates: Age	-.016	.007	-.118	<b>***2.247</b>	3.089	2.891	.058	1.069	3.736	2.886	.070	*1.295
Income	.219	.049	.236	<b>***4.509</b>	-11.941	20.036	-.032	-5.96	-16.680	20.529	-.045	-.812

Note: Bold indicates statistics needed to be significant to qualify for a mediated moderation, and a plus sign (+) indicates statistic needed to be non-significant to qualify for a full mediated moderation. X=manipulation, MO=moderator, and Me=mediator.

\*p<=.1, \*\*p<=.05, \*\*\*p<=.01 (one-tailed)

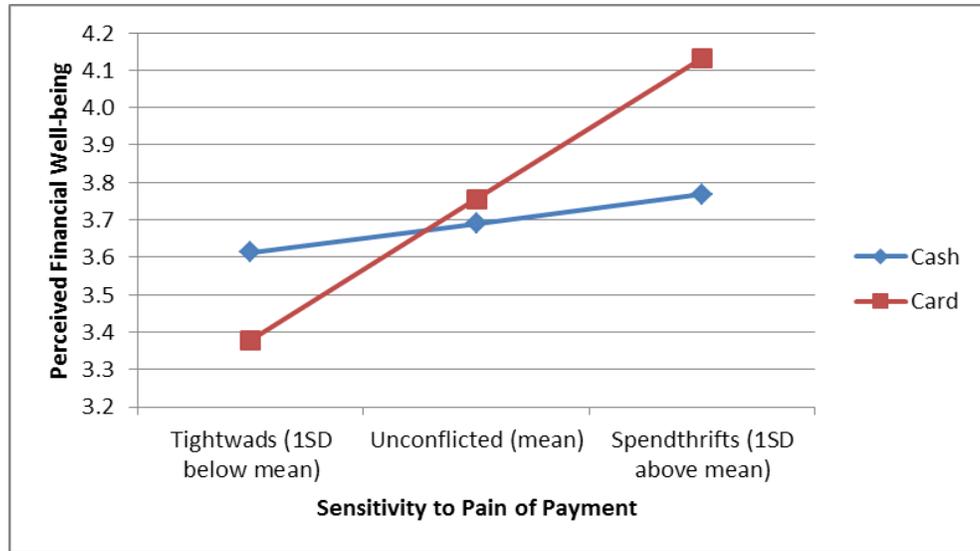
positive on the perceived financial well-being ( $t=3.65$ ,  $p<.01$ ), showing that when the credit cards cue was present, the higher the ST-TW score or the higher the tendency to be a spendthrift, the better the perceived financial well-being. To test the differences of perceived financial well-being across the Cash and Card conditions along the ST-TW scale, a spotlight analysis was performed at the mean level, one standard deviation below, and one standard deviation above the mean level of individual's sensitivity to pain of payment. The statistics of the spotlight analysis was presented in Table 3.4. A significant difference was found at one standard deviation above mean ST-TW score ( $t=1.79$ ,  $p<.05$ ), showing that spendthrift participants perceived themselves having a better (worse) financial well-being after being exposed to credit cards cue (vs. cash cue), supporting H1. Since no significant difference was found at the mean ( $t=0.43$ ) and one standard deviation below mean ST-TW score ( $t=-1.2$ ), the credit cards cue effect in promoting consumers' perceived financial well-being was weaker for unconflicted and tightwad participants, supporting H3. To illustrate the interaction relationship between the Credit Cards Cue manipulation and individual's sensitivity to pain of payment on perceived financial well-being, the results of the spotlight analysis is graphically presented in Figure 3.4.

**Table 3.4: Spotlight Analysis on Perceived Financial Well-being at Selected Levels of Sensitivity to Pain of Payment (N=336)**

<b>Sensitivity to Pain of Payment</b>	<b>Cash Mean</b>	<b>Card Mean</b>	<b>Mean Difference (Card-Cash)</b>	<b>t</b>
<b>Tightwads</b> (1SD below mean ST-TW score)	3.61	3.38	-0.23	-1.20
<b>Unconflicted</b> (Mean ST-TW score)	3.69	3.76	0.06	0.43
<b>Spendthrifts</b> (1SD above mean ST-TW score)	3.77	4.13	0.36	**1.79

Note: The spotlight analysis was done at the mean level of age and income.

One-tailed p-value: \* $p<=.1$ , \*\* $p<=.05$ , \*\*\* $p<=.01$



**Figure 3.4: Predicted Mean Perceived Financial Well-being Across Card vs. Cash Condition at Selected Levels of Sensitivity to Pain of Payment**

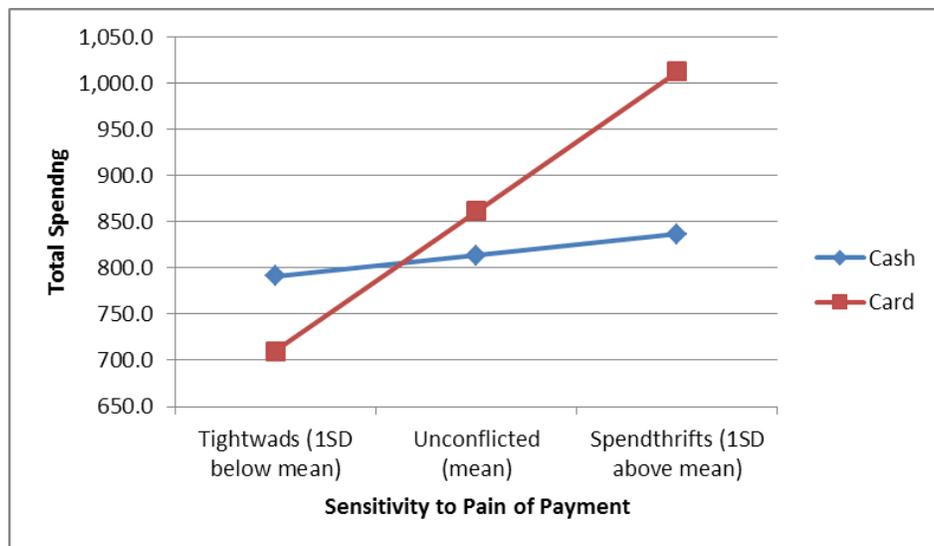
**Total Spending.** Thirdly, the credit cards cue effect on total spending moderated by the credit cards association was then tested. We regressed participants' total spending for the ten products onto the Credit Cards Cue Manipulation dummy variable (X), the mean centered ST-TW Score (MO), the product of the two (XMO), age, and income. The results were summarized in Table 3.3 as Equation 2. As predicted, the regression coefficient for XMO was significant ( $t=2.22$ ,  $p<.05$ ), suggesting the presence of a two-way interaction. Further analysis revealed that the slope of ST-TW Score in the Card condition was significant and positive on the total spending ( $t=3.56$ ,  $p<.01$ ), showing that when the credit cards cue was present, the higher the ST-TW score or the higher the tendency to be a spendthrift, the higher the total spending. To test the differences of total spending across the Cash and Card conditions along the ST-TW scale, a spotlight analysis similar to the one previously done on the perceived financial well-being was performed. The statistics of the spotlight analysis was presented in Table 3.5. A significant difference was found at one standard deviation above mean ST-TW score ( $t=2.15$ ,  $p<.05$ ), showing that spendthrift

participants spend more (less) after being exposed to credit cards cue (vs. cash cue). Since no significant difference was found at the mean ( $t=0.82$ ) and one standard deviation below mean ST-TW score ( $t=-0.99$ ), the credit cards cue effect in stimulating consumers' spending was weaker for unconflicted and tightwad participants, supporting H4. To illustrate the interaction relationship between the Credit Cards Cue manipulation and individual's sensitivity to pain of payment on total spending, the results of the spotlight analysis is graphically presented in Figure 3.5.

**Table 3.5: Spotlight Analysis on Total Spending at Selected Levels of Sensitivity to Pain of Payment (N=336)**

Sensitivity to Pain of Payment	Cash Mean	Card Mean	Mean Difference (Card-Cash)	t	One-tailed p-value
<b>Tightwads</b> (1SD below mean ST-TW score)	790.81	709.70	-81.11	-0.99	0.16
<b>Unconflicted</b> (Mean ST-TW score)	813.44	861.01	47.57	0.82	0.21
<b>Spendthrifts</b> (1SD above mean ST-TW score)	836.06	1,012.32	176.26	2.15	0.02

Note: The spotlight analysis was done at the mean level of age and income.



**Figure 3.5: Predicted Mean Total Spending Across Card vs. Cash Condition at Selected Levels of Sensitivity to Pain of Payment**

***Mediating Role of Perceived Financial Well-being.*** Finally, the role of perceived financial well-being in mediating the credit cards cue effect on spending was tested. The results discussed previously had shown that the interaction between the Credit Cards Cue Manipulation and individual's Sensitivity to Pain of Payment did affect the Perceived Financial Well-being, and a similar interaction effect was also found on Total Spending in the absence of the Perceived Financial Well-being. Following these results, we regressed the Total Spending onto the Credit Cards Cue Manipulation Dummy (X), the mean centered ST-TW Score (MO), the product of the two (XMO), the mean centered Perceived Financial Well-being (Me), the product of the mean centered Perceived Financial Well-being and the mean centered ST-TW Score (MeMO), age, and income. The results were summarized in Table 3.3 as Equation 3. As predicted, the regression coefficient for Me and MeMO were significant and positive ( $t=1.67, p<.05$ ;  $t=2.25, p<.05$ ). Also, the regression coefficient for XMO was reduced in magnitude when compared with that of XMO in Equation 2 on the overall moderation effect on spending (.148 vs. .164). These results indicate that the proposed model was qualified to have a mediated moderation though not a "full" one (Muller, Judd, & Yzerbyt, 2005), supporting H5. To further test for the indirect effect of XMO on Total Spending through Me, the bootstrapping approach was taken by using 1,000 bootstrap samples to generate the bias corrected bootstrap confidence intervals for the indirect effect in our model (Hayes, 2013; Preacher & Hayes, 2004). The bootstrap results showed that the true indirect effect was estimated to be above 0.013 with 95% confidence interval, so we could conclude that the indirect effect of XMO on Spending through Me was significantly greater than zero at  $p<.05$  (one tailed). The conceptual and statistical model we used for the bootstrapping approach is shown in Appendix A. The bootstrap output is shown in Appendix B.

## **Discussion**

Based on the results of the thought-listing task in the experimental study, our assumptions of spendthrifts having a stronger credit card-spending association than tightwads and tightwads having a stronger credit card-debt association than spendthrifts were supported. Participant's sensitivity to pain of payment had been shown to moderate the credit cards cue effect on both their perceived financial well-being and their total spending. Finally, participant's perceived financial well-being was found to mediate the moderation effect between credit cards cue and sensitivity to pain of payment on the total spending.

## **GENERAL DISCUSSION**

An experimental study was conducted to test how a mere exposure to credit cards cue promotes consumers' perceived financial well-beings and spending. The results from the study support our hypotheses that spendthrifts believe they have better financial well-being (currently wealthier, will be wealthier in the foreseeable future, and are more financially secure) after being exposed to credit cards cue. They also spend more when they were shown with credit cards cue. However, this credit cards cue effect in promoting one's perceived financial well-being and spending was not found in unconflicted and tightwad participants. Our conceptual framework is based on the assumption that spendthrifts have a stronger credit card-spending association than tightwads and tightwads have a stronger credit card-debt association than spendthrifts. This assumption is supported when we analyzed participants' thoughts about credit cards. We propose that consumers' perceived financial well-being mediates the credit cards cue effect on spending. A series of regression analyses reveals that the mediating role of perceived financial well-being

on spending is in the form of mediated moderation – perceived financial well-being mediates the moderation effect of sensitivity to pain of payment on credit cards cue manipulation.

Previous study on the spending-stimulating effect of credit cards cue has mixed results. Some results support the spending-stimulating effect (Feinberg, 1986; McCall & Belmont, 1996; Raghubir & Srivastava, 2008), while some find the reverse showing a spending-discouraging effect (Feinberg, 1990; Lie, Hunt, Peters, Veliu, & Harper, 2010). Given the mixed results in literature, we are motivated to investigate any possible moderators for the credit cards cue effect. Since consumers' associations with credit cards (positive vs. negative) or meanings ascribed to credit cards (Asian vs. Western culture) have shown to be a relevant moderator in prior study (Feinberg, 1990; Kamleitner & Erki, 2013), we focus on examining individual differences in thinking about credit cards. On the other hand, individuals' sensitivity to pain of payment has also shown to be relevant in moderating the effect of credit cards cue on purchase intentions for unhealthy food products (Thomas, Desai, & Seenivasan, 2011). Thus, we proposed individuals with different sensitivity to pain of payment may had different associations with credit cards, leading them to spend differently when the concept of credit cards was activated in their minds. The results of the experimental study support this notion.

Since the underlying mechanism which governs the spending-stimulating effect of credit cards cue is still unclear, we are motivated to look at the processes behind the effect trying to dig out any possible mediators responsible for the effect. The accessible account effect (Morewedge, Holtzman, & Epley, 2007), and the credit limit effect (Soman & Cheema, 2002) suggest that consumers' perceptions about their current wealth and future wealth may mediate the credit cards cue effect on spending. Without any previous research directly studying the credit cards

cue effect on perceived financial well-being, we try to fill the gap by exploring how a mere exposure to credit cards cue may influence the perceptions of financial well-being and so the subsequent spending behavior. The results of the experimental study support our hypotheses, showing that spendthrifts may have an inflated perception of their financial well-beings after being exposed to credit cards cue and will then spend more.

We contribute to the literature by showing that individual difference in sensitivity to pain of payment may lead to different associations with credit cards which in turn may influence how an individual perceives his/her financial situations when being primed with credit cards. Individuals' perceptions about their financial situations would then affect their spending behavior. Since credit cards cue are widely found in consumers' daily life, its effect on consumers' perceptions and behaviors are important phenomenon that worth researchers' attention. Future research may explore how the inflated perceptions of financial well-beings after an exposure to credit cards may affect subsequent financial decision-making such as saving, investment, and risk-taking. Since a mere exposure to money has found to be able to alter individuals' social behavior (Vohs, Mead, & Goode, 2006; Vohs, Mead, & Goode, 2008), future research may also explore if a mere exposure to credit cards may also influence people's social behavior through the inflated perceptions of financial well-beings. For example, after being exposed to credit cards cue, with an inflated perception of financial well-beings, consumers might feel more powerful and less submissive.

Nevertheless, there are several limitations in the present study. Firstly, there was no control condition in the study. The analyses were based on comparisons between the presence of credit cards cue and the presence of cash cue. Future research may consider including a control

condition which shows a neutral cue, because cash cue has also elicited a high ratio of spending thoughts, reducing the size of the credit cards cue effect that we might be able to observe.

Secondly, the total spending was based on the self-reported amount willing to spend for a total of ten products set by the researchers, which may not reflect participants' actual spending behavior. Future research may consider asking participants to select items with a price tag from a large pool of products in a hypothetical store to better capture participants' actual spending behavior. Finally, the credit cards cue was manipulated by showing a picture of credit cards and asking participants to list their thoughts about credit cards in the current study. The manipulation was considered to be heavy handed, so the effects resulted from this manipulation may not be easily found in reality when consumers are only exposed to credit cards cue briefly.

Serving as one of the first research attempts to study the direct link between an exposure to credit cards cue and perceived financial well-being, this study suggests that consumers may need to be well aware of how their perception of financial well-being may be inflated unconsciously after being exposed to any credit cards cue. Marketers may employ this as tactics to stimulate consumer spending, while consumers may want to protect themselves by being more cautious about any credit cards cue.

**APPENDIX A: SCREEN SHOTS OF THE TEN PRODUCTS SHOWN IN THE EXPERIMENTAL STUDY**

How much are you willing to spend for each of the following items?  
Please write your answers in the space provided under each item.

---



**Coffee Maker**

USDS

---



**Blender**

USDS



**Laptop Computer 14" Screen**

USDS

---



**Fish Aquarium**

USDS



Assortment of 3 Different Plants in 4" Pots

USDS

---



Digital Clock

USDS



Rose bud herbal tea pack 100g

USDS

---



Wooden Chair

USDS



Headphone

USDS

---



Wind Chimes

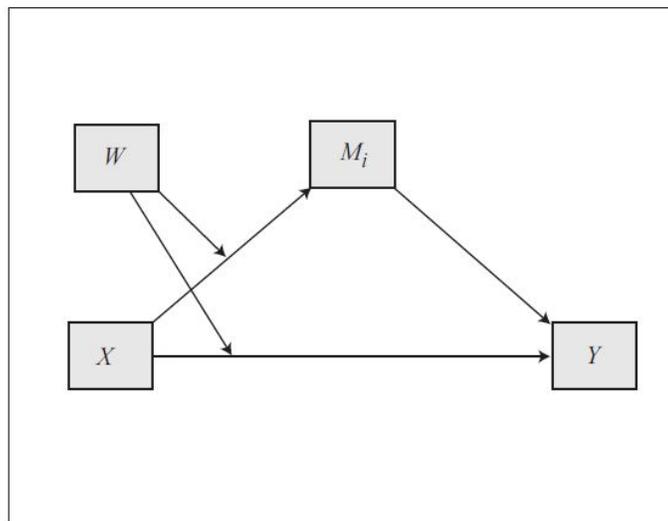
USDS

---

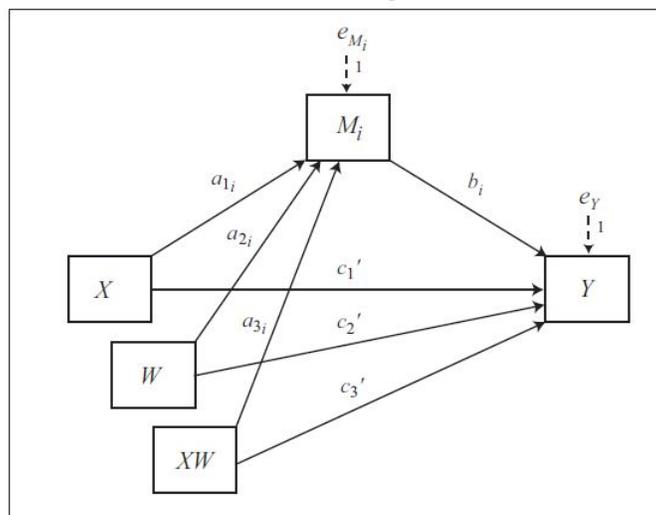


## APPENDIX B: CONCEPTUAL AND STATISTICAL MODEL FOR THE BOOTSTRAP APPROACH

Conceptual Diagram



Statistical Diagram



Conditional indirect effect of  $X$  on  $Y$  through  $M_i = (a_{1i} + a_{3i}W)b_i$

Conditional direct effect of  $X$  on  $Y = c_1' + c_3'W$

Diagrams extracted from Andrew F. Hayes (2013), Model Templates for PROCESS for SPSS and SAS,  
<http://www.afhayes.com/>

In this study,

- X = Credit Cards Cue Manipulation (Credit Cards Cue Manipulation Dummy variable)
- W = Sensitivity to Pain of Payment (ST-TW Score)
- XW = Interaction between Credit Cards Cue Manipulation & Sensitivity to Pain of Payment
- M = Perceived Financial Well-being
- Y = Total Spending

## APPENDIX C: BOOTSTRAP OUTPUT

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Release 2.13 \*\*\*\*\*

Written by Andrew F. Hayes, Ph.D.      www.afhayes.com  
 Documentation available in Hayes (2013). www.guilford.com/p/hayes3

\*\*\*\*\*

Model = 8  
 Y = TSpending  
 X = CCDummy  
 M = FWB\_C  
 W = TS\_C

Statistical Controls:  
 CONTROL= Age      Income

Sample size  
 336

\*\*\*\*\*

Outcome: FWB\_C

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.3329	.1108	1.6429	8.2248	5.0000	330.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.0817	.2611	-.3128	.7546	-.5123	.3490
CCDummy	.0597	.1404	.4251	.6710	-.1719	.2913
TS_C	.0183	.0222	.8254	.4097	-.0183	.0550
int_1	.0686	.0326	2.1088	.0357	.0150	.1223
Age	-.0158	.0070	-2.2467	.0253	-.0274	-.0042
Income	.2194	.0487	4.5088	.0000	.1391	.2997

Interactions:

int\_1      CCDummy      X      TS\_C

\*\*\*\*\*

Outcome: TSpending

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.2246	.0504	276797.119	2.9132	6.0000	329.0000	.0088

Model

	coeff	se	t	p	LLCI	ULCI
constant	751.8589	107.1764	7.0152	.0000	575.0716	928.6462
FWB_C	39.7230	22.5953	1.7580	.0797	2.4521	76.9938
CCDummy	45.2058	57.6462	.7842	.4335	-49.8815	140.2931
TS_C	4.4971	9.1262	.4928	.6225	-10.5565	19.5507

int_2	26.9923	13.4517	2.0066	.0456	4.8037	49.1808
Age	3.7154	2.9037	1.2796	.2016	-1.0742	8.5051
Income	-20.6564	20.5788	-1.0038	.3162	-54.6012	13.2884

Interactions:

int\_2 CCDummy X TS\_C

\*\*\*\*\* DIRECT AND INDIRECT EFFECTS \*\*\*\*\*

Conditional direct effect(s) of X on Y at values of the moderator(s):

TS_C	Effect	SE	t	p	LLCI	ULCI
-4.3277	-71.6078	81.7399	-.8760	.3816	-206.4376	63.2219
-.0030	45.1255	57.6461	.7828	.4343	-49.9616	140.2125
4.3217	161.8587	82.0565	1.9725	.0494	26.5067	297.2108

Conditional indirect effect(s) of X on Y at values of the moderator(s):

Mediator

	TS_C	Effect	Boot SE	BootLLCI	BootULCI
FWB_C	-4.3277	-9.4301	11.6506	-39.8978	1.2747
FWB_C	-.0030	2.3629	6.7568	-4.4243	19.8881
FWB_C	4.3217	14.1559	14.7705	-.2447	52.7186

Values for quantitative moderators are the mean and plus/minus one SD from mean.

Values for dichotomous moderators are the two values of the moderator.

-----

Indirect effect of highest order product:

Mediator

	Effect	SE(Boot)	BootLLCI	BootULCI
FWB_C	2.7269	2.6496	.0133	9.9339

\*\*\*\*\* INDEX OF MODERATED MEDIATION \*\*\*\*\*

Mediator

	Index	SE(Boot)	BootLLCI	BootULCI
FWB_C	2.7269	2.6496	.0133	9.9339

\*\*\*\*\* ANALYSIS NOTES AND WARNINGS \*\*\*\*\*

Number of bootstrap samples for bias corrected bootstrap confidence intervals:  
1000

Level of confidence for all confidence intervals in output:  
90.00

----- END MATRIX -----

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