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# Psychology and BAPCPA: Enhanced Disclosure and Emotion

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## I. INTRODUCTION

In the last 25 years, non-business bankruptcy filings in the United States increased at a steady rate from fewer than 300,000 petitions in 1980 to over 1.7 million in 2005.<sup>1</sup> This upward trend is evidenced in Figure 1, which shows the number of non-business filings from the mid 1990s through 2005, the year that Congress passed the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 [hereinafter BAPCPA].<sup>2</sup> The increase in consumer filings pressured Congress during the 1990s and the early years of the current decade to change the bankruptcy system, in part, in response to the increase in the number of consumers defaulting on their loans and seeking relief through the courts. With the enactment of BAPCPA, Congress did more than re-write important aspects of federal consumer bankruptcy law: it also enhanced disclosure requirements applicable to credit card issuers. Ostensibly, BAPCPA increased credit card disclosure requirements in reaction to two problems: sustained increases in consumer credit — including credit card credit — and in the consumer bankruptcy filing rate over the past 25 years.

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1. (1) U.S. COURTS, BANKRUPTCY STATISTICS (2005), <http://www.uscourts.gov/bnkrpctstats/statistics.htm#calendar> (last visited Sept. 1, 2006).

2. (2) Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, Pub. L. No. 109-8, 119 Stat. 23 (2005) [hereinafter BAPCPA].

Figure 1: Number of non-business bankruptcy filings  
by chapter and year

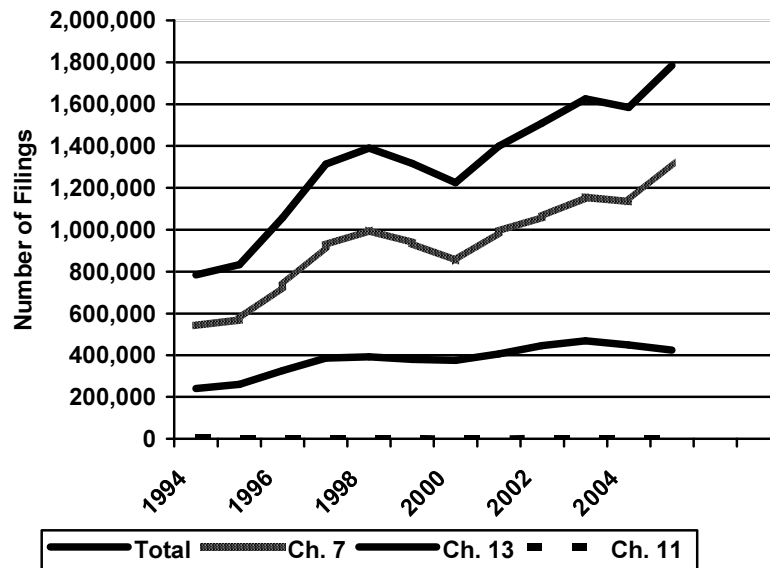


Figure 1 suggests upward trends in Chapter 7 filings, which enable a trustee to sell a debtor's unencumbered non-exempt assets and distribute the proceeds to priority and general unsecured creditors. A successful conclusion of this process results in a discharge, freeing the debtor from personal liability on many, but not all, remaining pre-bankruptcy claims. Figure 1 also demonstrates steady increases in the number of Chapter 13 filings, which allow consumers to hold onto all of their property and instead repay their creditors through a relatively long repayment plan (most likely five years) that exempts disposable income that debtors need to support themselves and their dependents. This shows that while almost all consumer petitions are of the Chapter 7 or 13 type, some small percentage of consumers file Chapter 11 petitions that follow a more complex and expensive restructuring process modeled after small business default claims. Figure 1 shows data collected over time, which depicts a general increase in the total number of consumer bankruptcy petitions filed during the 1990s where the rate of increase in Chapter 7 filings lead the way, followed by a steady but slower growth in Chapter 13 filings.<sup>3</sup>

3. Data from the last quarter of 2005 and the first two quarters of 2006 has led to some informal discussion among bankruptcy scholars suggesting that there was an increase in non-business filings within the months preceding the effective date of BAPCPA and a decrease in the six months following enactment. Policy analysts continue to follow the trends, which may show a recent increase in non-business filings.

What does any of this have to do with the psychology of BAPCPA? This article describes a program of research that applies social analytic jurisprudence to test some of the assumptions in consumer bankruptcy law and policy.<sup>4</sup> Our work first seeks to describe selected provisions from the newly enacted bankruptcy amendments that pertain to enhanced disclosure requirements, and then to locate some of the behavioral assumptions implicit in these provisions.<sup>5</sup> Next, we assess the accuracy of these assumptions based on an experiment that we conducted looking at a simulated online shopping trip that we constructed specifically to test the effects of enhanced disclosure.

## II. OVERVIEW OF SOCIAL ANALYTIC JURISPRUDENCE

Social analytic jurisprudence makes three important assumptions about the role of psychology in law and public policy. First, psychology as it relates to law is an empirical science and psycholegal scholars conducting work in this area constitute a scientific paradigm, which shares a common commitment to a set of scientific beliefs and values.<sup>6</sup> The result of the empirical studies of these scientists can shed needed light on the assumptions that the law makes about human behavior and the findings can and should influence both law and public policy.<sup>7</sup> Second, these psycholegal scholars apply the theory

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4. Social analytic jurisprudence is a type of psychological jurisprudence, developed by Wiener in an earlier law review article. Richard L. Wiener, *Social Analytic Jurisprudence and Tort Law: Social Cognition Goes to Court*, 37 ST. LOUIS U. L.J. 503 (1993). Wiener, his students and colleagues have applied this approach to studying law and psychology to a variety of areas in the last 10 years. These areas include judgments of workplace discrimination, specifically sexual harassment, *see, e.g.*, Richard L. Wiener et al., *The Effects of Prior Workplace Behavior on Subsequent Sexual Harassment Judgments*, 28 LAW & HUM. BEHAV. 47 (2004); Richard L. Wiener et al., *The Fit and Implementation of Sexual Harassment Law to Workplace Evaluations*, 87 J. APPLIED PSYCHOL. 747 (2002); Richard L. Wiener & Linda E. Hurt, *An Interdisciplinary Approach to Understanding Social Sexual Conduct at Work*, 5 PSYCHOL. PUB. POL'Y & L. 556 (1999); Richard L. Wiener & Linda E. Hurt, *Social Sexual Conduct at Work: How Do Workers Know When It Is Harassment and When It Is Not?*, 34 CAL. W. L. REV. 53 (1997), and decisions regarding juror use of the death penalty in homicide cases, Richard L. Wiener et al., *Guided Jury Discretion in Capital Murder Cases: The Role of Declarative and Procedural Knowledge*, 10 PSYCHOL. PUB. POL'Y & L. 516 (2004).

5. See Richard L. Wiener et al., *Unwrapping Assumptions: Applying Social Analytic Jurisprudence to Consumer Bankruptcy Education Requirements and Policy*, 79 AM. BANKR. L.J. 453 (2005), for a fuller development of the Social Analytic Perspective as applied to problems in the new bankruptcy rules that follow from BAPCP.

6. Wiener, *Social Analytic Jurisprudence*, *supra* note 4, at 510. *See, e.g.*, ROY LACHMAN, JANET LACHMAN & EARL C. BUTTERFIELD, *COGNITIVE PSYCHOLOGY AND INFORMATION PROCESSING* (1979); THOMAS S. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* (1962).

7. Wiener, *Social Analytic Jurisprudence*, *supra* note 4, at 510.

and the empiricism of science to produce empirical relationships that shed light on specific issues of law and policy.<sup>8</sup> Legal psychologists operating out of this model base their conclusions on their data and not on their shared social or political ideologies. Third, psycholegal scholars adopt the roles of consultants and not advocates.<sup>9</sup> Psycholegal scholars refrain from the use of research findings simply to support one side of a policy debate; instead, they search findings for results that disconfirm their hypotheses. In this manner, psycholegal scholars advance the science of psychological jurisprudence. While we are not so naïve as to suggest that psycholegal research is value free, social analytic jurisprudence advocates a thorough search of research findings to locate evidence that supports plausible rival explanations and alternative accounts of research results. Researchers who ignore alternative interpretations for their work risk disconfirmation through peer review, which encourages other scientists to test an author's conclusions with alternative explanations.

Social analytic jurisprudence follows a three-stage process. It begins with a careful analysis of the legal doctrine or policy rules and procedures to determine psychological and behavioral assumptions that underlie the particular ascriptions and prohibitions, which contribute to policy in any given area.<sup>10</sup> Next, psycholegal researchers review the social science literature to identify theories, research results, and methodologies that speak to the validity of these assumptions.<sup>11</sup> This psycholegal analysis is likely to point out gaps in our understanding of the psychological and social realities supporting legal and policy assumptions. Accordingly, psycholegal scholars set in motion the final stage of social analytic jurisprudence, which consists of researchers conducting carefully designed studies to probe, evaluate, and indeed, test the psychological models that others have not already applied to the problems at hand in prior research.<sup>12</sup>

In the current article, we use social analytic jurisprudence to study one of the assumptions that underlies the policy requirements of bankruptcy law.

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8. *Id.* at 511.

9. *Id.*; LAWRENCE S. WRIGHTSMAN, *PSYCHOLOGY AND THE LEGAL SYSTEM* 40-42 (5th ed. 2002).

10. Wiener, *Social Analytic Jurisprudence*, *supra* note 4(4), at 511-512. "If psycholegal research is to be useful for adjudicative or legislative decision-making it must begin with an accurate depiction of substantive legal doctrine." *Id.*

11. *Id.* at 512-14. "The second stage [of social analytic jurisprudence] consists of a careful psychological analysis of the legal doctrine under investigation. Statutory and common law, comprised of legal tests to be decided on the social facts induced in specific cases, may often be framed in language that invites a social scientific analysis and perhaps a psychological analysis." *Id.* at 512.

12. *Id.* at 514. "Upon determining that some area of substantive law is, at least in principle, amenable to psychological analysis, the psycholegal scholar proceeds to review the psychological literature and identify theories, research results and methodologies suitable for investigating the problem at hand." *Id.*

We believe the data that we present below show inconsistencies between assumptions underlying BAPCPA and the way in which people are predisposed to use their credit cards. We developed a simulated, online credit card purchasing analogue experiment to investigate some of these assumptions. We present the results of our investigation in this article.

### III. APPLICATION OF SOCIAL ANALYTIC JURISPRUDENCE TO CONSUMER BANKRUPTCY LAW

As Figure 1 shows, non-business bankruptcy filings generally have risen over the past twenty-five years, contributing to some commentators' concerns about the general philosophy of bankruptcy relief. These concerns focus on consumer debtors' motivations in borrowing and defaulting, contending that the system creates incentives that motivate consumers to use the courts to resolve problems that arise with their own overspending.<sup>13</sup> There is a perception among some that consumers generally lack information about consumer finance transactions, the consequences of default, and alternative options available for resolving financial distress.<sup>14</sup> Presumably, BAPCPA aims to curb the increasing rate of consumer filings with new rules that both modify the incentive structure and correct deficits in consumer knowledge about credit.

Regarding the empirical findings that this article describes, we are concerned with the assumption that increasing consumer knowledge will lead to

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13. See, e.g., Judge Edith H. Jones & Todd J. Zywicki, *It's Time for Means Testing*, 1999 BYU L. REV. 177, 180 (arguing that increase in non-business bankruptcy filings "has been significantly influenced," in part, "by changes in the law and legal practice that have facilitated filing bankruptcy"); Eric A. Posner, *Should Debtors Be Forced Into Chapter 13?*, 32 LOY. L.A. L. REV. 965, 968 (1999) (discussing how means testing might affect people's behavior relating to "(1) the purchase of credit, (2) the decision to file for bankruptcy, and (3) the behavior during the pendency of a Chapter 13 plan"); Michelle J. White, *Why Don't More Households File for Bankruptcy?*, 14 J.L. ECON. & ORG. 205 (1998) (exploring explanations for why households don't file for bankruptcy more often; Michelle J. White, *Why It Pays to File for Bankruptcy: A Critical Look at the Incentives Under U.S. Personal Bankruptcy Law and a Proposal for Change*, 65 U. CHI. L. REV. 685, 686 (1998) (arguing that unlimited bankruptcy exemptions "gives too many households an incentive to file for bankruptcy rather than to take responsibility for repaying their debts.").

14. See, e.g., Susan Block-Lieb, *Mandatory Protections as Veiled Punishments: Debtor Education in H.R. 975, The Bankruptcy Abuse and Consumer Protection Act of 2003*, 69 BROOK. L. REV. 425 (2004); Karen Gross, *Financial Literacy Education: Panacea, Palliative or Something Worse?*, 25 ST. LOUIS U. PUB. L. REV. 1 (2005); David A. Lander, *It "Is" the Best of Times, It "Is" the Worst of Times: A Short Essay on Consumer Bankruptcy After the Revolution*, 78 AM. BANKR. L.J. 201 (2004); Joseph A. Smith, Jr., *Financial Literacy, Regulation and Consumer Welfare*, 8 N.C. BANKING INST. 77 (2004); Alan M. White & Cathy Lesser Mansfield, *Literacy and Contract*, 13 STAN. L. & POL'Y REV. 233 (2002).

the wise use of credit. BAPCPA provides for increasing consumer information about credit card use in three different ways. First, credit card companies must enhance their disclosure of minimum payment obligations and teaser interest rates, as well as provide toll free telephone numbers for consumers to use to obtain information about how long it will take to pay off their balances by making only the minimum payment.<sup>15</sup> This regulation provides the point of departure for the research results reported in this article. In addition, BAPCPA conditions individuals' access to the bankruptcy system on receipt of pre-bankruptcy counseling,<sup>16</sup> and it requires consumer debtors to complete an "instructional course concerning personal financial management."<sup>17</sup> While our earlier work<sup>18</sup> addressed these later considerations in increased knowledge assumptions, this article is concerned only with the possible effects of the enhanced disclosure that BAPCPA demands of credit card creditors.

Disclosure requirements for creditors assume that consumers make deliberative financial decisions predicated largely on the consideration of the economic consequences of alternatives. As rational actors, consumers make self-serving choices based on the costs and benefits of a course of action.<sup>19</sup> BAPCPA deviates slightly from a textbook model of the rational actor in that it makes room for consumers' imperfect knowledge of credit card use consequences. In fact, the enhanced disclosure enactments aim to correct consumers who are ill-informed about the terms of their credit card contracts, including the effects of different types of repayment on the lives of their loans and the total amount of money needed to repay the initial amount borrowed with interest. In short, BAPCPA disclosure enhancement requirements are an effort to influence debtor decision making by providing debtors with accurate information about the long-term effects of reliance on credit card loans.

This view of debtor decision making falls short because it does not consider the psychological reality of everyday people as they make choices about what goods and services to buy, and what types of payment plans are best suited to satisfy their appetitive needs and desires. While we do not challenge the basic contribution that utility maximization can make to understanding debtor choice, we do suggest that such an approach must be incomplete because it ignores the effects of psychological processes that are less deliberate and more reactive in nature. In this article, we are specifically concerned with conscious and subconscious processes arising from feelings, moods, and emotions. We maintain that a more complete model of debtor and non-debtor choice ought to include emotional reactions that people cannot escape as they decide whether to make desired purchases. More specifically, we submit that

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15. 15 U.S.C. § 1637(b), (c) (2000 & Supp. V 2005).

16. 11 U.S.C. § 109(h)(1) (Supp. V 2005).

17. *Id.* at § 727(a)(11).

18. Wiener et al., *supra* note 5.

19. See, e.g., Jones & Zywicki, *supra* note 13, at 210-215; White, *Why It Pays*, *supra* note 13, at 689-90.

the subjective weights (in the utility model sense of weights) used to reach judgments about utility are themselves the product of affective psychological constructs impacted by the totality of the circumstances (both internal and external to the individual) that constitute the buying environment.<sup>20</sup> In the end, any model of how consumers choose to spend and borrow money will be incomplete and misunderstood to the extent to which it fails to take notice of the psychological mechanisms — in this case emotion — that shape the utility maximizing procedures that consumers use in deciding whether to make purchases with their credit cards.

Why do consumers use their credit cards to borrow more than rational actors would? The purpose of this line of research<sup>21</sup> is to examine some specific psychological processes that might provide an answer to that question and at the same time examine the interaction of human judgment with some of the enhanced credit card disclosure requirements adopted as part of BAPCPA.

Two important psychological factors are candidates for causes of credit card overuse. First, consumers may use credit cards unwisely because even when they accurately anticipate the experience of their actions (i.e., the high costs of overusing credit), they may fail to use the predicted experience to guide their behavior.<sup>22</sup> This failure of the cognitive system to direct conduct may be the result of “hyperbolic time discounting”<sup>23</sup> or impulsivity.<sup>24</sup> People attach greater weight to immediate payoffs than to distant outcomes, even when the cost of the distant outcomes is far greater than the immediate payoffs.<sup>25</sup> The immediate material payoff that results from the use of their credit

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20. See Richard L. Wiener et al., *Emotions and the Law: A Framework for Inquiry*, 30 LAW & HUM. BEHAV. 231 (2006) (discussing in detail the way in which emotion can influence the decision weights that make up decision processes in legally relevant contexts and referring both to judgment processes using the lens model and choice processes relying on utility maximization).

21. See Richard L. Wiener, Michael Holtje, Ryan Winter, Jason A. Cantone, Susan Block-Lieb, and Karen Gross, *Consumer Credit Card Use: The Roles of Creditor Disclosure and Anticipated Emotion*, 13 J. EXPERIMENTAL PSYCH.: APPLIED (forthcoming March 2007) (Containing the first report of the research collected within this program of research. The authors look at the specific effects of anticipated emotion in the decision whether or not to use credit cards to make purchases and the ability of the enhanced disclosure rules called for in BAPCPA to moderate their anticipated emotional reactions.)

22. Christopher K. Hsee & Reid Hastie, *Decision and Experience: Why Don't We Choose What Makes Us Happy?*, 10 TRENDS IN COGNITIVE SCI. 1, 34 (2006).

23. Ted O'Donoghue & Matthew Rabin, *Addiction and Self-Control*, in ADDICTION: ENTRIES AND EXSTS. 169 (Jon Elster ed., 1999).

24. Hsee & Hastie, *supra* note 22, at 33-34.

25. See Paul Slovic, *Psychological Study of Human Judgment: Implications for Investment Decision Making*, 2 J. PSYCHOL. & FIN. MARKET 160-72 (2001) (for an empirical analysis of cigarette smoking as a product of impulsivity).

cards blinds consumers so that they weigh too little the long-term effects of expensive revolving credit cards.

The issue is more complicated, however, because people are not always accurate in predicting how they will experience outcomes. The failure to predict accurately the outcome of one's actions is the second psychological process of importance. Consumers may "choose" to ignore the costs of long-term credit card use because the system allows them to avoid the "pain of paying" which normally accompanies purchases of goods and services.<sup>26</sup> Normally, when people spend their money, they suffer the consequence of not being able to use those funds for other products that they desire. However, the cost of foregoing other goods is a distant outcome, which loses some of its impact through hyperbolic time discounting. Still, when people spend their money directly—without the use of credit cards—the cost of giving up their dollars may become associated with negative emotion: the pain of spending. As a result, the emotional pain of spending (*e.g.*, writing the check or handing over dollars) is a natural limit, which people come to predict as an outcome of their purchasing behavior. As Loewenstein and O'Donoghue point out, the use of credit cards eliminates or, at least, puts off the emotional pain of paying.<sup>27</sup> In other words, people who use credit cards do not accurately predict the emotional cost of paying for the products or services, and, therefore, the regulating effects of negative emotions do not play their usual role in limiting purchasing behavior.

The recent BAPCPA amendments rely on a much less psychological approach to understanding consumer spending. Following the economic choice model,<sup>28</sup> BAPCPA assumes that with complete information people will act rationally and avoid overspending when the costs of spending outweigh the benefits of consumption. BAPCPA attempts to regulate consumption, in part, by requiring creditors to enhance their customary disclosure of minimum payment obligations and teaser interest rates, as well as by requiring toll-free telephone numbers through which consumers could obtain more individualized information about how long it would take to pay off their balances making only minimum payments.<sup>29</sup> Under the tenets of the rational actor model,

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26. George Loewenstein & Ted O'Donoghue, "We Can Do This the Easy Way or the Hard Way": Negative Emotions, Self-Regulation, and the Law, 73 U. CHI. L. REV. 183, 196 (2006); Drazen Prelec & George Loewenstein, *The Red and the Black: Mental Accounting of Savings and Debt*, 17 MARKETING SCI. 4 (1998).

27. Loewenstein & O'Donoghue, *supra* note 26, at 196.

28. See, *e.g.*, *id.*; REID HASTIE & ROBYN M. DAWES, RATIONAL CHOICE IN AN UNCERTAIN WORLD: THE PPSYCHOLOGY OF JUDGMENT AND DECISION MAKING (2001); Susan Block-Lieb & Edward J. Janger, *The Myth of the Rational Borrower: Rationality, Behavioralism and the Misguided "Reform" of Bankruptcy Law*, 84 TEX. L. REV. 1481 (2006); Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051 (2000); Wiener et al., *supra* note 5.

29. 15 U.S.C. § 1637(b) (2000 & Supp. V 2005).

providing consumers with more complete and individualized information about their level of debt should discourage the use of credit card consumption simply by making them aware of the costs of overusing their cards in the form of high interest rates, compounded balances, and the lengthy payoff periods that follow from payoff plans that rely on minimum payments.

Loewenstein and O'Donoghue describe this type of approach to regulation as "delayed demand deterrence," which motivates consumers by making them aware of the delayed punishment for consuming in harmful ways (*e.g.*, increased costs of interest compounded when people make only minimum credit card payments).<sup>30</sup> Loewenstein and O'Donoghue question whether this approach is likely to deter people's consumption because it requires consumers to weigh delayed consequences against more immediate ones. Further, enhanced disclosure may inadvertently produce negative affects associated with the immediate consequences of engaging in the negative conduct (*e.g.*, fear and guilt). "Immediate demand deterrence" or the intentional use of "fear appeals can and do often backfire because people respond to the fear not by halting the undesired behavior, but by trying not to think about or pay attention to the threat."<sup>31</sup>

If enhanced disclosure creates negative affects, people may engage in mood repair; that is, they may seek more pleasurable stimuli to escape the negative emotion that they experience from the fear and guilt induced by enhanced disclosure.<sup>32</sup> In the current case, that may mean that people will engage in more shopping to end bad moods. Some analogue psychological investigations help operationalize the mood repair concept.

In one study, Raghunathan and Trope found that people who were exposed to *both* harmful and beneficial information about caffeine consumption and who normally consumed large quantities of caffeine focused more on the positive effects of caffeine consumption (to improve their moods) when they

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30. Loewenstein & O'Donoghue, *supra* note 26, at 189.

31. *Id.* at 190 n.10.

32. Joseph P. Forgas, *Affective Influences on Partner Choice: Role of Mood in Social Decisions*, 61 J. PERSONALITY & SOC. PSYCHOL. 708 (1991); Jacqueline J. Kacen, *Phenomenological Insights in Mood and Mood-Related Consumer Behaviors*, in 21 ADVANCES IN CONSUMER RESEARCH 519 (1994); Gloria K. Manucia, Donald J. Baumann & Robert B. Cialdini, *Mood influences on Helping: Direct effects or Side Effects?*, 46 J. PERSONALITY & SOC. PSYCHOL. 357 (1984); David Glen Mick & Michelle Demoss, *Self-gifts: Phenomenological Insights from Four Contexts*, 17 J. CONSUMER RES. 322 (1990); William N. Morris & Nora P. Reilly, *Toward the Self-Regulation of Mood: Theory and Research*, 11 MOTIVATION & EMOTION 215 (1987); Dianne M. Tice, Ellen Bratslavsky & Roy F. Baumeister, *Emotional Distress Regulation Takes Precedence Over Impulse Control: If You Feel Bad, Do It!*, 80 J. PERSONALITY & SOC. PSYCHOL. 53 (2001); Dorf Zillman, *Mood Management: Using Entertainment to Full Advantage*, in COMMUNICATION, SOCIAL COGNITION, AND AFFECT 147 (Lewis Donohew et al. eds., 1988).

were induced to experience negative moods (as opposed to positive moods).<sup>33</sup> However, those participants who were low caffeine consumers showed increased attentiveness to all the information, not just the positive information. This second group of participants engaged in attentive processing because the task did not allow them to engage in mood repair. For them, focusing on the positive aspects of caffeine consumption did not lead to positive affective experiences because the negative caffeine information was not fear inducing (*i.e.*, they did not drink a lot of coffee, tea, or soda). Raghunathan and Trope conclude that people in negative moods engage in mood repair only when the task allows it.<sup>34</sup> Otherwise, they pursue attentive processing.

Extrapolating from these experiments, we anticipate that enhanced disclosure information may create negative mood states in consumers because this type of information forces credit card holders to confront the possibility of large balances, high interest rates, and lengthy payoff periods. These possibilities produce some level of distress, especially for people who have not previously thought about these high payoff terms. Will these people engage in mood repair actions? The literature is unclear. If enhanced disclosure produces negative mood states, then consumers may engage in mood repair activities, if such activities are available, and if the consumers believe that the activities will decrease their feelings of negative affect. Several scholars have collected correlational data to suggest that people sometimes (but not all the time) engage in shopping behavior to escape bad moods.<sup>35</sup> Therefore, it follows that if enhanced disclosure does produce negative affect, people may engage in more credit card buying to escape their negative moods. However, it is also possible that negative moods will motivate attentive behavior or that people will not believe mood repair is possible. The current research collected mood data to begin to explore the relationships among enhanced disclosure, affective responses, and credit card use.

We conducted an online field experiment to examine the effects of enhanced disclosure and self reported emotion on the credit card purchasing behavior among people who filed petitions for bankruptcy relief in the prior year (consumer debtors) and among people who had not done so (non-debtors). More specifically, we conducted this study to test the hypothesis that enhanced disclosure would prevent consumer non-debtors and to a lesser extent, consumer debtors from overusing their simulated credit cards. We expected the emotional reactions toward enhanced disclosure information to moderate the effects of enhanced disclosure on purchasing behavior.

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33. Rajagopal Raghunathan & Yaacov Trope, *Walking the Tightrope Between Feeling Good and Being Accurate: Mood as a Resource in Processing Persuasive Messages*, 83 J. PERSONALITY & SOC. PSYCHOL. 510, 513 (2002).

34. *Id.* at 522.

35. See Kacen, *supra* note 32; Wiener et al., *supra* note 5, at 466-67; Wiener et al., *supra* note 22.

## IV. METHODS

We recruited research participants for our online analogue shopping experiment in several ways. First, we located debtors through PACER, the online federal docket that lists all bankruptcy filers and their cases. We selected a random sample of filers from Nebraska and from the New York City metropolitan area who had filed petitions in one of seven months prior to our experiments. We mailed fliers to this group advertising the study and inviting them to participate in an online study in exchange for a ten dollar stipend. We also distributed fliers at the courthouse and with attorneys and bankruptcy trustees. Finally, we recruited non-debtor participants through newspaper advertisements in both the New York City and the Omaha and Lincoln, Nebraska communities. Interested flier recipients telephoned the laboratory and left a name and telephone number. A researcher contacted each potential research participant, explained the study, and provided a password to interested participants so that each could enter the study website on a computer of their choice to complete the research task. Upon entering the website, the program randomly assigned each participant to receive either current disclosure information or enhanced disclosure consistent with the requirements of BAPCPA.

Table 1 displays the demographic backgrounds of the 514 participants who participated in and completed our online simulated shopping trip during the period from June 2004 to August 2005.

Table 1: Demographic Information for Experiment 1 Participants

Variable	n	%
Filed for Bankruptcy Relief (490 reporting)		
Yes	193	39%
No	297	61%
Bankruptcy Chapter (184 reporting)		
Chapter 7	146	75%
Chapter 13	16	19%
Not Reported	5	6%
Gender ( 493 reporting)		
Male	159	32%
Female	334	68%
Residency (514 reporting)		
Nebraska	340	66%
New York	174	34%
Currently Married (489 reporting)		
Yes	185	38%
No	304	62%

Variable	n	%
Age <sup>1</sup> (489 reporting, Mean = 40)		
18-29	131	27%
30-39	95	19%
40-49	126	26%
50-59	107	22%
60-69	22	5%
Over 70	8	2%
Education (497 reporting)		
Less than high school	7	1%
High school only	208	42%
Associate degree	115	23%
Bachelor degree	113	23%
Graduate or professional degree	54	11%
Ethnicity (492 reporting)		
European American	350	71%
African-American	58	12%
Asian American	35	7%
Hispanic	4	1%
Other	40	8%
Unemployed ever last year (488 reporting)		
Yes	260	53%
No	228	58%
Student Status (492 reporting)		
Full-time student	41	8%
Part-time student	36	7%
Non-student	415	84%
Prior Year Family Income (474 reporting)		
20,000 or less	135	28%
21-30,000	97	21%
31-40,000	73	15%
41-50,000	49	10%
51-60,000	42	9%
61-70,000	27	6%
71-80,000	13	3%
81,000 or more	25	6%

The research materials in this study that appeared on the website included an informed consent statement, a disclosure information manipulation (enhanced or unenhanced disclosure), a survey to measure emotions

(PANAS-X),<sup>36</sup> a simulated online shopping trip task, and a demographic sheet.<sup>37</sup> The simulated shopping trip emulated a common on-line shopping experience, where consumers used a hypothetical “Goldwave” credit card to make purchases. Prior to the shopping trip, the website displayed a general set of instructions, describing the simulated shopping trip, and detailing how to use the “Goldwave” credit card. It read (in part):

This survey will ask you to complete a task with which you are very familiar. It will ask you to act as a consumer who is deciding whether to buy several products. Please read the description of each product and determine whether you would be willing to purchase the product using your credit card. . . . Use the same care that you would when spending your own money using your own credit card.

One-half of the participants received unenhanced disclosure information, which consisted of a credit card balance, the interest rate, and the minimum payment due, a prototype of the general information available to consumers prior to BAPCPA. The website told participants that they currently held a credit card balance of \$2,500, a limit of \$8,000, and a fixed interest rate of 14.5% annually.

The other half of the participants, those in the enhanced disclosure condition, viewed additional information that reflects full and individualized disclosure information. Following the logic implied in BAPCPA, we reasoned that full and individualized disclosure would provide consumers with complete information about their credit card loans and that such a disclosure would have the greatest likelihood of moderating debtor’s credit card use. Participants received a clear and concisely written statement explaining how many minimum payments they would need to make to pay off credit card balances at increasing increments of \$1,000.00 from \$1,000.00 to \$15,000.00, how much principal they would pay, how much interest they would pay, and an estimate of how many months would elapse before the balance reached zero. The statement came in the form of a schedule (chart) and a narrative description of each of the chart’s elements (*i.e.*, principal, balance, minimum payment, interest, and interest plus principal).

Figure 2 displays a portion from the chart. Column one arranges balances from \$1000 to \$10,000 in increments of 1000 and column two is the size of the minimum payment for each increment level per month. Columns three through five present the total amounts that the debtor will pay out as-

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36. David Watson et al., *Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS-X Scales*, 54 J. PERSONALITY & SOC. PSYCHOL. 1063 (1988).

37. The website also included an anticipated affect manipulation and an experienced emotion manipulation, but data analyses of these effects are presented elsewhere. *See generally, supra* note 38.

suming that the debtor pays the minimum monthly payment each month. Column three shows the total interest that the debtor will pay during the life of the loan to satisfy the financial obligation. Column four shows the total amount that the debtor will expend in principal and interest to pay off the loan, and column five displays the number of monthly payments (and years) that the debtor will need to pay off the loan in full. In other words, for a \$10,000 loan at 14.5% fixed rate, one would need to make 201 monthly minimum payments (almost seventeen years) of \$300 to pay of the loan. This would cost the debtor \$15,830, or \$5,830 above the balance of \$10,000, to pay off the full amount.

**Figure 2: Enhanced Disclosure Information Schedule**

<b>GOLDWAVE Balance (Principal)</b>	<b>Size of the Minimum Monthly Payment</b>	<b>Total In- terest Paid</b>	<b>Total Amount Paid Out (Balance Plus the Interest)</b>	<b>Number of Months of Minimum Payments to Reach a Zero Bal- ance</b>
\$ 1000	\$ 30	\$ 430	\$ 1430	78 (6.6yrs)
\$ 2000	\$ 60	\$1030	\$ 3030	116 (9.7yrs)
.....	.....	.....	.....	.....
\$10,000	\$300	\$5830	\$15830	201 (16.8yrs)

After viewing one of the two disclosure forms, each shopper completed a short version of the PANAS, a standardized measure of currently experienced positive and negative affect.<sup>38</sup> The long form version of the PANAS, which measures each dimension with ten positive and ten negative traits, has shown strong psychometric properties in prior studies.<sup>39</sup> The PANAS-X short form<sup>40</sup> lists five positive (*i.e.*, inspired, alert, excited, enthusiastic, and deter-

38. Watson et al., *supra* note 36, at 1063-70.

39. David Watson & Lee Anna Clark, *The PANAS-X: Manual for the Positive and Negative Affect Schedule - Expanded Form* (Aug. 1999) (unpublished manuscript, on file with The University of Iowa), *available at* <http://www.psychology.uiowa.edu/Faculty/Clark/PANAS-X.pdf>.

40. Kyle Kercher, *Assessing Subjective Well-Being in the Old-Old*, 14 RES. ON AGING 131 (1992). A. Mackinnon et al., *A Short Form of the Positive and Negative Affect Schedule: Evaluation of Factorial Validity and Invariance Across Demographic Variables In a Community Sample*, 27 PERSONALITY AND INDIVIDUAL DIFFERENCES 405-16 (1999); A short form of the Positive and Negative Affect Schedule: Evaluation of factorial validity and invariance across demographic variables in a community sample. *Personality and Individual Differences*, 27(3), 405-416. This study used confirmatory factor analysis to examine the psychometric properties of the PANAS short form with a sample of 2,651 Australians from the Electoral Roll for Canberra. *Id.* The resulting structural equation model showed two nearly orthogonal dimensions (one for negative affect and one for positive affect). *Id.* Each dimen-

mined) and five negative feeling states (*i.e.*, distressed, scared, nervous, upset, and afraid) and asks respondents to "rate the extent to which you feel this way right now" on a one (very slightly or not at all) to five (extremely) scale. The instrument produces two psychometrically sound measures of current feelings: one scale measures positive affect and a second scale measures negative affect that the respondent is experiencing at the time that she or he is completing the rating scales.

After completing the PANAS-X short form, the participants engaged in our online shopping task, which offered the participants ten items that they could consider for purchase. The task for the respondents was to examine each item and then rate the likelihood that they would buy that item with their Goldwave credit card on a scale from 1 (very unlikely to buy) to 8 (very likely to buy). The items appeared in random order, a different order for each participant. First, all ten items appeared on the screen without description. Then, each popped up, one at a time, with prices and descriptions and the program asked the participants to rate the likelihood that they would make a purchase for each item. The program presented the items for purchase, one at a time in a different random order for each participant. Participants had as much time as they needed to reach their decisions. The items (and their respective prices), were dinner out (\$200), wine/liquor (\$30), wristwatch (\$400), business clothes (\$300), vacation (\$3,000), three CDs (\$45), sofa (\$800), bicycle (\$450), laptop computer (\$2,000) and movie tickets (\$30). The website kept a displayed record of which items that the participant had already rated and which ones that the respondent had not rated. The participants continued until they had evaluated and rated each item.

At the conclusion of the shopping trip, the participants again completed the PANAS-X short form (post shopping) and then finally answered a series of demographic and financial questions that included items about their current financial status, credit use, normal purchasing behavior, and knowledge of credit card borrowing. We used the financial questions to test the relationships between results on our simulated shopping trip with the respondents' self-reported financial status, credit use, and purchasing behavior. In addition, we used the items about knowledge of credit card use to determine how much participants know about borrowing and interest rates and to look at the relationship between our enhanced disclosure information and knowledge of credit use.

More specifically, the demographic survey included five knowledge questions about credit card borrowing. We wrote these five questions to sample representatively the content domain of the credit card use information in our simulated shopping task. The five items that made up our knowledge scale asked participants to use their own words to give definitions of the fol-

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sion showed high internal consistency reliability with coefficient alphas equal to .78 and .87, respectively. *Id.*

lowing credit card concepts 1) minimum payment, 2) interest rate, 3) total interest paid, 4) principal and 5) total amount paid. Three independent coders analyzed three of the credit card borrowing questions from the demographic survey (interest rate, total interest paid, and total amount paid) on scales ranging from 0 (wrong or missing answer) to 2 (completely correct answer) with 1 as a partially correct answer. The coders assigned for the other two definitions (minimum payment and principal) either a 0 for incorrect or a 1 for correct.<sup>41</sup>

Upon completion of the demographic and financial questions, participants read a debriefing statement and then supplied their names and addresses so that the researchers could send them the stipends. The program stored the consumers' responses to the rating scales and demographic questions in a downloadable file, which we ultimately subjected to statistical analyses. The website sent the names and addresses to a database maintained separately from the experimental task data so that the researchers could not link any of the answers to any of the questions to the participants' identifying information.

## V. RESULTS

*Purchasing Behavior.* The simulated shopping trip yielded two measures of shopping. We calculated the first measure, the average likelihood-to-buy-rating (LB) by taking the average score across the 10 items to create an index that could range from 1 (very slight likelihood-to-buy) to 8 (very high likelihood-to-buy). The mean of the scale (with a midpoint of 5) was 3.16 (standard deviation [s.d.] = 1.30), suggesting that respondents were a little reluctant to spend money across all items. However, this is not surprising considering that the shopping trip included items with both high and low price tags.<sup>42</sup> For the second measure, we calculated expected expenditures (EE), by weighing the likelihood to buy the item by the cost of the item. That is, we multiplied the cost of each item by the likelihood-to-buy-rating that respondents supplied. This index could range from 690 to 55,169 and the actual mean was 2,794 (s.d. = 1439.69).<sup>43</sup>

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41. Each coder independently rated a sample of 20 participants on each of the six variables. Correlations between the coders for each question across the 20 participants (point biserial correlations for dichotomous measures) ranged from a low of .65 (dichotomous factors) to a high of .89. Using Fisher's  $r$  to  $z$  transformation, the average inter-rater correlation was  $r = .78$ . Inter-correlations for the 20 participants across all three coders for the total scale (which could range from 0 to 8) were .90, .93, and .96.

42. The LB scale (for  $n = 514$ ) produced a coefficient alpha equal to .77, demonstrating adequate internal consistency reliability and the data were normally distributed (skewness = .39 and kurtosis = .051).

43. The EE scale (for  $n = 514$ ) was normally distributed (skewness = .58 and kurtosis = -.34).

*Knowledge of Credit Card Borrowing.* First, we calculated full knowledge scale totals for the data across all the respondents. Scores ranged from a low of 0 to a high of 8 with a mean of 3.4 ( $s.d. = 2.46$ ). Our participants scored significantly lower than the midpoint of the scale ( $X = 5$ ) indicating that they showed poor knowledge of credit card borrowing as used in this study.<sup>44</sup>

Next, we calculated correlations between the LB and EE measures with the knowledge scale. According to the rational actor model, we expected participants who were more knowledgeable about credit card use and its high costs to show signs of less purchasing behavior. However, the correlations between the credit card knowledge scale and the LB and EE scales were non-significant ( $r = -.08, n = 484$ ; and  $r = -.08, n = 484$ ). Further we found that the scores on the knowledge scale were not significantly different between the enhanced disclosure participants and the unenhanced disclosure participants, ( $M$ 's = 3.56 and 3.31, respectively).<sup>45</sup> While these results do not allow us to accept the null hypothesis, they implicate directly our mediation hypothesis. Therefore, if we find effects of disclosure on LB or EE we will be unable to demonstrate the mediating effect of knowledge about credit card borrowing at least as we measured that construct. In other words, these data do not support a conclusion that the effects of enhanced disclosure inhibit the decision to purchase via an increased knowledge route.

*Simulated Shopping and Actual Financial Behavior.* Next, we examined the relationship between the likelihood to purchase items on the online shopping trip and some measures of consumer conduct we collected on the demographic inventory to learn if people with different purchasing backgrounds showed different patterns of behavior on our simulated shopping trip. First, we asked, "Are people who spend more money on our simulated shopping trip likely to be consumers who normally use credit cards?" Figure 3 shows that respondents who reported that they possessed no credit cards on our demographic measure were significantly less likely to purchase items with their Goldwave credit cards on our online shopping trip.<sup>46</sup> Figure 4 illustrates respondents with unpaid bills from the previous month were more likely to spend money on our shopping trip compared to those without unpaid bills.<sup>47</sup> Similarly, those responders who reported that they had planned budgets but failed to use them were more likely to buy than were those who reported that they managed to stick to their planned budgets.<sup>48</sup>

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44. The 95th percent confidence interval for the knowledge scale ( $CI$ : 3.22, 3.66) did not contain the midpoint ( $X = 5$ ), demonstrating that the actual knowledge mean was significantly lower than the midpoint of the scale ( $p < .05$ ).

45.  $t(482) = 1.08, ns$ .

46.  $t(466) = 2.33, p < .02$ ;  $n_1$ (no cards) = 131,  $n_2$ (1 or more cards) = 337.

47.  $t(484) = 3.14, p < .01$ ;  $n_1$ (with unpaid bills) = 193,  $n_2$ (no unpaid bills) = 293.

48.  $t(262) = 2.46, p < .025$ ;  $n_1$ (followed budget) = 148,  $n_2$ (failed to follow budget) = 116.

Figure 3: Likelihood of Using the Goldwave Card (Means) as a Function of the Number of Self-reported Credit Cards

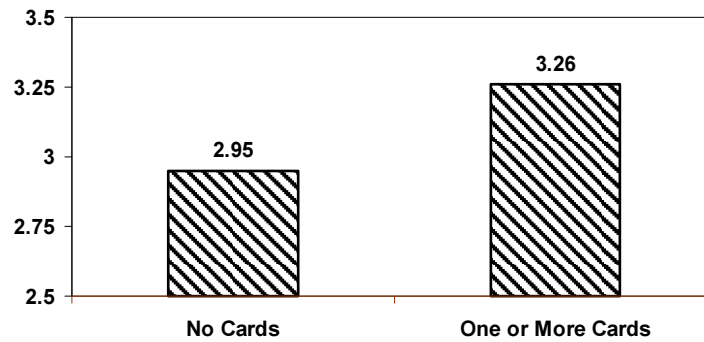
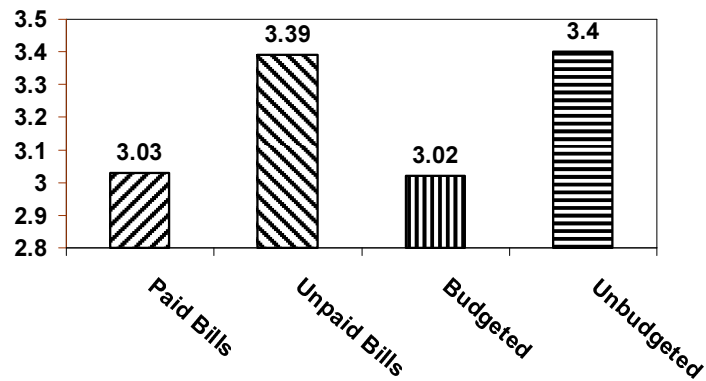


Figure 4: Unpaid Bills, Use of a Planned Budget, and Likelihood of Using the Goldwave Card (Means)



Finally, we asked responders on the demographic instrument to indicate whether they borrowed money in the prior month, and if they did from which sources they borrowed the money (bank loan, payday loan, pawn broker, home equity loan, finance company loan, credit union loan, mortgage loan, credit card loan, or and equity loan). We found a significant correlation ( $r = .12$ ,  $p < .025$ ,  $n = 514$ ) between the number of sources from which respon-

dents borrowed and the likelihood that they use the Goldwave card to make purchases. In other words, the more sources they checked, the greater was the likelihood that consumers would spend money on our simulated shopping trip.

In summary, these results show that online shoppers were more likely to purchase with their cards if they had multiple real credit cards of their own, they had unpaid bills from the previous month, they failed to follow their own planned budgets, or if they borrowed money from multiple sources. These results suggest that our simulated credit card task is associated with at least some forms of unwise use of money and credit.

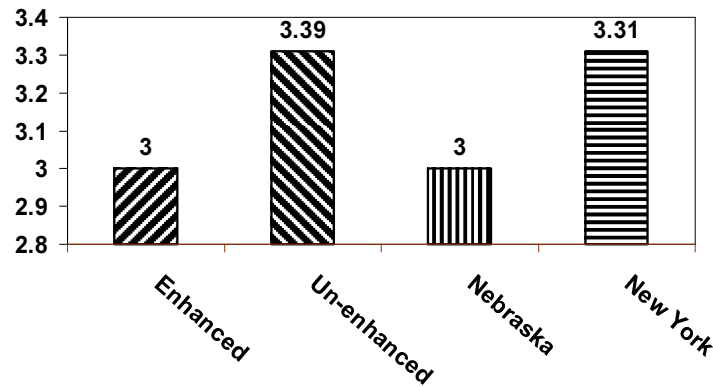
*Enhanced Disclosure and Debtor Status.*<sup>49</sup> Next, we examined in detail the effects of enhanced disclosure, debtor status, and place of residence (New York vs. Nebraska) on the two measures of consumers using their Goldwave credit cards to purchase items on our online shopping trip. The first analysis examined whether or not there were differences among debtors and non-debtors with and without enhanced disclosure, and whether any differences generalized to responders living in the two different geographic locations.<sup>50</sup> As depicted in Figure 5, we found that enhanced disclosure lowered the likelihood of consumers to purchase items on our shopping trip, when the aggregated ratings did not include the prices of the items in the index (i.e., the LB measure described above). Those with the enhanced disclosure charts, regardless of state of residence, were less likely to use their Goldwave Cards overall. We also found, as would be expected, that the New Yorkers (accustomed to paying higher prices for merchandise overall) were more liberal in their spending than were the Nebraskan respondents. We found no differences between debtors and non-debtors.

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49. Before conducting the analyses that follow, we examined the effects of respondent gender on LB and EE and found no main effects or interactions of gender with any of the factors of interest. As a result of these analyses, we dropped gender from the remaining analyses reported in this article.

50. A 2 (status: debtor vs. non-debtor)  $\times$  2 (disclosure: enhanced vs. unenhanced)  $\times$  2 (residence: Nebraska vs. New York) between groups analysis of variance on LB produced a main effect for disclosure,  $F(1,506) = 3.91$ ,  $MSE = 1.62$ ,  $p < .05$ , and a main effect for residence,  $F(1,506) = 3.88$ ,  $p < .05$ . The effect for debtor status was not significant,  $F(1,506) = 2.89$ ,  $ns$ . No other main effects or interactions were significant.

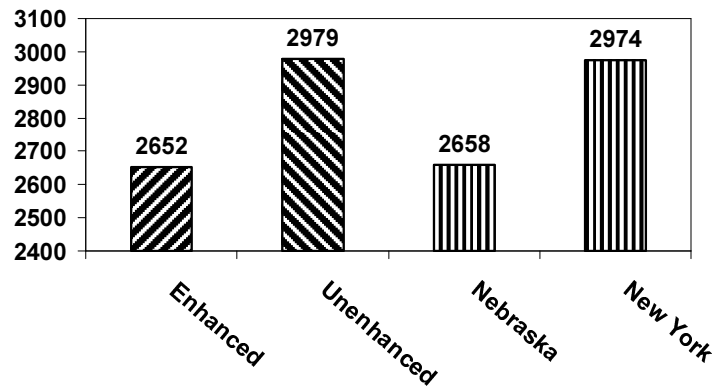
Figure 5: The Effects of Type of Disclosure, Respondent Residence, and Likelihood of Using the Goldwave Card (Means)



We repeated these same analyses using expected expenditures (i.e., E.E. – which included the price of the items in the scale as described above) as the outcome measure and found very similar results as shown in Figure 6. Again, enhanced disclosure produced lower expected expenditures and New York residence was associated with higher expected expenditures. Again, there was no statistically significant difference between debtors and non-debtors.<sup>51</sup>

51. A 2 (status: debtor vs. non-debtor) x 2 (disclosure: enhanced vs. unenhanced) x 2 (residence: Nebraska vs. New York) between groups analysis of variance on EE produced a marginal main effect for disclosure,  $F(1,506) = 3.64$ ,  $MSE = 2033092.004$ ,  $p < .06$ , and a marginal main effect for residence,  $F(1,506) = 3.41$ ,  $p < .07$ . The effect for debtor status was not significant,  $F(1,506) = .55$ , *ns*. No other main effects or interactions were significant.

Figure 6: The Effects of Type of Disclosure, Respondent Residence, and Expected Expenditures (likelihood x item prices, averaged) (Means)

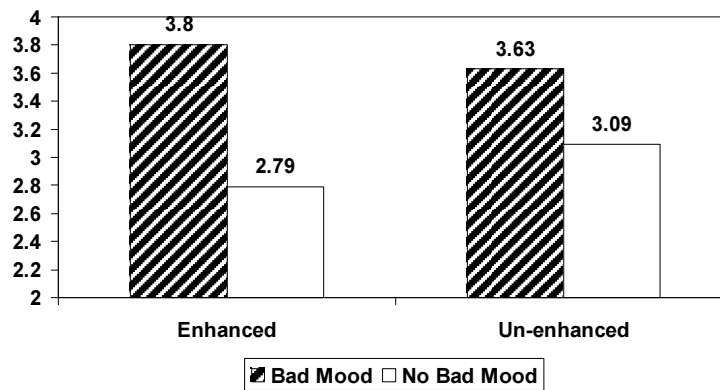


*Enhanced Disclosure and Shopping to End Bad Moods.* One of the questions on our demographic questionnaire asked respondents whether they did or did not shop in order to end bad moods. The mood repair hypothesis developed above would suggest that those respondents who typically shop to escape bad moods might spend more money on our online shopping trip. To test this out we examined the interactive effect of type of disclosure and whether or not people typically shop to end bad moods on the likelihood to buy measure.<sup>52</sup> The results showed those respondents who self-reported that they shop to end bad moods were more likely to use their Goldwave credit cards to purchase items on our online shopping trip ( $M=3.70$ ) as compared to those who did not shop to end bad moods ( $M=2.90$ ). However, more importantly the effect of enhanced disclosure on inhibiting likelihood to buy was different among those participants who did and did not shop to end a bad mood. Figure 7 illustrates the effects. Analyses showed that for participants who reported shopping to end a bad mood, the effect of type of disclosure

52. A 2 (shop to end bad mood: yes vs. no) x 2 (disclosure: enhanced vs. unenhanced) between groups analysis of variance on LB produced a main effect for mood,  $F(1,477) = 58.19$ ,  $MSE = 1.46$ ,  $p < .01$ , and an interaction effect between mood and type of disclosure,  $F(1,477) = 5.35$ ,  $p < .06$ . Follow-up simple effects showed that the effect of type of disclosure was significant for those *who do not* shop to end a bad mood,  $F(1,477) = 5.33$ ,  $p < .025$ , but not for those who do shop to end a bad mood,  $F(1,477) = .64$ , ns. Examining the means within disclosure conditions, the effects of mood were significant in the enhanced disclosure condition,  $F(1,477) = 34.90$ ,  $p < .01$  and in the unenhanced condition,  $F(1,477) = 9.38$ ,  $p < .01$ . No other main effects or interactions were significant.

was not statistically significant. Only for those respondents who did not report that they shopped to end a bad mood were the effects of enhanced disclosure significant. That is, those with enhanced disclosure information were less likely to use their Goldwave credit cards to make purchases only if they did not shop to end a bad mood. Examining the effects of shopping to end a bad mood within each type of disclosure information, we find that those who report that they do shop to end bad moods are more likely to make purchases with their Goldwave credit cards under both types of disclosure conditions.

**Figure 7: The Effects of Type of Disclosure and Shopping to End a Bad Mood on Likelihood to Buy**



The same analyses on the Expected Expenditure data produced very similar effects as shown in Figure 8.<sup>53</sup> Similar to Figure 7, those who self-reported that they shop to end bad moods showed higher expected expenditures ( $M = 3203.79$ ) as compared to those who did not shop to end bad moods ( $M = 2635.91$ ). Again, the effect of enhanced disclosure on credit card purchasing behavior was different among those participants who did and did not

53. A 2 (shop to end bad mood: yes vs. no) x 2 (disclosure: enhanced vs. unenhanced) between groups analysis of variance on EE produced a main effect for mood,  $F(1,477) = 16.12$ ,  $MSE = 1963179.13$ ,  $p < .01$ , and an interaction effect between mood and type of disclosure,  $F(1,477) = 4.18$ ,  $p < .05$ . Follow-up simple effects showed that the effect of type of disclosure was significant for those who do not shop to end a bad mood,  $F(1,477) = 7.60$ ,  $p < .01$ , but not for those who do shop to end a bad mood,  $F(1,477) = .45$ , *ns*. Examining the means within disclosure conditions, the effects of mood were significant in the enhanced disclosure condition,  $F(1,477) = 18.93$ ,  $p < .001$ , but not in the unenhanced condition,  $F(1,477) = 1.88$ , *ns*. No other main effects or interactions were significant.

shop to end a bad mood. Analyses showed that for participants who reported shopping to end a bad mood, the effect of type of disclosure was not statistically significant, but for those who did not report that they shopped to end a bad mood, the effects of enhanced disclosure were significant in the expected direction. For this latter group of participants, those with enhanced disclosure showed lower expected expenditures as compared to those without enhanced disclosure.

Taking apart this interaction from the opposite direction, we found no difference on expected expenditures between responders who do and those who do not shop to end bad moods in the unenhanced disclosure condition. However, for consumers who received enhanced disclosure, those who shop to end a bad mood demonstrated higher expected expenditures than did those who did not shop for that purpose. Thus, enhanced disclosure facilitated differences between consumers who do and those who do not shop to end a bad mood. This unintended effect of enhanced disclosure is a boomerang effect in that it actually augments the differences in purchasing between those who report that they shop to end a bad mood and those who shop for other reasons. We turn to analyses of direct mood comparisons using the PANAS-X measures to help understand why this effect seems to work in this unexpected direction.

**Figure 8: The Effects of Type of Disclosure and Shopping to End a Bad Mood on Expected Expenditures (Means)**



*Positive and Negative Feelings During the Shopping Trip.* Recall that participants completed the PANAS-X short form with 5 negative feeling adjectives and 5 positive feeling adjectives after reviewing the disclosure information, before shopping with their Goldwave credit cards and again after shopping with their cards. We summed the positive and negative adjective rating scales separately to create separate positive and negative emotion

scales before and after shopping.<sup>54</sup> We examined the effects of type of disclosure, debtor status, residence of respondent, and time of mood administration on male and female respondents' scores on the positive and negative feeling scales. First for positive mood, we found a statistically significant increase in positive mood from the pre-shopping measure ( $M = 2.72$ ) to the post-shopping measure ( $M = 2.86$ ). No other effects were significant for positive feelings as an outcome measure.<sup>55</sup> For negative mood, there was also an impact of time of administration of the PANAS feeling scales such that negative feelings decreased from before shopping ( $M = 1.78$ ) to after shopping ( $M = 1.60$ ).<sup>56</sup> However, Figure 9 and the statistical analyses show

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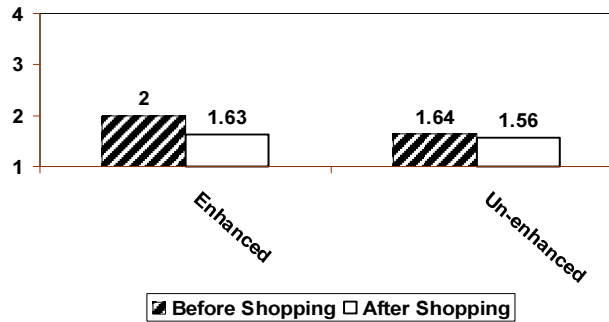
54. We averaged across the five ratings of positive feelings (1 to 5) pre-shopping to produce a positive feeling scale (coefficient alpha internal consistency reliability equaled .75,  $M = 2.69$ ,  $s.d. = .86$ ,  $n = 514$ ) for the first administration and did the same post-shopping for the second administration (alpha = .80,  $M = 2.86$ ,  $s.d. = .97$ ,  $n = 504$ ). Following this same method (but averaging across the negative feeling ratings) we created a negative feeling scale prior to shopping (coefficient alpha = .90,  $M = 1.88$ ,  $s.d. = .99$ ,  $n = 514$ ) and one post shopping (alpha = .89,  $M = 1.62$ ,  $s.d. = .83$ ,  $n = 504$ ).

55. A 2 (debtor status: debtor vs. non-debtor) x 2 (disclosure: enhanced vs. un-enhanced) x 2 (Residence: New York vs. Nebraska) x 2 (Gender) x 2 (time of PANAS administration: before vs. after shopping) mixed analysis of variance with repeated measures on the last factor produced only a significant main effect of time administration on positive (PANAS) feelings,  $F(1, 496) = 10.31$ ,  $p < .001$ . No other main effects or interactions were significant. This analysis and the one that examined negative feelings included gender because there are some indications in the literature that gender influences PANAS scores. It did not do so in this analysis.

56. A 2 (debtor status: debtor vs. non-debtor) x 2 (disclosure: enhanced vs. un-enhanced) x 2 (Residence: New York vs. Nebraska) x 2 (Gender) x 2 (time of PANAS administration: before vs. after shopping) mixed analysis of variance with repeated measures on the last factor produced a significant main effect of time administration on negative (PANAS) feelings,  $F(1, 477) = 10.31$ ,  $MSE = .41$ ,  $p < .01$ . However, this effect was qualified by an interaction between the time of administration and type of disclosure,  $F(1, 477) = 6.86$ ,  $p < .025$ . Simple effects tests showed that the enhanced disclosure chart produced a significant effect on negative feelings only before shopping,  $F(1,477) = 6.49$ ,  $p < .01$ , but that the effect faded away after shopping,  $F(1,477) = .00$ , *ns*. No other main effects or interactions were significant.

Some other interactions that are less important to the main theses of this article resulted from this analysis of negative affect. First, there was a significant interaction between time of administration and gender of the respondent,  $F(1,477) = 6.76$ ,  $p < .025$ . Simple effect tests showed that decreases in negative feelings in women participants from pre-shopping ( $M = 1.87$ ) to post-shopping ( $M = 1.54$ ),  $F(1, 477) = 25.88$ ,  $p < .025$ , but not in men,  $F(1,477) = .04$ , *ns*. Finally, there was a significant interaction between the debtor status and participant residence,  $F(1,477) = 4.62$ ,  $MSE = 1.15$ ,  $p < .05$ . Simple effect tests showed that collapsed across administration of the PANAS, Nebraska non-debtors showed more negative feelings ( $M = 1.80$ ) as compared to New York non-debtors ( $M = 1.60$ ),  $F(1,477) = 4.98$ ,  $p < .05$ . The same effect was not significant in debtors,  $F(1,477) = 1.60$ , *ns*.

Figure 9: The Effects of Shopping and Disclosure on Negative Affect Measured by the PANAS (Means)



that participants who read the enhanced disclosure information showed increased negative feelings as a result of reading the enhanced disclosure which explained some of the detrimental outcomes of unwise credit card use. Interestingly these negative feelings decreased significantly after the shopping trip to reach the same level as the negative feelings among those with unenhanced disclosure information both before and after shopping. These data seem to suggest that the enhanced disclosure increased negative mood relative to unenhanced disclosure and that shopping increased positive mood for all participants regardless of the type of disclosure they viewed.

It is possible that enhanced disclosure among those people who shop to end a bad mood led to negative affect, which in turn resulted in increased shopping and expected expenditures. This would be a classic mood repair effect, suggesting that those who shop to end a bad mood responded to the negative moods produced by enhanced disclosure with additional shopping, which resulted in a decrease in negative mood. If this is true, the enhanced disclosure boomerang for expected expenditures, which augmented differences between those who shop to end bad moods and those who do not, may be due to the impact of enhanced disclosure on mood states. That is, it puts shoppers into bad moods in the first place, which they attenuate by using their credit cards even more. In the end, this increased buying decreases the negative mood state. To determine if this was a possibility, we conducted some mediation analyses following Baron and Kenny's procedure.<sup>57</sup> Accordingly, if negative mood mediates the interaction of type of disclosure and shopping to end a bad mood on expected expenditures, then the interaction term in a regression model should predict both expected expenditures after shopping

57. Reuben M. Baron & David A. Kenny, *The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations*, 51 J. PERSONALITY & SOC. PSYCHOL. 1173 (1985).

and negative mood before shopping. However, the effect of the interaction on expected expenditures should drop out when we control for negative mood before shopping. (Note: variable *x* moderates the effects of variable *y* on outcome *z*, if variable *y* influences *z* differently at unique values of *x*. Variable *x* mediates the relationship between variable *y* and *z*, if *y* causes *x*, which in turn causes *z*. Therefore, while we have shown that shopping to end a bad mood does moderate the effects of enhanced disclosure on expected expenditures, we have not yet established that experienced emotion mediates the effects of enhanced disclosure on expected expenditures.)

Figure 10 displays the results of the linear regressions (it shows standardized beta weights) using the interaction of type of disclosure with shopping to end a bad mood (disclosure  $\times$  shopping to end a bad mood) to predict expected expenditures. It also displays the relationship between the interaction (disclosure  $\times$  shopping to end a bad mood) and negative mood before shopping, as well as the relationship between negative mood before shopping and expected expenditures. Finally, Figure 10 displays in parentheses, the relationship between the disclosure  $\times$  shopping interaction and expected expenditures (controlling for negative mood before shopping).<sup>58,59</sup>

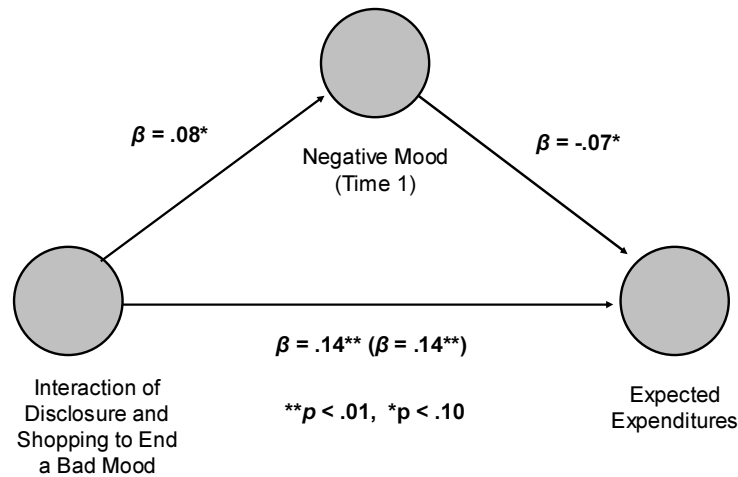
In these analyses, the interaction of type of disclosure and shopping to end a negative mood did predict the Goldwave credit card expected expenditures. Further, there were marginally significant links between the interaction and negative moods at time 1 and for negative moods at time 1 with expected expenditures. However, the interaction of disclosure  $\times$  mood on expected expenditures did not attenuate when the regression equation controlled for negative moods at time 1. Therefore, there is no evidence that mood repair is responsible for the boomerang effect (*i.e.*, enhanced disclosure facilitating the differences in purchasing between those who shop to end a bad mood and those who do not).

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58. For the criterion variable negative affect at time 1, a linear regression analysis that included as a dummy coded predictor disclosure information and the interaction of disclosure and shopping to end a bad mood produced a marginally significant model,  $F(1,490) = 3.22, p < .07$ . The standardized regression weight for the interaction ( $\beta$ ) was .08. For the criterion variable expected expenditures, a linear regression analysis that included as a dummy coded predictor disclosure information and the interaction of disclosure and shopping to end a bad mood produced a significant model,  $F(1,490) = 9.78, R = .14, p < .01$ . The standardized regression weight for the interaction ( $\beta$ ) was .14.

59. For the criterion variable expected expenditures, a linear regression analysis that included as a dummy coded predictor disclosure information and the interaction of disclosure and shopping to end a bad mood and negative mood at time 1 produced an overall significant model,  $F(2,489) = 6.28, R = .16, p < .01$ . The Standardized regression weight for the interaction of type of disclosure and shopping to end a bad mood ( $\beta = .15, p < .001$ ) was significant and the standardized regression weight for negative affect was marginally significant ( $\beta = -.07, p < .10$ ).

Figure 10: Predicting Expected Expenditures



## VI. SUMMARY AND CONCLUSIONS

The analogue experiment that we developed had several positive outcomes. First, it provided reliable measures of the likelihood of consumers to make ostensible purchases with simulated credit cards and the expected amount of money that they would spend. We are encouraged that we have been able to sample successfully over 500 respondents and that they were able to complete our online shopping trip and provide us with a rich data set to evaluate. One advantage of this approach (as compared to laboratory research or mailed surveys) is that it allowed us to collect conveniently a diverse sample of respondents from geographic areas that sampled very different communities. The demographic data that we collected showed that we were indeed able to collect data from a diverse sample of debtors and non-debtors from New York and Nebraska. As a result, we are able to generalize our results across a heterogeneous population.

The rational actor model<sup>60</sup> makes the testable assumption that consumers will choose not to overspend with credit cards to the extent that they possess knowledge about the effects of high interest rates, minimum payments, and long term loan agreements on the amount of money they pay to satisfy

60. See HASTIE & DAWES, *supra* note 28; Block-Lieb & Janger *supra* note 28; Korobkin & Ulen, *supra* note 28; Loewenstein & O'Donoghue, *supra* note 26, at 185-87; Wiener et al., *supra* note 5, at 459-60.

their credit card loans. Our data show that debtors and non-debtors possessed poor knowledge of these issues (the mean number of test items answered correctly was less than the midpoint values on our scale). Further, the correlation between knowledge scores on our scale and the likelihood that consumers purchased items on our online shopping expedition were very small and non-significant, as were the correlations between this same index and expected expenditures. This challenges the underlying BAPCPA assumption that with more information about credit loans, consumers will modify their purchasing behavior and resist the pressures to overuse their credit cards to buy desired products and services.

Perhaps our respondents' level of knowledge about credit card loans did not reach the threshold that is required to influence purchasing behavior. It could be that with more education, debtors and non-debtors would gain enough information to modify their behavior. However, we designed our enhanced disclosure information to provide maximum information to consumers, more than may be required by BAPCPA, yet respondents who reviewed our enhanced disclosure charts and summaries showed knowledge scores that were not significantly different from those who read the unenhanced information. Still, some of our earlier work demonstrated that financial literacy training can significantly increase knowledge about credit and finance.<sup>61</sup> Different methods of conveying enhanced disclosure may be more successful than our current approach. More specifically, it is possible that people who actively call their creditors for the type of information we provided will pay more attention to it than did participants in our study. BAPCPA, when fully enacted, will require that creditors make this type of call-in service available. Still, our results should bring some pause to those who firmly believe that enhanced disclosure will automatically curb use of credit cards to make desired purchases.

However, this finding is only useful if our simulated shopping trip results correlate with actual financial behavior. To this end, we looked at the relationship between purchasing behavior on our simulated shopping trip and self-reported financial data. We found that online shoppers were more likely to purchase with their cards if they had multiple real credit cards of their own, if they had unpaid bills from the previous month, if they failed to follow their own planned budgets, or if they borrowed money from multiple sources. These results suggest that our simulated credit card task is associated with at least some forms of unwise use of money and credit.

While the main analyses found no significant differences between debtors and non-debtors on either likelihood to buy or expected expenditures, they did show enhanced disclosure effects. Those consumers with enhanced disclosure (as compared to those without) were less likely to buy products and showed lower expected expenditures. Unsurprisingly, New Yorkers (com-

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61. Richard L. Wiener et al., *Debtor Education, Financial Literacy, and Pending Bankruptcy Legislation*, 23 BEHAV. SCI & L. 347 (2005).

pared to Nebraskans) were more likely to use their Goldwave cards to purchase products and services. However, whether or not people professed to shop to end bad moods moderated the effects of enhanced disclosure in a troublesome way. First, individuals who claimed to shop to end bad moods were more likely to buy and had greater expected expenditures. Most importantly, enhanced disclosure failed to limit credit card use among those respondents who claimed that they shopped to end bad moods. Further, we found a boomerang effect of enhanced disclosure in that it augmented the differences in purchasing among those who shop to end a bad mood and those who do not. Specifically, those who shopped to end a bad mood displayed higher expected expenditures than did those who did not shop to end a bad mood, but only in the enhanced disclosure condition.<sup>62</sup> That is, the difference in the expected expenditure means of the bad mood and non-bad mood shoppers were only statistically significant in the enhanced disclosure condition. It is worth noting that those people who shop to end bad moods are likely the ones who could benefit the most from a form of disclosure that they could use to inform their purchasing behavior. In the end, these results may signal a missed opportunity in the new regulations.

While it is difficult to explain these effects, we did make some headway. We found that respondents' positive moods increased from measures taken immediately after they read enhanced disclosure information (before shopping) to the end of the shopping trip. Further, enhanced disclosure produced increases in negative affect prior to shopping, but this negative affect decreased after shopping. However, to our surprise, the effect of enhanced disclosure on expected expenditures among those who shop to end a bad mood was not mediated by negative feeling ratings on the PANAS so that any mood repair effects that occurred did not produce greater use of the Goldwave credit card.

It may be that those individuals who report that they shop to end a bad mood did endeavor to decrease negative affect in this study by using their Goldwave Card to make purchases. However, because our exercise results in the acquisition of no actual goods or services and no actual bills, the connection between enhanced disclosure and expected expenditures is direct and does not rest on experienced negative mood. More specifically, because of the simulated nature of the shopping trip, the mere act of rating any or all of the items as having a high likelihood-to-buy decreased negative moods below the initial pre-shopping rating. As a result, our measure of decreased negative affect was not sensitive enough to pick up the effects of enhanced disclosure in the sub sample of respondents who shopped to end a bad mood. Therefore, the effect of the interaction between type of disclosure and shopping to end a bad mood remained significant after controlling for the negative PANAS-X mood effect before shopping.

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62. See *supra* text accompanying note 53.

We are left with a moderating effect for enhanced disclosure. It does have a moderate size impact, decreasing credit card purchasing among individuals who do not shop to end bad moods. However, for those individuals who self-report that they do shop to control their moods, enhanced disclosure becomes another reason to buy more. These results support the Loewenstein and O'Donoghue (2006) argument that "delayed demand deterrence" produces increases in fear and anxiety without commensurate increases in compliance to the intended regulation.<sup>63</sup> In other words, making consumers aware of the delayed punishment for consuming in harmful ways (*i.e.*, increased costs of compounded interest when people make only minimum credit card payments) may create fear and anxiety that offset any small gains obtained in the wise use of money. In our experiment, those who admittedly shop to end bad moods failed to gain much new knowledge from their exposure to enhanced disclosure information, but they did experience the affective "pain" that comes with that increased knowledge. Most importantly, these individuals wound up using their credit cards as much and spent as much money as did those without enhanced disclosure charts.

## VII. CONCLUSIONS

We started out with a discussion of social analytic jurisprudence suggesting that there is value in addressing identified assumptions made in the law and testing them with empirical data.<sup>64</sup> This article has done just that with BAPCPA. Because it follows a rational actor model, the law assumes that disclosing more information will act as an antidote for consumer's unwise use of credit card loans. While we found some evidence to support this assumption in our experiment, we found other results that require major qualifications in defense of the assumption. Increases in credit card loan knowledge did not lead to curbed use of credit, and enhanced disclosure did not increase loan knowledge. However, enhanced disclosure did increase negative affect, and it did not decrease buying for people who shop to end a bad mood. Individuals who bought more on our simulated shopping trip experienced a decrease in their negative affect over the course of the shopping expedition.

While we were unable to pinpoint negative affect due to enhancement as the mediator for the negative effects of enhanced disclosure in consumers who shop to control their bad moods, those negative effects were nonetheless pronounced in our data. Our results point to the likelihood that the effectiveness of increased knowledge as an antidote for unwise use of consumer credit cards may involve a great deal more than simply enhancing credit card statement disclosures. At the very least, our data suggest that researchers might do well to take into consideration psychological factors in examining the efficacy of credit card disclosure rules in regulating the demand side of credit

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63. Loewenstein & O'Donoghue, *supra* note 26, at 189.

64. Wiener et al., *supra* note 5.

card over-expenditures. This is especially true because the information that we presented to consumers was more complete than the minimum required disclosure under BAPCPA and the amendments (not yet in force) to the Truth in Lending Act.

Finally, a conclusion about the role of emotion in moderating and mediating the effects of reforms to credit card disclosure requirements awaits further research from experiments that use different forms of disclosure information presented in different formats (*i.e.*, made available over the telephone as required in BAPCPA or automatic systems in which consumers enter their personalized data after more general hypothetical repayment examples) and from field studies that replicate our results. Certainly, it would be unwise to draw general inferences from one analogue study without replication in real world contexts. The study reported in this article is an experimental analogue for people engaged in credit card shopping. The chief difference between our methodology and real world shopping is that our participants were in the enviable position of not owing any money after completing the experiment, but in the unenviable position of not owning any new products or services after shopping.

Still, the current work raises the importance of factors such as experienced emotion as explaining unwise use of credit cards among consumers. The data collected from our online shopping trip suggest that unwise credit card use is a difficult problem for the bankruptcy system to address and that it will require an interdisciplinary effort to resolve. In the end, we have only begun to examine the effects of experienced emotion on credit use under BAPCPA. However, we invite other researchers who are interested in this issue to take notice of the results of rational actor model theories, as well as research that emphasizes the role of more psychological factors in the wise use of credit.