In Search of a Theoretical Explanation for the Credit Card Effect

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Feinberg (1986) conducted a series of experiments in which he manipulated the presence or absence of credit card stimuli in context of experimental tasks requiring subjects to evaluate the worth of products, indicate how much they would be willing to donate to a charity, or to actually donate money. In all experiments, he detected that the mere presence of credit card paraphernalia led to greater valuations and donations. Feinberg proffered two theoretical explanations to account for his findings: classical conditioning and a weapons effect. These were merely conjectured rather than empirically tested. Hence, although Feinberg’s research is well known to many consumer behavior scholars, his fascinating finding remains absent of a compelling theoretical explanation. Moreover, Feinberg himself and Hunt et al. (1990) have failed to replicate Feinberg’s (1986) original findings. The purpose of the present research is to attempt to replicate Feinberg’s (1986) results and also to test the theoretical explanations that he proposed. To this end, two studies were conducted. Study 1 tested the classical conditioning mechanism. Although this study obtained some support for Feinberg’s original credit card effect, the results clearly reveal that classical conditioning is not the explanatory mechanism underlying this result. Study 2 tested the weapons effect mechanism. Findings from this study failed to replicate the credit card effect, thereby also rejecting the weapons effect as a suitable explanation for his original results.

Many published findings in marketing and consumer behavior are not surprising—they are either intuitive or perfectly compatible with well-established theory. Occasionally, however, research results are so fascinating that they virtually beg for replication. Such findings possess information value and are appealing, because they have something to say about marketer or consumer behavior that is unexpected, quirky, implausible, or even inconsistent with extant theory. In isolation, however, the strange, unique, newsworthy finding is little more than an empirical irregularity until further research supports the finding and offers an adequate theoretical account.

One such set of unexpected findings is found in the work of Richard Feinberg (1986) and his reported credit card effect. In brief, across multiple, clever studies Feinberg found that objects evaluated in the presence of credit card stimuli were perceived as more valuable than when evaluated without such stimuli. He offered two theoretical accounts—classical conditioning and a weapons effect—to explain these findings. As is established here, both of these explanations are inadequate, because of problematic aspects of Feinberg’s work. Our own studies attempt to test better the theoretical foundation underlying the credit card effect that Feinberg observed. Before presenting our own studies, it is useful to discuss more fully Feinberg’s studies along with the previous attempts to replicate his results.

Feinberg’s Credit Card Effect

Feinberg (1986) performed a nonexperimental study measuring the difference in the size of tips left by credit card and cash-paying customers at a restaurant and found that, on average, credit card customers left larger tips. He extended this result to an experimental setting by having subjects examine a mock catalog featuring pictures of various unbranded consumer products (dress, tent, man’s sweater, lamp, typewriter, chess set). Half of the subjects viewed the book in the presence of a credit card stimulus (specifically, MasterCard paraphernalia), and the other half viewed the book in the absence of any such stimuli. When asked to assess the amount of money they would be willing to spend on each of the featured items, subjects in the credit card condition (vs. the control condition) indicated a willingness to spend significantly more for all of the products investigated. Feinberg employed procedures to minimize demand effects; hence, this artifact cannot explain his results.
Feinberg (1986) replicated the finding from the first experiment in three additional experiments, the details of which are unnecessary for present purposes other than to say that the dependent variable in one study involved a measure of willingness to donate money and, in another, a measure of actual donation behavior. All four experiments converged on the same finding: subjects were more willing to spend/donate when their decision was made in the presence of credit card stimuli than when devoid of such stimuli.

As theoretical foundation for his findings, Feinberg proposed two explanations: a weapons effect and classical conditioning. Basically, the weapons effect occurs when the mere presence of a weapon intensifies the aggressive behavior of an already aggressive individual (Berkowitz and LePage, 1967). Feinberg paralleled credit card stimuli to the weapon stimuli, with spending as the outcome rather than aggressive behavior.

Feinberg also speculated that through shopping and spending experiences, people learn to associate credit cards with spending, and, therefore, also associate them with the positive affect that can occur through the possession and consumption of goods purchased through credit. He hypothesized that the association of credit card stimuli with a product could, therefore, transfer this positive affect to the product through classical conditioning. In this case, the credit card would be serving as the unconditioned stimulus (more specifically, a second-order unconditioned stimulus) with the product being the conditioned stimulus. Pairing of the credit card and the product would result in the spending elicited by the credit card (the unconditioned response) being transferred to spending related with the product itself (the conditioned response). There are aspects of Feinberg's methodology that prevent his studies, particularly studies 1 through 3, from being evaluated as true tests of classical conditioning. This assertion is elaborated upon shortly.

Prior Replications

Hunt, Florsheim, Chatterjee, and Kernan (1990) attempted to replicate Feinberg's credit card effect. These researchers used procedures similar to Feinberg's and in addition, blocked subjects on a measure of materialism, reasoning that materialistic individuals would more likely be influenced by spending cues and exhibit a credit card effect. The results of their study were null—no main effect, even when blocked on materialism.

Enough differences exist between the Hunt, Florsheim, Chatterjee, and Kernan (1990) and Feinberg (1986) methodologies to explain the discrepant results. Some of these were identified by Hunt and co-workers (1986), such as the differences in the subjects. These researchers claimed that most of their subjects were from working-class backgrounds, conceivably lacking experience with credit cards. It is possible that Feinberg's subjects were more middle class and credit savvy than were Hunt and co-workers'. In addition, Hunt and colleagues' cell sizes were roughly half Feinberg's, thus implicating inadequate statistical power as another explanation for their null results.

In a comment on the Hunt, Florsheim, Chatterjee, and Kernan study, Feinberg (1990) claimed that Hunt and co-workers' monetary payment to subjects may have created an experimental confound, because the nature of the study dealt with financial stimuli. In this same comment, Feinberg (1990) acknowledged that he also had difficulty replicating his earlier (1986) results. He maintained that his original work had taken place in the social and historical context of the early 1980s—a context quite different from that of the late 1980s when Hunt and co-workers' study was performed. Increasing numbers of college students were using credit cards; some, no doubt, having very negative experiences in becoming over extended with credit purchases.

In a test of this negative credit experience effect, Feinberg and Meoli (1987) had student subjects read a vignette about a hypothetical family that had either a positive or a negative credit card experience. Subjects were subsequently tested with the same type of methodology as Feinberg's (1986). It was determined that subjects exposed to a positive (vs. negative) credit card experience vignette estimated products to have higher prices. This effect was amplified in the presence of credit card stimuli.

Although nicely supplementing Feinberg's (1986) prior results, the fact remains that the theoretical accounts for these effects, namely, classical conditioning and a weapons effect, are matters of conjecture rather than empirical demonstration. Shortly we explain why Feinberg has not provided adequate tests of the theoretical mechanisms proposed to account for his results, first, however, it will be informative to examine other scholars' treatment of Feinberg's (1986) research as reflected in journal and textbook citations.

Citation History

In an analysis of articles published in the Journal of Consumer Research—the journal where Feinberg's (1986) article was published—Cote, Leong, and Cote (1991) determined that full-length articles (i.e., those other than comments or notes) published in JCR between 1974–1986 received, on average, 1.9 citations per year in the Social Science Citation Index. Our analysis reveals that during the 10-year period 1987–1996 Feinberg's article has been cited a total of 11 times, mostly in psychology journals. It is clear that Feinberg's work is below the average JCR article in citation frequency. Nevertheless, the article also is cited in consumer behavior texts, and it is here where Feinberg's results perhaps have the greatest potential of becoming part of the mythos of the marketing and consumer behavior fields. (A review of the following consumer behavior texts published during the 1990s indicates that Feinberg's [1986] article is cited in slightly over one-third of the reviewed texts; namely, those indicated with an asterisk: Asael [1990]; Engle, Blackwell, and Miniard [1995]; Hawkins, Best,

Appraisal of Alternative Explanations for the Credit Card Effect

Classical Conditioning

As alluded to, classical conditioning occurs when a conditioned stimulus (CS) is paired with an unconditioned stimulus (US) that invokes an unconditioned response (UR) until the CS produces the same, or similar response—conditioned response (CR)—by itself. In Feinberg’s studies 1 and 2, which provide the paradigm for our replications, the CS is the product being evaluated by the subject, and the US is the credit card. Although USs in basic conditioning research are biologically salient stimuli—as in the case of Pavlov’s dogs salivating at the sight of food—a credit card is a US only in the sense that it is the result of prior conditioning, and is known as a second-order US (Rescorla, 1980). Through acculturation experiences, consumers probably develop thoughts about and even emotional reactions toward credit cards, so that credit cards might assume the properties of second-order conditioned stimuli.

Feinberg (1986) asserts that spending is the UR elicited by credit cards; that is, after pairing the credit card with a product, the product begins to elicit this spending response on its own, and consumers would be willing to pay more for products in the presence than in the absence of credit card stimuli. This explanation represents a suitable conceptual parallel to the accounts provided in basic conditioning research, but, unfortunately, there is a notable problem with Feinberg’s empirical demonstration of this conditioning explanation; namely, subjects who viewed catalog pictures of products in the presence of credit card stimuli also evaluated the worth of these products in the presence of credit card paraphernalia. In other words, Feinberg did not remove the unconditioned stimulus—the credit card itself—when measuring the putative conditioned response. This would be equivalent to Pavlov having retained meat powder in the sight of his canine subjects when measuring their salivary responses to bells or metronomes.

Because of this methodological oversight, it is impossible to determine if the responses that Feinberg measured were URs elicited from the credit card or CRs evinced by the product itself. To test truly for classical conditioning, the responses would need to be measured in the absence of credit cards. Study 1 of the current research adheres to this methodology by including a treatment condition where the credit card stimulus is present only during the encoding of product information but absent in the measurement of responses.

The Weapons Effect

This effect originated in a study by Berkowitz and LePage (1967). In their original experiment, they subjected male student subjects to either one or seven mild electrical shocks, under the guise that it was part of a study on physiological reactions to stress. The shocks were ostensibly given by a second student subject (actually a confederate) in evaluation of the first student’s responses to an experimental task. Subjects were then given the chance to evaluate the confederate’s responses by giving him electrical shocks. On the table near the shock key were either weapons (a rifle and a revolver), two badminton rackets, or nothing. When the weapons were present, they were either explained as belonging to the other “subject” or as being left over from another experiment. The dependent measure was the number of shocks given by the subject to the confederate. The results of this experiment revealed that the greatest number of shocks were administered by subjects in the seven-shock group who also were exposed to weapons associated with the confederate (higher mean = 6.07 in the seven shock/associated weapons condition, lowest mean = 0 in the one shock/badminton rackets condition).

In more modern weapons effect research, some type of arousal manipulation has been instantiated as a virtual requirement for obtaining such an effect. Indeed, a meta-analysis by Carlson, Marcus-Newhall, and Miller (1990) revealed strong support for the notion that incidentally present weapons generally enhance aggressiveness among individuals, but mostly only when they already are experiencing some form of negative affect, or arousal. Highly aroused subjects are more susceptible to act on their aggression when weapons are present (Cahoon and Edmonds 1985; daGloria, Duda, Pahlavan, and Bonnett 1989; Maas and Kohnken 1989; and Tooley, Brigham, Maas, and Bothwell 1987). Study 3 of the present research employs a moderator variable that is analogous to the arousal measures used in recent weapons effect studies.

Study 1

Study 1 was conducted to provide a direct test of Feinberg’s (1986) classical conditioning explanation for his results as well as to test for an effect similar to that obtained in his study 1.

Method

SUBJECTS. Sixty-nine undergraduate students participated for extra class credit. They were randomly assigned to one of three conditions, two of which are equivalent to the experimental and control conditions employed in Feinberg’s (1986) study 1. A third condition represents a slight variant of Feinberg’s credit card-present condition and enables a direct test of his classical conditioning explanation. The conditions are:

1. Feinberg (F): Feinberg’s experimental condition (Visa stimulus present both at product encoding and rating);
2. Visa/Absent (V/A): Visa stimulus present during encoding of product information but not at rating; and
3. Control (C): Feinberg’s control condition (Visa stimulus absent).

Condition 1 (F) directly replicates Feinberg’s experimental condition. Subjects were exposed to various products in a catalog format with credit card paraphernalia present both when they encoded the product pictorials and when they estimated how much they would be willing to pay for each product. Condition 2 (V/A) enables a true test of classical conditioning by disjoining the measure of the conditioned response from the presence of the unconditioned stimulus. In other words, Visa paraphernalia were present when subjects encoded product information but were removed when they rated the perceived value of products. Condition 3, the control condition, is equivalent to the F condition with Visa paraphernalia removed.

PROCEDURE. Pre-testing with a large group of students \( n = 111 \), who were similar to the subjects in the full experiment, revealed that the Visa card was strongly preferred over MasterCard. Hence, Visa represented the experimental stimulus in contrast with the MasterCard stimulus used in Feinberg’s research.

Subjects were told they were participating in a study simulating a new, catalog order center method of shopping. A simulated catalog order center was set up with two desks at opposite ends of the experimental room—one representing a location for examining catalog merchandise, and the other for placing orders. The two-desk structure was necessary, however, only for subjects assigned to the V/A treatment. Subjects were then given the booklet containing the dependent measures and instructed to complete the booklet, referring to the catalog if desired. In the V/A condition, the subject was directed to table 1 where the experimenter then opened the simulated catalog to the first product and placed it in front of the subject, who was asked to examine each product. The subject was then given the booklet containing the dependent measures and instructed to complete the booklet, referring to the catalog if desired. In the V/A condition, the subject was directed to table 1 where the experimenter then opened the simulated catalog to the first product, placed it in front of the subject, and requested him or her to examine all pictorials. After the subject was done looking at the catalog, the experimenter led her or him to table 2, explaining that it was a simulated order desk. The subject was then given the booklet containing the dependent measures, as well as the closed catalog, and instructed to complete the booklet, referring to the catalog if desired.

DEPENDENT MEASURES. Subjects provided a dollar amount corresponding to how much they would be willing to spend for each item if they were to buy it for themselves or as a gift. This measure directly corresponds to the perceived-value measure used in Feinberg’s (1986) studies. However, rather than treating each product as a unique dependent variable, we aggregated perceived values across all seven products to form a variable labeled Total Expenditures. Such a measure removes the idiosyncratic responses to individual products and represents a conceptually richer variable, because it reflects perceived value for a rather diverse set of products.

Second, a summated four-item, seven-point semantic differential scale was used to measure subjects’ attitudes toward each product (good/bad, high/low quality, like/dislike very much, superior/inferior). The range of possible scores was 4–28, with higher numbers reflecting more positive attitudes.

The simulated catalog consisted of color photographs (clipped from actual mail-order catalogs) of seven products: an automatic bread maker, binoculars, a woman’s dress, a coffee maker, a portable compact disc player, a floor lamp, and a man’s sweater. Two factors determined the choice of these products: First, they are similar to those used by Feinberg (1986). Second, and more important, they are brand-neutral items that are devoid of well-known, advertised prices. This was a critical consideration, insofar as a credit card effect would have no opportunity of materializing if subjects had clear-cut price schema prior to participating in the experiment. Each picture was labeled and accompanied by a brief description, as if in a real catalog. The pictures were centered on white paper and covered in clear plastic.

After reading a brief description about catalog order centers, each subject was brought individually into the experimental room. Subjects assigned to the Feinberg and control conditions were immediately directed to table 2. The experimenter then opened the simulated catalog to the first product and placed it in front of the subject, who was asked to examine each product. The subject was then given the booklet containing the dependent measures and instructed to complete the booklet, referring to the catalog if desired. In the V/A condition, the subject was directed to table 1 where the experimenter then opened the simulated catalog to the first product, placed it in front of the subject, and requested him or her to examine all pictorials. After the subject was done looking at the catalog, the experimenter led her or him to table 2, explaining that it was a simulated order desk. The subject was then given the booklet containing the dependent measures, as well as the closed catalog, and instructed to complete the booklet, referring to the catalog if desired.

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Internal consistency reliabilities were acceptable for all seven products (all alphas exceeding 0.8). This attitude measure enables a test for classical conditioning. Specifically, if subjects in the credit card-present conditions (Feinberg and V/A) attach higher values to products because they are encoded in the presence of a credit card stimulus, then the product attitude ratings should also be higher if a credit card effect is to be attributed to a conditioning mechanism. In other words, higher perceived value estimates without more positive attitude ratings is not a pattern of results that can unequivocally
Theoretical Explanation of Credit Card Effect

Table 1. Study 1: Perceived Value Means and (Standard Deviations)

<table>
<thead>
<tr>
<th>Product</th>
<th>Experimental Condition¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Feinberg (n = 24)</td>
</tr>
<tr>
<td>Bread maker</td>
<td>$76.25 (71.48)</td>
</tr>
<tr>
<td>Binoculars</td>
<td>$111.54 (156.94)</td>
</tr>
<tr>
<td>Dress</td>
<td>$50.13 (19.16)</td>
</tr>
<tr>
<td>CD player</td>
<td>$168.08 (109.14)</td>
</tr>
<tr>
<td>Coffee maker</td>
<td>$43.17 (12.87)</td>
</tr>
<tr>
<td>Sweater</td>
<td>$45.00 (15.44)</td>
</tr>
<tr>
<td>Floor lamp</td>
<td>$69.13 (38.57)</td>
</tr>
<tr>
<td>Total $</td>
<td>$563.29 (303.87)</td>
</tr>
</tbody>
</table>

¹Feinberg condition = credit card stimuli present at encoding and rating; control = no credit card stimuli at encoding or rating; V/A = credit card stimuli present at encoding only.

be accounted for by a classical conditioning explanation. Thus, our test procedure, unlike Feinberg’s, permits a direct test of the conjectured conditioning explanation.

Results and Discussion

The perceived value data are shown in Table 1. It can be seen that the summed variable (Total $) is the highest in the Feinberg condition (M = $563.29) but lowest in the V/A condition where Visa paraphernalia were present only at encoding (M = $399.14). Although the omnibus F test is statistically significant (F²,36 = 3.64, p = 0.03), the results are not entirely compatible with the expected pattern—clearly the control group (M = $454.14), where Visa paraphernalia were absent, should not have assigned greater value to the experimental products than did the V/A group. More problematic is the fact that there are no significant differences among the three groups’ attitudinal ratings (Table 2). With a summed attitudinal variable (Total Attitude) as dependent variable, the omnibus F test is not significant (F²,36 = 1.00, p = 0.38). In addition, there is no consistent pattern of differences in the attitude ratings when tested product by product. Thus, although a Feinberg-like credit card effect is observed when comparing just the Feinberg and control conditions, such an effect cannot be attributed to a classical conditioning mechanism.

Study 2

As previously noted, Feinberg’s weapons effect account also is merely conjectural, because his research lacked the important

arousal manipulation that is fundamental to a true weapons-effect test. This study addresses this concern by including an arousal-type manipulation of motivation to spend.

Method

SUBJECTS. Subjects were 70 undergraduates who participated for extra course credit. They were randomly assigned to one of 5 treatment conditions—four experimental conditions and a control. The experimental conditions were established on the basis of: (1) whether the Visa stimulus was present or absent; and (2) whether there was high spending arousal or no spending arousal prior to the experimental task.

Two variations of arousal manipulation were manipulated to test for the robustness of the anticipated effect. In one, subjects were instructed to imagine that they had won a $1,000 catalog shopping spree and that they could spend as much or as little as they liked when “shopping” at the catalog order center. The second variation instructed students to consider the impending holiday season (the study was conducted in early December) and the approaching final exams, and to consider the catalog shopping exercise as a hypothetical method of time-saving and convenient gift shopping. The conditions were as follows:

Condition 1: Shopping spree arousal/Visa present
Condition 2: Shopping spree arousal/Visa absent
Condition 3: No arousal/Visa present
Condition 4: Holiday arousal/Visa present
Condition 5: Holiday arousal/Visa absent

Table 2. Study 1: Attitudinal Means and (Standard Deviations)

<table>
<thead>
<tr>
<th>Product</th>
<th>Experimental Condition¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Feinberg (n = 24)</td>
</tr>
<tr>
<td>Bread maker</td>
<td>21.50 (4.16)</td>
</tr>
<tr>
<td>Binoculars</td>
<td>20.38 (3.40)</td>
</tr>
<tr>
<td>Dress</td>
<td>17.38 (5.72)</td>
</tr>
<tr>
<td>CD player</td>
<td>22.54 (5.70)</td>
</tr>
<tr>
<td>Coffee maker</td>
<td>21.79 (3.27)</td>
</tr>
<tr>
<td>Sweater</td>
<td>17.50 (4.84)</td>
</tr>
<tr>
<td>Floor lamp</td>
<td>21.38 (4.32)</td>
</tr>
<tr>
<td>Total attitude</td>
<td>142.46 (17.06)</td>
</tr>
</tbody>
</table>

¹Feinberg condition = credit card stimuli present at encoding and rating; control = no credit card stimuli at encoding or rating; V/A = credit card stimuli present at encoding only.
Because this study was designed to test the weapons effect, and not classical conditioning, there were no phases as in the first two studies; rather, the credit card was either present or absent both at product encoding and at data collection.

**PROCEDURE.** As before, subjects were told that they were participating in a study dealing with catalog order centers. The experimental room had only one “order desk.” In the Visa present conditions (1, 3, and 4), a framed Visa advertisement hung above the desk, and the plastic Visa stand was placed in the upper left-hand corner of the desk.

After subjects were given the introductory cover story (the brief description of the catalog order centers), they then were subjected to either of the two arousal manipulations. In Condition 3, arousal was not manipulated.

Subjects were then asked to look at the catalog that contained the same seven products tested in study 1. Then they were given the booklet containing the dependent measures and instructed to answer the questions as they looked through the catalog.

**Results and Discussion**

**AROUSAL MANIPULATION.** Two Likert-type items checked the arousal manipulation. First, if this had been a real shopping environment, I would have wanted to purchase at least one of the items in the catalog (strongly disagree = 1, strongly agree = 5). Second, the shopping exercise increased my desire to spend money (strongly disagree = 1, strongly agree = 5). Because these two items shared only 32% common variance, it was decided to retain only the first item in subsequent analysis. A contrast of the mean arousal of Conditions 1, 2, 4, and 5 (arousal), versus the mean arousal of Condition 3 (no arousal) is marginally significant ($t_{58} = 1.58; p = 0.06$, one-tailed). The mean arousal for the no-arousal condition (M = 3.00) is lower than the mean for the arousal conditions (M = 3.53). Hence, the arousal manipulation worked as expected, although not quite as definitively as would have been desired.

There is no significant difference between the two types of arousal manipulations (i.e., the shopping spree vs. holiday variations), so Conditions 1 and 4, and Conditions 2 and 5 were combined, resulting in three groups for final analysis: (1) arousal/Visa present; (2) arousal/Visa absent; and (3) no arousal/Visa present.

**PERCEIVED VALUE DATA.** The perceived value data for Study 3 are shown in Table 3. An analysis of variance (ANOVA) ($F_{2,67} = 1.10; p = 0.34$) shows that there is no significant difference in the perceived value means among the three conditions. Indeed, the Total $ value is slightly higher in the arousal/Visa absent condition (M = $491.39) than in the arousal/Visa present condition (M = $485.67). Only one of the individual product price means was significantly different among groups (the floor lamp).

The results from this study add important information to the test of Feinberg’s credit card effect. There were differences in arousal among the different treatment conditions, which is analogous to the manipulation of arousal in the classical weapons effect research. However, even with these prior differences, there were no significant differences on product perceived value estimation in the presence or absence of the Visa stimulus. Hence, a credit card effect is not manifest. This further discounts the theoretical basis Feinberg used to explain his experimental results.

**General Discussion**

Feinberg (1986) found interesting results when he asked subjects to evaluate products in the presence or absence of a credit card stimulus. However, subsequent research (Hunt, Florsheim, Chatterjee, and Kernan, 1990; Feinberg, 1990) has failed to find similar results. Our first study obtains some semblance of a credit card effect, but the overall pattern of results is not supportive of a robust effect. Our second study utilized two types of arousal manipulation in an attempt to correspond to the weapons effect research. No credit card effect was detected.

If classical conditioning and the weapons effect were not responsible for Feinberg’s findings, what theoretical account might explain his results? One possibility is that credit card stimuli release consumers’ inhibition to spend—the “buy now, pay later” mentality. A credit card may make the consumer feel as if she or he can afford to pay more for products, simply because it is not necessary to pay the entire amount in cash.

**Table 3. Study 2: Perceived Value Means and (Standard Deviations)**

<table>
<thead>
<tr>
<th>Product</th>
<th>A/VP $(n = 24)$</th>
<th>A/VA $(n = 23)$</th>
<th>No/VP $(n = 23)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bread maker</td>
<td>$76.08 (54.60)$</td>
<td>$59.58 (35.97)$</td>
<td>$58.04 (34.32)$</td>
</tr>
<tr>
<td>Binoculars</td>
<td>$70.88 (42.67)$</td>
<td>$74.36 (44.02)$</td>
<td>$62.08 (43.69)$</td>
</tr>
<tr>
<td>Dress</td>
<td>$50.72 (22.32)$</td>
<td>$54.04 (14.09)$</td>
<td>$47.48 (15.66)$</td>
</tr>
<tr>
<td>CD player</td>
<td>$139.33 (56.77)$</td>
<td>$151.79 (39.40)$</td>
<td>$131.88 (65.43)$</td>
</tr>
<tr>
<td>Coffee maker</td>
<td>$49.84 (22.60)$</td>
<td>$43.08 (15.85)$</td>
<td>$40.79 (13.30)$</td>
</tr>
<tr>
<td>Sweater</td>
<td>$41.00 (16.47)$</td>
<td>$45.36 (22.11)$</td>
<td>$40.33 (12.51)$</td>
</tr>
<tr>
<td>Floor lamp</td>
<td>$54.84 (31.66)$</td>
<td>$62.28 (25.45)$</td>
<td>$45.29 (17.62)$</td>
</tr>
<tr>
<td><strong>Total $</strong></td>
<td>$485.67 (172.83)$</td>
<td>$491.39 (150.82)$</td>
<td>$429.57 (143.32)$</td>
</tr>
</tbody>
</table>

&A/VP = Arousal/Visa Present; A/VA = Arousal/Visa Absent; No/VP = No Arousal/Visa Present.
This type of thinking would seem to be most prevalent among consumers without much credit card experience. Those who had experience paying off credit card debts with high interest charges would seem less likely to feel that credit cards actually provide greater spending power in the long run.

At the time Feinberg conducted his original studies, in the early 1980s, college students did not own credit cards in the same high proportion that they do in today's society. Credit cards may have represented a reward for graduating from college, finding a job, and being able to afford nice clothing, electronics, and other rite-of-passage products. In the 1990s, students are much more likely to routinely use credit cards, and many of them may have already gotten themselves into debt. This may help explain why Feinberg's results are so difficult to replicate.

The United States economy has also gone through changes since the early 1980s. College students may no longer look forward to graduating and being able to purchase nice products. They may be more worried about simply finding a job that will cover basic living expenses. Credit cards may even be used to purchase groceries or other necessities rather than luxury or semiluxury items.

Feinberg's (1986) research, as noted earlier, has been cited in journals within and outside the consumer behavior discipline as well as in popular consumer behavior texts. What makes his research so fascinating is that his effects were consistently strong in four studies that used different measures of effect: perceived product value, intent to donate, and actual donation behavior. All of these effects have ecologically valid implications for understanding actual marketplace behavior, because they suggest that the mere presence of a stimulus (credit card paraphernalia in this case) can have salubrious effects for the marketer.

Feinberg (1986), however, merely conjectured as to why such effects should have been obtained and how they can be explained. Our studies reveal that his preferred theoretical accounts—classical conditioning and a weapons effect—are not substantiated. In sum, the credit card effect is, at best, an unreliable empirical outcome that lacks a compelling theoretical explanation. Either more research is necessary to determine the moderating conditions better when such an effect obtains, or, perhaps better yet, researchers and text authors should refrain from citing this research and, in so doing, prevent the further institutionalization of what seems to be an unreplicable result.

References