Do People Spend More in a Crowded Store?: a Field Experiment on Control Deprivation and Compensatory Spending
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The present research extends previous research showing how motivation for control over the environment leads to increased buying and spending behaviors (Chen, Lee, & Yap, 2011). We test this hypothesis in a retail setting (i.e., supermarket). Specifically, we predict that control-deprivation induced by store crowedness would cause shoppers to buy more items and spend more money. This effect however would be attenuated when people are given the chance to restore their sense of control before shopping. We compared three conditions: shoppers in an uncrowded store, shoppers in a crowded store, and shoppers in a crowded store who were given the opportunity to regain control through an intervention. Results showed that shoppers in crowded situations bought and spent more than those who were shopping in the uncrowded situations and those who received the intervention before shopping in crowded situations.

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lower social standard leads to a fewer number of categories (a higher construal level) than a higher social standard. Following Louro et al. (2007), we combined positive and negative moods into a single index (i.e., the difference between positive and negative moods, positive scores indicate net positive moods). We found significant correlation between standard and moods ($r = -.276, p = .015$) and between progress and moods ($r = .383, p = .001$). However, we did not find significant relationship between moods and construal level (camping trip, $r = -.113, p = .328$; yard sale, $r = .109, p = .343$).

**DISCUSSION**

Lee et al. (2009) showed that fit between individuals’ regulatory focus and the construal level of a message can enhance engagement in information processing and in turn lead to processing fluency and intensified reactions. In this study, we found that greater goal progress increases construal level. This implies that individuals are likely to construe information at different levels depending on goal progress and that different messages represented either at a high or a low construal level can be more influential in goal pursuit. In the subsequent studies, we intend to examine the persuasiveness of messages focusing on different construal levels depending on goal progress. Different from our expectation, we did not find a mediating role of moods in the relationship between goal progress and construal level. This may suggest goal progress may expand individuals’ cognitive flexibility and thus increase construal level. We will elaborate on the underlying processes in subsequent studies.

**REFERENCES**


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**A Field Experiment on Control Deprivation and Compensatory Spending**

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Desire for control over the environment is a fundamental human motive (White, 1959). Violation of this need provokes distress that initiates efforts to reassert control (Skinner, 1996). Recent research has shown that people might compensate for their perceived lack of control through an increase in acquisition behaviors to feel a sense of ownership and control (Chen, Lee, & Yap, 2011). The current study extends this research by investigating whether control deprivation induced by a crowded supermarket could affect buying and spending behaviors similarly. Crowding in retail settings has been found to diminish one’s sense of control because it frustrates one’s shopping goals of moving freely and locating products (Langer & Saegart, 1977). Hence, we expected shoppers in a crowded (vs. uncrowded) store to buy and spend more.

Another goal of this experiment was to demonstrate that control restoration in the crowded store would attenuate these effects, thus strengthening our confidence that loss of control indeed drives increased purchasing behavior. In a study by Langer and Saegart (1977), participants given information about the psychological effects of being in crowded situations (e.g., physiological arousal) did not exhibit the same decrements on a simulated shopping task in a crowded store as those who were not given such information. The authors argued that information provision raises people’s control of the situation by allowing them to anticipate the onset of the stressor and to initiate cognitive preparation (see also Schmidt & Keating, 1979). In our experiment, a similar intervention was introduced to alleviate control deprivation caused by crowding. We predicted that giving shoppers information related to retail store environments (e.g., crowding) would reverse their tendency to buy and spend more in a crowded store.

**METHODOLOGY**

Regular shoppers were recruited during crowded and uncrowded periods at the entrance of a supermarket, and were given a $3-coupon for participating. Based on communication with the store, we were able to ascertain beforehand time intervals in the afternoon that were either crowded or uncrowded. Shoppers in crowded periods were randomly assigned to either receive or not receive any intervention before shopping. Those that received the intervention were given this information: “Research studies in the area of marketing have shown that retail store environments can influence consumers’ shopping behavior. Certain characteristics of a store like crowding for example can cause customers to shop differently.” Overall, there were three conditions: (a) uncrowded; (b) crowded and no information was given (no-info); and (c) crowded and information was given (info). All shoppers were told to redeem their coupons and answer a survey regarding their experiences.
after shopping. Eighteen shoppers did not redeem the coupon and were removed from the sample (non-redemption rates were equivalent across conditions). The final sample comprised 57 shoppers (22 males) between 18-70 years of age ($M=29.79; SD=15.79$).

RESULTS

To analyze the data, we conducted planned contrast tests comparing the crowded/no-info condition with the other two conditions. A contrast weight sequence of 2, -1, -1 was used for all outcome variables (sense of control, number of items bought, expenditure, and number of utilitarian items bought) across: the crowded/no-info, uncrowded, and crowded/info conditions (respectively). Crowded/no-info shoppers perceived lower control over their environment ($M=3.59; SD=2.06; n=17$) than uncrowded shoppers ($M=4.90; SD=1.25; n=20$) and crowded/info shoppers ($M=4.50; SD=1.67; n=20$), $t(54)=2.30, p<.05$. Therefore, crowding did reduce perceived control but this was prevented when shoppers received the information.

Support was obtained for our prediction that crowded/no-info shoppers would buy and spend more than shoppers in the other conditions. Crowded/no-info bought more items ($M=6.12; SD=5.72$) than uncrowded shoppers ($M=2.80; SD=1.58$) and crowded/info shoppers ($M=3.30; SD=1.81$), $t(54)=3.09, p<.005$. They also spent more money ($M=8.34; SD=15.49$) than uncrowded shoppers ($M=7.04; SD=4.62$) and crowded/info shoppers ($M=8.34; SD=5.14$), $t(54)=3.53, p<.005$. Two independent raters classified each product purchased by participants as "utilitarian", "hedonic", or "either utilitarian or hedonic" (Kappa=.72). For each participant, the quantity of items in each category was computed. Crowded/no-info shoppers bought significantly more utilitarian products ($M=4.12; SD=4.40$) than uncrowded shoppers ($M=1.55; SD=1.28$) and crowded/info shoppers ($M=1.90; SD=1.62$), $t(54)=3.07, p<.005$. The contrast test did not show any significant difference in number of hedonic products purchased, $p=.83$. Controlling for emotions and shopper characteristics (e.g., buying more because of long queues) did not alter the results.

DISCUSSION

Lacking control in crowded situations without an opportunity to restore it through information provision led shoppers to buy more and spend more. A finding by Chen et al. that control-deprived individuals tend to buy more utilitarian products was also replicated in this study. According to these authors, such products are typically viewed as means to certain ends, and thus help people feel that they are accomplishing some intended effect on the environment. In this experiment, shoppers who were not given the information bought more utilitarian products when the store was crowded. Shoppers in crowded situations who had the chance to regain it through information provision however resembled shoppers in the uncrowded situations in what they bought and spent. Hence, the current findings support our claim that control motivation underlies our effects.

Shopping opportunities in contemporary life makes buying a convenient channel for compensating for one's lack of control. While prudent use of this strategy may be helpful for control-deprived individuals, frequent employment may result in excessive spending. From a policy standpoint, shoppers should be informed that certain retail environments (e.g., crowding) can instill feelings of control loss that in turn may propel them to increase their purchasing.

REFERENCES


Should Santa Still Wear Red? Investigating the Effects of Color on Impulsive Buying Behavior

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Impulsiveness or impulsivity has long been extensively studied as a general trait by psychologists, educators and criminologists (Rook and Fisher 1995; Eysenck and McGurk 1980). Accordingly, to a large extent, impulsive buying behavior has been examined involving with long-term predisposed factors such as norms (Rook and Fisher 1995), cultural orientations (Kacen and Lee 2002), and fashion-involvement and lifestyle (Park et al., 2006). Scant research has empirically examined the environmental cue’s impact on consumers’ impulsive buying behavior. Also, large body of research on impulse buying has been studied in the developed western contexts. Attempting to fill the gaps in this area of consumer behavior, this research, contrast to prior research involving with predisposition factors, aims to examine the impact of brief exposure to color (blue vs. red) on impulsive buying behavior in China- a developing country recently with much transitions and many new international market experiences.

Color is ubiquitous in people’s life. And it influences human perception, cognition and behavior (Meth and Zhu 2009; Elliot et al 2007). As to research studying color topics, most of them have focused on “two of the three primary colors-red versus blue (green)” (P.1226, Meth and Zhu 2009). Elliot et al 2007 demonstrated that prior to an anagram test, participants briefly exposed to red performed worse than those briefly exposed to green. Meth and Zhu 2009 suggested that short exposure to red (versus blue) could enhance performance on detail-oriented (versus creative) cognitive tasks. Gorn et al 2004 found that participants who were exposed to the blue background screen perceived the page