

The Beauty of Boundaries: When and Why We Seek Structure in Consumption

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How do consumers cope when it seems that they have no control over their outcomes in life? This research posits that consumers will seek greater structure in consumption—or the sense that everything is in its designated place. Moreover, it suggests that very simple boundaries in the environment offer a means for attaining this sense of structure. Several experiments demonstrate that when personal control is threatened, consumers prefer logos, products and environments that are tangibly or intangibly bounded over those that are unbounded. This research also explores the functional and symbolic benefits that boundaries provide as representations of order and structure.

The terrorist attacks in the U.S. on September 11th, 2001 shocked and horrified the nation. In the weeks and months following the attacks, people faced a heightened awareness of their vulnerability and lack of control over outcomes in life (Schuster et al. 2001). To cope, they heightened support for the government (Willer 2004), held tighter to religious beliefs (Schuster et al. 2001; Smith, Rasinski, and Toce 2001) and increased spending on consumer goods (Zuckerman 2002). Interestingly, these attempts to re-establish a sense of order were accompanied by a perceived (if not actual) change in products that were introduced (Nussbaum 2002). Specifically, it has been suggested that America's reaction to its vulnerable state was reflected in a shift away from visually open, flexible, and translucent products to the more structured and tightly bounded products (with their sharp edges, tight corners and opaque packages) that captured design awards and accolades in the year that followed (Nussbaum 2002).

Such an observation is purely speculative; yet the idea that we seek structure in consumption (i.e., “structured consumption”) as a means of dealing with low feelings of personal control may provide powerful insight into our choices. The notion that such structure may be found in the simple elements of our surroundings is particularly intriguing. Thus, this research asks how visual aspects of the environment serve individuals' psychological needs and influence their consumption choices. Are there certain aspects of the environment that provide the sense of order and structure that consumers need when feelings of control have been shattered?

I specifically focus on how consumers' desire for “structured consumption” results in enhanced preferences for boundaries in their environment when personal control is threatened. Such boundaries can include the tangible aspects of products, such as the frame surrounding a painting, a fence circling a house, or a prominent border surrounding a firm's logo. However, boundaries can also be intangible, such as when a distinct place is identified for a given object

and is differentiated from that of others without the presence of a physical border. For example, organized environments (i.e., space that is designed such that everything has its place) reflect the presence of strong intangible boundaries. When people experience a threat to personal control, they are likely to desire the sense of order and structure that such boundaries provide.

In what follows, I review why threats to personal control should result in heightened needs for structured consumption and why this manifests itself in a desire for boundaries. I then present seven studies that support this idea. I also begin to explore the functional and symbolic benefits that arise from seeking structure through boundaries. Overall, this research provides an important example of how individuals' psychological needs and the elements of their physical environment jointly influence product choices. More specifically, it introduces the notion that consumers seek structured consumption as a means of coping with fragile perceptions of control and demonstrates that the desire for such structure often results in a preference for boundaries.

THE DESIRE FOR STRUCTURE

A belief that the world is governed by nothing more than chaos and that outcomes are randomly determined is one that most people would never accept. Researchers have discovered that individuals are strongly motivated to avoid such beliefs; perceiving the world as random would be too psychologically stressful and anxiety-provoking (Antonovsky 1979; Janoff-Bulman 1992; Kruglanski 1989; Pennebaker and Stone 2004). Some of this anxiety is likely to originate from the difficult questions that would arise if individuals were to accept a world of randomness. For example, if the world is random, how can it be just and meaningful (Antonovsky 1979; Janoff-Bulman 1992; Lerner 1980; Thompson et al. 2001)? How would we manage to interpret,

predict and explain outcomes in our lives (Landau et al. 2004)? Would it ever be possible to know what we should approach and avoid in the environment (Landau et al. 2004; Thompson et al. 2001)?

To avoid feeling as if the outcomes in their lives are randomly determined, individuals often choose to believe instead that they have personal control over their lives. In other words, they believe that they can intentionally produce desired outcomes and prevent undesired ones (Skinner, Chapman, and Baltes 1988). This belief essentially renders randomness a non-issue in their lives. It makes sense then that researchers consider the motivation to believe that one is in control a sub-goal of the broader motivation to defend against fears of randomness and chaos in the world (Kay et al. 2008). Given this important role of personal control (as well as the many other benefits that personal control offers), it is often considered to be a basic human need (Kelly 1955; Lefcourt 1973; White 1959). Accordingly, individuals generally maintain high, overly optimistic perceptions of their control, very often believing they have control in completely random situations (e.g., Alloy and Abramson 1979; Langer 1975; Taylor and Brown 1988).

Considering the importance of personal control, particularly as an antidote to feelings of randomness and chaos in the world, how do people respond when their perceptions of control are threatened? Research has shown that people are quite adept at recruiting other means for perceiving a world of order and structure. For example, people strengthen their beliefs in a controlling God, provide greater support for their government, and even force themselves to see patterns in random noise when personal control is threatened (Kay et al. 2008; Whitson and Galinsky 2008), all in an attempt to bring a sense of order and structure to their lives.

Structured Consumption through Boundaries

In what follows, I argue and demonstrate that one interesting way that people respond to threats to personal control is by seeking order and structure in their consumption environments and choices, or “structured consumption.” In seeking structured consumption individuals desire to feel as if all aspects related to consumption (e.g., beliefs, choices, emotions, environments, etc.) fit within clearly designated mental or physical spaces and are not randomly or chaotically determined. People may seek such structured consumption through a variety of techniques. For example, one way to maintain a sense of order and structure is by sticking to familiar and predictable goods and products—where outcomes are known and therefore should not feel random or chaotic. I suggest that an additional and intriguing means towards achieving a sense of “structured consumption” involves seeking boundaries in one’s physical environment.

I posit that boundaries, by their very nature, dictate where things belong and consequently represent the establishment of order and structure in the environment. The role of boundaries might be colloquially paraphrased as providing a sense that “there’s a place for everything and everything is in its place.” Preliminary evidence for this role of boundaries in the physical environment can be found in prior research and suggests that boundaries can be broadly characterized as tangible or intangible in form.

Tangible Boundaries. Tangible boundaries refer to visual borders that separate and contain a focal object. While research on such boundaries is scant, what does exist suggests that tangible boundaries are important tools for containing objects in a given space and may therefore be important for establishing order and structure. Perhaps the most basic boundary in any given space is the boundary represented by one’s body and skin. Burris and Rempel (2004) discuss how a bodily boundary allows individuals to make sense of the world and provides perspective

on where things belong with respect to one's self. Similarly, psychiatric research (Hartmann 1991) suggests that some people chronically contain and protect the self with 'thick' boundaries, preferring to be surrounded by items such as thick, solid clothing and heavy walls and doors.

Other tangible boundaries also provide a meaningful sense of where things belong or are contained. For example, Myrseth and Fishbach (2009) argue that when individuals see lines separating the dates on a calendar, they think of their behaviors as being contained to an isolated, defined space. Consequently, conflicts with self-control goals are less salient. Focusing more on the boundaries that surround individuals in a given space, Levav and Zhu (2009) and Meyers-Levy and Zhu (2007) have demonstrated that basic boundaries such as aisle width and ceiling height, respectively, can instigate feelings of containment and impact consumption choices and decision processes (i.e., variety-seeking and item-specific vs. relational processing). In the context of larger societal designs, Newman (1972) has argued that boundaries are critical in influencing who enters a space, what they do while they are there and the overall sense of order and civility in neighborhoods. Thus, from highly individualized boundaries such as skin to the broad boundaries that exist in the world around us, tangible boundaries seem to have a meaningful role in establishing the sense of structure that one might perceive in a given space.

Intangible Boundaries. Intangible boundaries in one's environment can be viewed as invisible borders that separate and contain focal objects within their designated spaces. For example, the borders between countries or other geographical areas are often invisible lines, yet they are important in providing a sense of separation and structure (Burris and Branscombe 2005). Intangible boundaries are particularly meaningful for consumers in the spaces in which they live, work and shop. A space in which objects all occupy a seemingly well-defined and deliberate place without the aid of explicit borders is one that reflects strong intangible

boundaries. Evidence suggests that the presence or absence of such boundaries (often discussed as the lack of or presence of clutter) in one's environment affects well-being and provides meaningful signals to the self (Cwerner and Metcalfe 2003; Ger and Yencioğlu 2004). For example, Belk et al. (2007) have demonstrated that a physically disorganized home (i.e., a lack of intangible boundaries) means a disorganized life and a chaotic sense of self. They found that consumers feel better about themselves and their environment after at least partially de-cluttering their homes. Thus, intangible boundaries, like tangible boundaries, can provide meaningful signals of structure in one's life.

Functional and Symbolic Value of Boundaries

By identifying "where things belong," boundaries may serve two important functions. First, they may allow individuals to focus better on the important elements of their environment. For example, the frame around a painting serves as an immediate cue to focus on the content within the boundary. Researchers have argued that boundaries (even intangible ones) provide mental starting and stopping points that ease our ability to process the elements in a given space (Burriss and Branscombe 2005). Further, research on visual perception and retinal processing suggests that edges and boundaries are how our eyes begin to dictate what belongs together and what does not (Palmer and Rock 1994), making it possible to make sense of our environment. As a second function, boundaries may serve as symbolic reminders that the things in one's life are not randomly or chaotically determined. In other words, the fear of randomness may be reduced when individuals see that the things around them are in a designated place.

Overview of Experiments

I posit that when feelings of personal control are threatened, individuals have a desire for greater order and structure in consumption (i.e., structured consumption) that is often manifested as an enhanced preference for boundaries. In what follows, I first seek to demonstrate the basic relationship between feelings of control and the preference for boundaries (Studies 1 and 2). I then illustrate how this preference for boundaries exists across both tangible and intangible boundaries and is related to an overall desire for structure (Studies 3 and 4). In the remaining studies I begin to explore why boundaries are so valuable. I focus first on the functional benefits that boundaries provide (Study 5) and then the more symbolic benefits (Studies 6 and 7).

STUDY 1: SILENCE IS GOLDEN

In Study 1, I aim to demonstrate that when individuals find themselves in situations of low (vs. high) personal control, they are more likely to seek boundaries in their environment. To manipulate feelings of control, I leverage a classic noise manipulation that has been used to reliably manipulate control while holding constant the actual noise that participants experience across conditions, as well as levels of arousal and esteem (e.g., Glass, Singer, and Friedman 1969; Pennebaker et al. 1977). To measure preferences for boundaries, I ask participants to make a real choice between a “bounded” and an “unbounded” postcard.

Method

Participants and Procedure. Forty undergraduate students were recruited at a U.S. university and were told that they would be participating in a study designed to understand cognitive performance in the face of distraction. Participants arrived at the lab one at a time and were directed to a small room in which they were asked to answer several two-digit addition and subtraction problems. While solving the math problems, participants listened to the sounds of emergency sirens, car alarms, and shrill whistles blaring at 100 decibels from speakers located less than three feet away from their seats. (To have a better sense for what this means, imagine turning your personal stereo up to its maximum volume and standing directly in front of it, or working with the saws and other power tools inside your garage). Half of the participants were assigned to a high control condition. They were given a remote and informed that “some participants press the button to terminate the noise, and while we prefer that you do not, it is totally up to you whether you press the button or not.” Remaining participants were assigned to the low control condition. They never saw the remote, and the possibility of terminating the noise was never mentioned. (In both conditions, the experimenter turned the noise on and off). After listening to the noise, participants completed a manipulation check question (Glass et al. 1969; Pennebaker et al. 1977) regarding their perceived ability to control the noise in the study (where 1 = no ability and 7 = complete ability). They were also asked how difficult it was to concentrate on the math problems (where 1 = not at all difficult and 7 = very difficult). After listening to the noise, participants chose a postcard as “thanks” for their participation. The two postcard options featured a water lily garden on campus. The primary difference between the postcards was whether a boundary was present or not. One postcard had a black border framing the picture and the other did not. The postcards were presented side-by-side and the location of each was randomly determined during the course of the experiment. A pre-test among 31

participants revealed no significant differences among the two post-cards before the border was added to one of them on measures such as liking ($t(30) = -1.15, p = .26$), attractiveness ($t(30) = -1.04, p = .30$), or perceptions of structure ($t(30) = -.70, p = .49$). (The order of these comparisons reflects ratings for the postcard that was never bounded subtracted from ratings for the postcard that was subsequently bounded). The dependent variable was the choice of bounded vs. unbounded postcard. Finally, in this and the remaining studies, participants completed demographic measures and were probed for suspicion. Participants were unable to correctly guess the studies' hypotheses.

Results and Discussion

Manipulation Check. The manipulation check confirmed that participants in the low control (lc) condition believed they had lower ability to control the noise than participants in the high control (hc) condition ($F(1, 38) = 5.13, p = .03, M_{lc} = 2.64, M_{hc} = 4.25$). Importantly and consistent with prior research (Glass et al. 1969; Pennebaker et al. 1977), although individuals in the high control condition believed that they had more control over the noise, they never exercised their control by terminating the noise. Interestingly, participants in the low control condition reported only directional differences regarding difficulty concentrating on the math problems relative to the high control participants ($F(1, 38) = .48, p = .49, M_{lc} = 4.0, M_{hc} = 3.6$), yet they performed significantly worse ($F(1, 38) = 5.32, p = .03, M_{lc} = 179, M_{hc} = 212$).

Results and Discussion. A logistic regression analysis was conducted to test the main hypothesis for this study—that individuals who did not have control over the noise would be more likely to choose the bounded logos than individuals who did have control. The analyses

supported this prediction ($\chi^2 = 3.96, p = .04; M_{lc} = 61\%, M_{hc} = 25\%$). Even after controlling for differences in performance on the math problems across the two noise conditions, the effect of control on the postcard preferences remained significant ($\chi^2 = 3.78, p = .05$). Thus, Study 1 supports the notion that low feelings of control instigate a desire for boundaries. Study 2 is designed to build on this finding in several ways.

STUDY 2: LUCKY DRAW

In Study 2, I first seek to replicate the findings of Study 1 with a new dependent variable (i.e., company and brand logos). Second, I aim to demonstrate that low personal control enhances the desire for boundaries relative to our normal state (as opposed to high personal control dampening it). The key to this hypothesis is the recognition that a high perception of personal control is most often individuals' baseline state. In other words, high control manipulations should generally reflect individuals' normal psychological state (in non-depressed populations). As mentioned previously, research has demonstrated that individuals generally maintain high perceptions of personal control, even in situations where outcomes are totally random (e.g., Alloy and Abramson 1979; Langer 1975). To illustrate this point, Study 2 includes a "baseline condition" that does not mention personal control. The expectation is that this baseline condition will drive behavior in a manner that is consistent with high control.

The final goal of Study 2 is to demonstrate that low feelings of control will lead to a desire for structure through boundaries even in positive contexts. As Kay et al. (2008) articulate, any event that serves to lower feelings of personal control should lead to compensatory processes.

In other words, in both positive and negative situations a lack of control should instigate a concern about randomness and the realization that anything could happen.

Method

Participants and Procedure. Fifty-nine participants were recruited online and assigned to one of three personal control conditions. In the low personal control condition, participants wrote about “something positive that happened to you in the past few months that was NOT because of something that you did.” In the high personal control condition, participants wrote about “something positive that happened to you in the past few months that was because of something that you did.” These two manipulations have been used previously to manipulate feelings of personal control without affecting general mood states (Kay et al. 2008). Finally, to provide a baseline reference point, the participants in the neutral condition wrote about “a movie or television show that you saw and enjoyed in the past few months.” This allowed individuals to write about a positive experience without priming issues of control.

Participants were then asked to choose which logos they preferred in each of 10 pairs of bounded versus unbounded logos (see Appendix). Ten additional pairs of logos that did not differ with respect to boundaries were included as fillers. Each pair of logos was presented in random order. Moreover, in the pairings of bounded versus unbounded logos, the bounded logo was presented on the left in half of the cases and on the right in the remaining cases.

Results

Pre-test. A pre-test was conducted to confirm that the manipulation of control influenced individuals' feelings of control, but not overall positive or negative mood. Sixty participants were recruited online and completed either the low control, neutral, or high control essay described previously. Participants were then asked to answer several manipulation check questions regarding their perceptions of personal control (Kay et al. 2008; Lachman and Weaver 1998). Specifically, participants were asked to rate their agreement with the following on a 7-point likert scale: The events in my life are mainly determined by my own actions; I am not in control of most things that occur in my life; Whether or not I am able to get what I want is in my own hands; What happens to me in the future mostly depends on me; What happens in my life is often beyond my control. Next, participants completed the brief PANAS scale (Watson, Clark, and Tellegen 1988).

As expected, participants in the low control condition reported lower feelings of control than participants in the neutral or high control conditions ($F(2, 57) = 4.74, p = .01; M_{lc} = 4.44, M_{nc} = 5.20, M_{hc} = 5.40$). The low control condition was different from both the neutral condition ($F(1, 57) = 6.25, p = .02$) and the high control condition ($F(1, 57) = 7.46, p = .01$). The neutral and high control conditions did not differ from one another ($F(1, 57) = .34, p = .56$), supporting the notion that an individual's baseline state is one of relatively high control. Positive ($F(2, 57) = 1.19, p = .31$) and negative moods ($F(2, 57) = 1.42, p = .25$) were not affected.

Results and Discussion. A repeated measures logistic regression analysis was conducted to test the hypothesis that when personal control is threatened, individuals are more likely to choose bounded logos than when personal control is not threatened. The predictors were the three personal control conditions. The dependent variable was the choice of bounded logo versus unbounded logo in each of the 10 pairs of choices. The results revealed a simple main effect of

condition whereby the low personal control condition resulted in the choice of more bounded logos than both the neutral condition ($Z = -2.16, p = .03, M_{lc} = 74\%, M_{nc} = 60\%$) and the high control condition ($Z = -2.91, p < .01, M_{lc} = 74\%, M_{hc} = 55\%$). The difference between the neutral and high control conditions was not significant ($Z = -.72, p = .47$).

Thus, consistent with Study 1, Study 2 demonstrates that when personal control is threatened, individuals prefer logos with boundaries over those without such boundaries. This is true even though individuals were in a positively-valenced situation. Moreover, this study emphasizes that the results are driven by individuals' low feelings of control. Baseline feelings of control are relatively high and follow patterns consistent with high control feelings.

STUDY 3: STRUCTURED BY DESIGN

Having demonstrated the basic relationship between feelings of control and individuals' desire for boundaries, I sought to provide initial support for the idea that a desire for structure underlies individuals' preferences for boundaries in the environment. One way to do so is to demonstrate that individuals' chronic needs for structure are related to their desire for boundaries. A chronic need for structure refers to the extent to which people regularly desire simple structure in their lives (Neuberg and Newsom 1993; Thompson et al. 2001). The scale designed to capture the essence of this construct includes questions such as "I enjoy having a clear and structured mode of life," "I like to have a place for everything and everything in its place." If low feelings of control lead to a greater preference for boundaries because of an enhanced need for structure, then we should find that individuals with high chronic needs for structure have a greater preference for boundaries at baseline than individuals without such needs for structure. To test

this hypothesis, two separate samples were recruited and the relationship between their chronic needs for structure and their preferences for different types of boundaries was analyzed.

Sample 1. Twenty-five adults recruited online were asked to complete the Personal Need for Structure scale ($\alpha = .81$). Participants then saw the painting, *The Great Wave Off Kanagawa* by Hokusai in two slightly different forms, side-by-side. In one form, the painting appeared with a clear wooden frame around it. In the second form, the painting appeared with its canvas wrapped around the sides and was unframed (Appendix). The position of each painting (left vs. right) was randomly determined for each participant. Participants then indicated which of the two paintings they preferred. Pre-testing indicated that these paintings differed in perceptions of structure, but not other measures such as quality, price or attractiveness. Using logistic regression, the choice of bounded versus unbounded painting was regressed on the continuous need for structure measure. As expected, analyses revealed that the higher a consumer's need for structure, the more likely he was to choose bounded products ($\chi^2 = 4.15, p = .04$).

Sample 2. In this second sample, 28 adults were recruited online and asked to complete the same Personal Need for Structure scale ($\alpha = .80$). They then indicated their preferences for a new measure of boundaries. Participants chose between items that can be characterized as tangibly bounded or not (e.g., a picture with a frame vs. no frame, a house surrounded by a fence vs. no fence; see example in Appendix). Specifically, participants chose one item in each of six pairs of items where one item in each pair was bounded and the other was not. The pairs of items were presented in random order and in half the cases the bounded object was presented on the left side, and in half it was presented on the right. Pre-testing indicated that these items differed in perceptions of structure, but not other measures such as quality, price or attractiveness. Using repeated measures logistic regression, the choice of bounded versus unbounded items was

regressed on the continuous need for structure measure. The analyses again revealed that the higher a consumer's chronic need for structure, the more likely he/she was to choose bounded products ($Z = 1.96, p = .05$).

In sum, these two brief inquiries demonstrate that there is a basic relationship between individuals' needs for structure and their preferences for boundaries. Moreover, they begin to expand the notion of boundaries beyond simple borders around a picture to the tangible walls, frames and dividers that we see in products all around us. Study 4 expands the notion of boundaries even further.

STUDY 4: A PLACE FOR EVERYTHING & EVERYTHING IN ITS PLACE

Each of the studies thus far have focused on how low feelings of personal control lead to a preference for tangible boundaries that surround the products and designs that we encounter in our environments. However, the idea that people seek boundaries when control is low can be construed much more broadly. When feelings of control are low, individuals should not only prefer that individual items be bounded (e.g., products, logos, etc.), but should also prefer that their *environments* be bounded. Specifically, they should seek environments wherein intangible boundaries dictate where things belong and keep things "in place." In other words, people should assign greater value to being in very structured, organized environments when their feelings of personal control are low relative to when such feelings are high. As it pertains to retail environments, when personal control is low, individuals should be more willing to buy products when they are in an environment that provides the structure that they desire. To test this idea, I manipulate feelings of personal control and manipulate a shopping environment to

reflect the presence of strong intangible boundaries (i.e., a very organized environment) or weak intangible boundaries (i.e., a very disorganized environment).

Method

Participants and Procedure. Eighty-five students were recruited to participate in the study. Upon arriving at the lab (one at a time), half of the participants were asked to write about a threatening experience in which they were not in control of the outcome (low control condition) and half were asked to write about a threatening experience in which they were in control of the outcome (high control condition) (e.g., Whitson and Galinsky 2008). They were then asked to shop in a mock convenience store in the consumer psychology lab. Participants were told that the lab manager was considering opening the store for retail and wanted to gauge students' interest in the concept and understand the types of products that they would be interested in buying. To stimulate their interest and encourage realistic choices, participants were told that the store's items were highly discounted and that ~30% of people (randomly determined) would be able to buy their basket of items at the end of the study. Participants were randomly assigned to shop in the store when it was in a bounded (organized) state or an unbounded (disorganized) state. In the unbounded state of the store, products were scattered along the shelves in a manner such that nothing appeared to be in "its place." In the bounded state of the store, everything was shelved in a way such that each item seemed to occupy a clearly designated place. Thus, the study had a 2 (control condition: low vs. high) x 2 (store design: bounded vs. unbounded).

The products in the store were exactly the same in both the bounded and unbounded states of the store, chosen based on the selection at a campus convenience (e.g., soft drinks,

snacks, school supplies, DVDs, school paraphernalia). After shopping and collecting their selections in a shopping basket, participants reported their selections on a computer. Next, to ensure that the predicted interaction pattern could not be attributed to factors other than the value that consumers place on order and structure when personal control is threatened, participants rated several aspects of the store (product quality, store variety, store organization, store atmosphere, product prices, ease of finding things, convenience of location, and effort of the store's management) on seven-point scales (where 1 = very bad and 7 = very good). They also rated the importance of each aspect (where 1 = not at all important and 7 = very important).

Results

Pre-test. A pre-test was run to ensure that the manipulation was successful in impacting feelings of control. Twenty-four participants were recruited from the same population as the main study and assigned to complete either the low control or high control essay. Participants were then asked to answer the manipulation check questions outlined in Study 2 and the brief PANAS scale (Watson et al. 1988). As expected, participants in the low control condition reported lower feelings of control than participants in the high control condition ($F(1, 22) = 5.01$, $p = .04$; $M_{lc} = 4.04$, $M_{hc} = 4.73$). Positive mood ($F(1, 22) = 1.05$, $p = .32$) and negative mood ($F(1, 22) = 1.10$, $p = .31$) were unaffected.

Main Results. In the main study, the main effect of control condition was not significant ($F(1, 81) = 1.56$, $p = .22$), but a main effect of store design condition emerged ($F(1, 81) = 16.65$, $p = .0001$). Individuals were more likely to buy items in the bounded (organized) store. This effect was qualified by a significant interaction of the control and store design conditions ($F(1,$

81) = 4.16, $p = .05$). Individuals in the low control condition chose more items in the bounded store than the unbounded store ($F(1, 81) = 14.30, p = .0003; M_{lc/bounded} = 9.45, M_{lc/unbounded} = 3.60$), whereas high control participants did not ($F(1, 81) = 3.02, p = .09; M_{hc/bounded} = 6.31, M_{hc/unbounded} = 4.36$). Moreover, low control participants chose more than high control participants in the bounded store ($F(1, 81) = 4.50, p = .04$), but not in the unbounded store ($F(1, 81) = .39, p = .53$).

Next, I analyzed how the personal control and store design manipulations impacted individuals' ratings on the store characteristics noted previously. As expected, when the store was unbounded, individuals rated it more poorly on a number of aspects (store variety, organization, store atmosphere, ease of finding things, convenience, and management effort). Importantly, the personal control manipulation did not impact these measures, nor did the interaction of personal control and store design. In other words, low feelings of personal control did not cause individuals to see the store differently. However, when asked how *important* each of these elements was, a main effect of the personal control manipulation on the importance of order and structure (i.e., measured by an index of importance ratings for organization, atmosphere, and effort required to find things) emerged ($\alpha = .75; F(1, 81) = 4.26, p = .04, M_{lc} = 5.25, M_{hc} = 4.82$). Individuals did not differ in their ratings of importance for other measures based on the personal control and store design manipulations or their interaction.

Discussion

Study 4 demonstrates that boundaries are not only important as tools of structure when they are tangible entities surrounding individual products, but also when they serve as intangible

elements in the environment. Individuals in the low control conditions were more likely to value order and structure in the environment. Consequently, when participants in the low control condition were assigned to shop in a bounded store, they were much more likely to buy products than when they were assigned to shop in an unbounded store.

STUDY 5: ART OF ATTENTION

The studies discussed thus far have shown that when feelings of control are low, people are more likely to seek structure through boundaries in their environment. The question remains, however, as to exactly how such boundaries are helpful. Do they provide a real functional sense of structure or is it merely symbolic? Study 5 explores the possibility that boundaries provide meaningful functional benefits. (Studies 6 and 7 will explore symbolic benefits).

The functional benefit of boundaries revolves around their ability to help individuals narrow in and focus on the key elements in their environment. When feelings of control are low (versus high), this benefit is particularly valued because individuals are likely to realize that they are in a vulnerable state. If they are unable to control the events of their lives, then anything can happen to them. It therefore becomes pertinent that they pay close attention to all of the things around them. Consequently, they are likely to feel overwhelmed by the number of things to which they need to pay attention. This can be described as a state of attentional or stimulus overload, and is often defined as a state in which demands on attention exceed capacity (Cohen 1978; Milgram 1974). This feeling of attentional overload is likely generated in part by feelings of anxiety and the fear of a vast sea of possible outcomes, but is also likely to generate anxiety as individuals come to understand their limited ability to process everything in the environment. In

other words, although general mood is not affected, an enhanced sense of anxiety may emerge when thinking about one's lack of control. The notion of a bi-directional relationship between states of overload and feelings of anxiety is indeed consistent with prior theorizing (Kahneman 1973). When individuals are in such a state they should be more motivated to try to deal with feelings of overload by employing tactics that make it easier to focus on critical things and filter out the non-critical things in their environment (e.g., Cohen 1978).

Boundaries may help individuals attain the focus they need in the face of overload. As mentioned, research suggests that boundaries provide mental starting and stopping points that ease our ability to process the elements in a given space (Burriss and Branscombe 2005) and dictate how we make sense of our surroundings (Palmer and Rock 1994). In this study, I test the notion that lower feelings of control lead to feelings of overload and such overload enhances individuals' desire for boundaries. To do so, I manipulate feelings of control and measure individuals' feelings of attentional overload. Moreover, given that feelings of overload are likely to influence and be influenced by feelings of anxiety (Kahneman 1973), anxiety is also measured. I then assess preferences for boundaries. A post-choice measure is also taken to get a better understanding of the benefits that individuals will (consciously) ascribe to boundaries.

Method

Participants and Procedure. Seventy-four participants were recruited online and randomly assigned to complete either the low control, neutral or high control manipulation described in Study 2, followed by the manipulation check questions. Participants were then asked how their level of control makes them feel. Specifically, they were asked to indicate their

current feelings of control impacted their sense of attentional overload ($\alpha = .84$) using the following words on a scale from 1 (very slightly or not at all) to 5 (extremely): overwhelmed, focused (r), scattered, distracted, confused and preoccupied. They were also asked to describe the degree to which their feelings of control made them feel anxious using the following adjectives on the same scale ($\alpha = .88$): comfortable (r), relaxed (r), calm (r), anxious, worried and tense. The attentional overload and anxiety words were asked within the same set of questions in random order. After completing these measures, participants were asked to indicate which of two paintings they preferred (Appendix). The paintings both depicted *The Great Wave off Kanagawa* by Hokusai. However, as described in the first sample of Study 3, one was bounded while the other was not. The paintings were shown side-by-side and the location of each painting (left vs. right) was randomly determined. After making their choice, participants were asked to indicate how their choice would make them feel. They were then asked to rate several positive and negative words from the PANAS scale (excited, strong, enthusiastic, proud, inspired, active, angry, guilty, ashamed, hostile, irritable, sad) (Watson et al. 1988) in addition to being asked the attentional overload and anxiety questions once more.

Results

Manipulation Check. The analysis revealed a significant main effect of condition on personal control ratings ($F(2, 71) = 3.90, p = .02$); $M_{lc} = 4.36, M_{nc} = 4.98, M_{hc} = 5.06$. Low control differed from both neutral ($F(1, 71) = 5.85, p = .02$) and high control conditions ($F(1, 71) = 6.10, p = .02$). But, the neutral and high control conditions did not differ from one another ($F(1, 71) = .11, p = .74$). The neutral and high control conditions are therefore pooled for the

discussions that follow and referred to as the “baseline condition (bc).” (The pattern of results for the two conditions does not differ for any of the results below when analyzed separately).

Attentional Overload and Anxiety. The analyses revealed a significant main effect of condition on attentional overload ratings ($F(1, 71) = 6.19, p = .02$). Individuals in the low control condition reported greater feelings of overload ($M_{lc} = 2.51$) than those in the baseline condition ($M_{bc} = 1.98$). The analysis also revealed a significant main effect of condition on anxiety ratings ($F(1, 72) = 7.69, p = .01$). As expected, individuals in the low control condition reported greater anxiety ($M_{lc} = 3.56$) than those in the baseline condition ($M_{bc} = 2.95$).

Dependent Variable. A logistic regression analysis, controlling for age and gender, indicated that the control manipulation had a significant effect on the choice of painting. Individuals in the low control condition were more likely to choose the bounded painting than individuals in the baseline condition ($\chi^2 = 5.06, p = .02, M_{lc} = 76\%, M_{bc} = 46\%$).

Next, I explored whether this relationship between feelings of control and preferences for boundaries exists because individuals in a low control state feel overloaded and want help focusing on what is critical in the environment or because of a more general sense of anxiety. In other words, which of the two is most likely to be the specific predecessor to the preference for boundaries? The hypothesis is that boundaries respond most directly to individuals’ desire to focus on the elements of the environment. Thus, a tight relationship should exist between feelings of overload and preferences for boundaries. To test this hypothesis, a mediation model was conducted to analyze the effect of control on preferences for boundaries while simultaneously accounting for attentional overload and anxiety in the model. The model supports the hypothesis that feelings of attentional overload are what most directly impact preferences for boundaries. The indirect effect of control on the painting choice through

attentional overload is significant (mean estimate = $-.65$) and the 95% confidence interval excludes zero ($-1.93, -.06$) after 5,000 bootstrap estimates. The direct effect of feelings of control on painting choice becomes (marginally) non-significant, suggesting a pattern of full mediation. The mediation pattern for anxiety was not significant.

-----INSERT FIGURE 1 ABOUT HERE-----

As the final set of analyses for Study 5, participants were asked to predict how their choice would make them feel if they were to buy the painting. The key research question was whether individuals who chose the bounded painting would report lower feelings of overload than those who chose the unbounded painting, particularly in the low control condition where the value of structure though boundaries should be the greatest. The design in question is therefore a 2 (control condition: low vs. baseline) x 2 (painting choice: bounded or unbounded).

The results revealed a main effect of painting choice on attentional overload ratings. Those who chose the painting with the boundary had lower ratings of overload post-choice than those who chose the painting without the boundary ($F(1, 68) = 6.87, p = .01, M_{\text{bounded}} = 1.89$ vs. $M_{\text{unbounded}} = 2.29$). No effect of control condition existed on overload, but a significant interaction of control condition and painting choice emerged ($F(1, 68) = 3.87, p = .05$). Probing this interaction revealed a significant contrast within the low control condition between individuals who chose the bounded painting ($M = 1.71$) and those who chose the unbounded painting on feelings of overload ($M = 2.60$); $F(1, 68) = 7.85, p = .01$). The remaining contrasts were not significant. Moreover, no main effects or interactions existed with respect to individuals' thoughts about their feelings of anxiety, negative emotions more generally, or

positive emotions, suggesting that while individuals may have recognized the functional benefits of choosing boundaries, they were unable to recognize or chose not to report any deeper emotional benefits.

Discussion

Study 5 suggests that boundaries provide functional benefits to consumers when their feelings of control are low. Individuals with low feelings of control reported feeling greater attentional overload and this led to enhanced preferences for a bounded painting. Moreover, participants who chose such bounded paintings reported that they expected their choice to help reduce feelings of overload more than individuals who chose the unbounded painting.

STUDY 6: LET GO AND LET GOD

As alluded to previously, individuals often turn to religious beliefs to help them cope when feelings of control are threatened. For example, secondary data suggest that in times of economic, social and political turmoil, presumably the times when perceptions of personal control are lowest, individuals turn to more authoritarian churches (McCann 1999; Sales 1972). More recently, Aaron Kay and colleagues have demonstrated that threats to personal control enhance individuals' beliefs in a controlling God (Kay et al. 2008; Laurin, Kay, and Moscovitch 2008) and that instigating thoughts of randomness increases support for supernatural sources of control, such as God or Karma (Kay, Moscovitch, and Laurin 2010). In other words, when control is low and fears of a random world are most likely to surface, individuals seek comfort in

religion (Kay et al. 2010). It seems that the existence and power of God is their signal that the world is not random. But, what if people do not have a strong belief in God and cannot rely on him/her to symbolize a world that is not random? Such individuals are likely to look for other symbols around them to provide clues that there is order and structure in the world and for the psychological comfort that might have otherwise been provided through religion. Boundaries, by representing a state in which things are in “their place” may provide the needed symbolism and psychological comfort. If in fact religion and boundaries offer substitutable forms of psychological comfort by symbolizing a world that is not chaotic and random, we should find that non-religious people choose more boundaries when personal control is threatened, but highly religious people will not. This is because the high control people will turn to God as their symbol of structure instead. Study 6 is designed to test this hypothesis.

Method

Participants and Procedure. Ninety-nine participants were recruited online and asked to complete the Religious Commitment Inventory-10 (Worthington et al. 2003). This 10-item scale is designed to assess the degree to which a person adheres to his or her religious values, beliefs and practices and uses them in daily living (e.g., “My religious beliefs lie behind my whole approach to life,” where 1 = not at all true of me and 5 = totally true of me; $\alpha = .97$). Next, participants were randomly assigned to one of two conditions: either the low personal control or the high personal control condition first presented in Study 2. Participants were then asked to complete the manipulation check questions outlined in Study 2. Participants then chose which

product they preferred in a series of six product pairs where one product in each pair was bounded and the other was unbounded (Appendix).

Results

Manipulation Check. The analyses revealed a main effect of condition on personal control ratings ($F(1, 95) = 3.89, p = .05, M_{lc} = 4.79, M_{hc} = 5.19$). The analyses also revealed a marginal main effect of religiosity ($F(1, 95) = 3.71, p = .06$), whereby feelings of personal control and religiosity were negatively correlated. The interaction of religiosity and personal control condition was not significant ($F(1, 95) = 1.63, p = .20$). These results suggest that low and high control participants both experienced the threats to personal control. In other words, believing in God did not make individuals immune to threats to personal control.

Main Results. The primary goal of Study 6 was to test the prediction that people who are low in religiosity choose more bounded products when personal control is threatened than when it is not threatened. Unable to rely on the psychological comfort of religion, they are expected to seek such benefits through consumption choices. Individuals who are high in religiosity are not expected to respond through their choices. To test this hypothesis, a repeated measures logistic regression analysis was conducted with personal control condition and the continuous measure of religiosity as the predictors. The choice of bounded versus unbounded products in each of six pairs of choices was the dependent variable. Gender and age were included as covariates.

Analyses revealed a main effect of condition ($Z = -2.78, p = .01$), where individuals in the low control condition were more likely to choose the bounded products. The effect for religiosity was not significant ($Z = -.15, p = .88$). As expected, a significant interaction of

personal control condition and the religiosity measure emerged ($Z = 2.25, p = .02$). As religiosity is a continuous measure, the analyses were repeated at one standard deviation below and above the centered mean of the religiosity measure (Aiken and West (Aiken and West 1991). The analysis revealed a significant simple effect of condition among individuals who were low in religiosity ($Z = -3.55, p < .001$). Low religiosity individuals chose more bounded products when personal control was threatened ($M_{lc} = 41.88\%$) than when it was not ($M_{hc} = 21.17\%$). However, as anticipated, the effect of condition was not significant among high religiosity individuals ($Z = .56, p = .58; M_{lc} = 28.06\%, M_{hc} = 31.72\%$).

Discussion

It appears that individuals who are high in religiosity are buffered from the need to seek structure through bounded products when personal control is threatened. Conversely, it seems that the psychological comfort offered by religion is sought through consumption choices, particularly as it relates to boundaries, among individuals with low levels of religiosity. This suggests that boundaries, in providing a symbol of order and structure, may sometimes provide emotional benefits akin to that provided from religion.

STUDY 7: LIFE SUPPORT

When feelings of control are low, individuals seem to seek psychological comfort in the symbols of structure that they find in God or alternatively, the boundaries in their environment. But, boundaries may be used as a substitute for more than just religion when it comes to

perceiving a world of order and structure. The benefits that boundaries provide may also allow them to serve as substitutes for material and social resources.

Individuals often have a strong set of resources that they use to maintain control in their lives. Among others, such resources often include meaningful social relationships and the financial means to achieve one's goals. For example, research suggests that people with high social support are in a better position to control the events that confront them, particularly when social support is characterized by a close, confiding relationship (Cohen 1988; Pearlin et al. 1981). And, as it relates to financial resources, research suggests that the mere thought of money is enough to activate feelings of strength and self-sufficiency (Zhou, Vohs, and Baumeister 2009). Further, researchers have found that money is effective at increasing actual levels of control in one's environment (Lea and Webley 2006), and people with high socioeconomic status are more likely to believe they can control the future (Lachman and Weaver 1998). Thus, individuals with strong resources are less likely to be affected by threats to their feelings of control. They should be able to maintain strong beliefs in their personal control and not fear randomness in their environment. They should therefore not show an enhanced appreciation for boundaries in the face of threat. But, what about individuals who do not have such resources? They do not have the benefit of avoiding the fear of randomness through a steadfast resolve to their personal control. Consequently, they should be more likely to seek boundaries as symbols of order and structure in the environment. Thus, the psychological comfort (i.e., the ability to avoid fears of randomness) that is maintained with the presence of resources may also be delivered through boundaries.

In Study 7, I explore how the presence of adequate personal resources in a variety of domains impacts whether individuals seek bounded products when personal control beliefs are

threatened. To do so, I leverage the Resource Adequacy Scale (Rowland, Dodder, and Nickols 1985). The scale measures how individuals feel about the adequacy of resources pertaining to their physical environment, health and physical energy, available time, finances, interpersonal support, knowledge and skills, and community. I expect that individuals who question the adequacy of their resources should be the most likely to seek the symbols of order and structure provided by bounded products.

Method

Participants and Procedure. Seventy-seven participants were recruited online and asked to complete the Perceived Adequacy of Resources Scale ($\alpha = .78$). They were then randomly assigned to the low or high personal control condition described first in Study 2. Next, participants completed the manipulation check questions described in Study 2. Participants then chose a product in each of six product pairs where one product in each pair was bounded and the other was unbounded (see example in Appendix).

Results

Manipulation Check. The analysis revealed the expected main effect of control condition on personal control ratings ($F(1, 73) = 9.70, p = .003, M_{lc} = 4.55, M_{hc} = 5.12$). The main effect of resource adequacy was not significant ($F(1, 73) = .68, p = .41$). The interaction of resource adequacy and control condition on personal control ratings was significant ($F(1, 73) = 7.29, p = .01$). Spotlight analyses (Aiken and West 1991) were used to probe the interaction. The effect

of the control manipulation at low resource adequacy was significant ($t(71) = 3.72, p < .001$); the effect at high resource adequacy was not ($t(71) = .72, p = .48$). These results suggest that differences in perceived resource adequacy allowed individuals to experience threats to personal control differently. Among individuals who perceived their resources as being less than adequate, those in the low control condition reported feeling lower control than participants in the high control condition. Among individuals who perceived their resources as being more than adequate, that difference disappeared. In other words, individuals with high resource adequacy were able to maintain strong beliefs of control even in the face of threat. In the analyses that follow, I explore how these differences impact how they respond to threat with their consumption choices. Of note, one might be concerned that placing the manipulation check questions before the dependent variables here led participants to guess the hypotheses of the research. This demand hypothesis was not supported by the debriefing reports. Participants were unable to correctly guess the hypotheses of the studies. Moreover, the manipulation checks in the prior studies (Studies 1-4) were taken in a separate sample of participants to ensure that the manipulation checks did not impact the results. The similar results of Studies 1-4 and the current study add confidence that the results are not driven by demand.

Main Results. The primary goal of this study was to test the prediction that people with low perceived adequacy of resources would be more likely to choose bounded products when personal control was threatened than when it was not threatened. I did not expect people with high perceived adequacy of resources to respond to a threat to personal control with their choices. A repeated measures logistic regression analysis was conducted with personal control condition and the full resource adequacy scale (mean-centered) as the predictors. The choice of bounded versus unbounded products in each of six pairs of choices was the dependent variable.

The analysis revealed no significant main effects, but as expected, a significant interaction of personal control condition and the resource adequacy measure emerged ($Z = 2.43$, $p = .02$). As resource adequacy is a continuous measure, the analysis was repeated at one standard deviation below and above the centered mean of resource adequacy. A significant simple effect of condition among individuals with low resource adequacy emerged ($Z = -3.07$, $p < .01$). Individuals characterized by low resource adequacy chose more bounded products when personal control was threatened ($M_{lc} = 30.54\%$) than when not ($M_{hc} = 11.22\%$). As anticipated, the effect of condition was not significant among individuals characterized by high resource adequacy ($Z = .61$, $p = .54$; $M_{lc} = 15.24\%$, $M_{hc} = 18.05\%$).

Discussion

As expected, individuals characterized by high perceived adequacy of resources did not change product preferences when personal control was threatened. However, individuals characterized by low perceived adequacy of resources preferred bounded products more when personal control was threatened than when it was not threatened. This suggests that when individuals are not able to rely on resources to maintain a sense of control and reduce the fears associated with randomness, they may be able to reap similar psychological benefits by surrounding themselves with boundaries instead. One limitation to consider with this study and the prior study, however, is that individuals were reminded of their chronic resources (Study 7) and religious feelings (Study 6) before completing the main control manipulation and subsequent measures. In order to ensure that the control manipulation did not impact the scale measures, the scales were placed at the beginning of the studies. It may be the case that being reminded of

such resources made individuals who were high in resource adequacy/religiosity even more likely to rely on those resources than they might normally; individuals who were low in such resources might have been reminded of how unable they are to rely on such resources.

GENERAL DISCUSSION

In this paper, I have introduced the notion that one way that people respond to the threatening and anxiety-inducing fear that they have no control over their lives is by seeking order and structure in their consumption environments, or “structured consumption.” The research presented here has demonstrated how the need to maintain a sense of order and structure in the face of threats to personal control influences individuals’ desires for structured consumption. I have focused on boundaries (both tangible and intangible) as one instantiation of this desire for structure that appears in a variety of forms (e.g., products, logos, retail environments). By doing so, this research has introduced a novel response to personal control threats, contributing to the growing body of research that seeks to better understand the nature of personal control. It has also illuminated how psychological needs (e.g., the desire for structure) can help release the subtle symbolic and functional benefits associated with elements in our environment and consequently affect our consumption choices.

Studies 1 and 2 demonstrated that threats to personal control (in either positive or negative contexts) results in enhanced preferences for tangible boundaries. Study 3 illustrated how this preference is often directly related to individuals’ needs for structure. Study 4 demonstrated that the desire for boundaries extends to the intangible boundaries that we face in

the spaces surrounding us and reiterated the notion that it is an enhanced desire for order and structure that is underlying the observed patterns of behavior. Study 5 demonstrated that boundaries offer a very functional benefit in that they help individuals with low feelings of control, who are consequently in a state of attentional overload, focus more clearly and efficiently on the items in their environment. Finally, Studies 6 and 7 suggested that seeking structure through boundaries may offer the symbolism and psychological comfort that individuals might otherwise receive from religion and financial/social resources, at least when it comes to sustaining a belief that the world is not random.

Importantly, while these studies have focused on boundaries in one's surroundings, "structured consumption" as a means of coping should exist beyond the realm of boundaries in one's physical environment. Many types of boundaries may be imposed on consumption-related beliefs, emotions, and activities. For example, consumers may become less likely to allow brands to stretch beyond a particular space in brand extensions and partnerships, or they may erect boundaries in emotional responses and constrain their emotions such that they affect only relevant decisions. In essence, individuals may use many different manifestations of boundaries as a means of achieving structured consumption in response to threats to control. This is consistent with the growing body of research in consumer behavior that demonstrates that consumers respond to threats in their lives with a variety of different consumption behaviors (e.g., Cutright et al. 2011; Ferraro, Shiv, and Bettman 2005; Gao, Wheeler, and Shiv 2008; Rucker and Galinsky 2008).

Future Research

Clearly, several questions remain about the notion of structured consumption. One important question is the degree to which the results reflect a conscious or nonconscious thinking process. It seems unlikely that individuals are always consciously thinking about the role of boundaries in their environment or are even able to spontaneously generate a coherent explanation for why boundaries are valuable when personal control is threatened. Yet, individuals may have at least a basic intuition about the benefit of boundaries. For example, individuals seemed to show such intuition in the post-choice exercise of Study 7 that questioned how they expected to feel as a result of their choice, although this may have been strengthened by the salience of the overload measures. Interestingly, individuals' self-reports in this study did not acknowledge any emotional value of boundaries. Future research should investigate whether in fact individuals consciously recognize the functional and emotional benefits of boundaries. It would also be interesting to understand how they prioritize such benefits. Are they likely to say that the functional benefits of boundaries are more important than the emotional ones?

Another important question centers on the question of when people will reject structure (even beyond baseline preferences). Particularly stemming from the store study (Study 4), one may wonder how some retailers seem to thrive off of chaos. In order to briefly explore this question, 28 students and staff members were interviewed and asked to describe when they enjoy environments of high structure and when they would prefer environments that lack structure. (Structure was defined as an environment in which there feels like there is a place for everything and everything is in its place). A few key insights emerged. First, individuals reported a preference for structured environments when their goal was to find specific items. This is consistent with the idea that one primary benefit of structure is its ability to help you focus on what is critical in your environment (which, as we have seen, happens to be most valued when

control is low). Yet, there are certainly times when people seek to strongly avoid structure even beyond the base rates demonstrated in the studies presented here. As one person said, “I’m very structured—but, sometimes I just want to escape. I want to go to Walmart—and without a list!” Individuals generally commented that unstructured environments were best when they wanted to find something unique, inspiring, or unexpected and when they wanted to avoid the sometimes intimidating and confining nature of structured environments. Several individuals referred to highly structured stores as “uptight” or “judgmental.” Thus, while my research focuses on the times when structure is desired, i.e., when control is low, there are likely many situations that lead individuals to want to strongly avoid such structure.

Another interesting question that stems from the store study (Study 4) is when intangible boundaries and tangible boundaries will diverge in the benefits that they offer and the degree to which people seek them. For example, one way that tangible and intangible boundaries differ is in their degree of physical confinement. More specifically, intangible boundaries provide the sense that things are in place, but do not physically confine an object to that space, while tangible boundaries are more associated with physical confinement. It may be the case that different causes of one’s low feelings of control may lead individuals to prioritize tangible and intangible boundaries differently based on their level of confinement. For example, if an individual is feeling low in control because he/she must follow many rules and regulations from others, tangible boundaries may be less appealing than intangible boundaries because of the overt symbols of confinement associated with tangible boundaries. Intangible boundaries may serve as a reminder that the world is not random without communicating confinement. On the other hand, if an individual is feeling low in control because there are so many things that can affect

their lives, confinement may be a more desirable aspect and lead to a prioritization of tangible boundaries over intangible ones.

It would also be interesting to explore the set of characteristics that are required for boundaries to be effective as symbolic and functional representations of structure. For example, in the case of the boundaries that surround items such as postcards, paintings and logos, to what extent do the boundaries have to be solid, simple and complete boundaries? Would more complex designs have similar effects? Or, in the case of intangible boundaries in a retail environment, how does one define what types of boundaries are most effective? As an example, is it more “structured” to define the boundaries within the toilet paper category by roll size or by brand? My hypothesis is that the perceptions of structure that arise from different types of boundaries will vary greatly based on individuals’ experiences and mental models. For one person, perhaps an artist or engineer who is used to studying complex designs, a multi-colored boundary of varying shapes and materials surrounding a book shelf may function perfectly well as a symbol of structure, while for others it could spark even greater feelings of chaos. Similarly, while a store that organizes its toilet paper by roll size may seem highly structured to one person, to someone else the only reasonable structure is one that focuses first on the brand name. The boundaries presented in the studies here are generally simple, basic forms that signal structure for most people. But, not all boundaries are expected to do so for every individual.

Another interesting question is the degree to which high control is always a non-threatening state. In other words, are there times when high control is a bad thing? And, in such cases will people prefer boundaries? Research has certainly shown that having high control can also be a threatening experience at times, depending on the nature of the situation. For example, people often prefer not to have control when high control would result in a high level of concern

for self-presentation or decrease one's chances of success (Burger 1989). Researchers have also shown that people would prefer not to have control in choice sets with bad or tragic options (Botti and McGill 2006; Botti, Orfali, and Iyengar 2009). Thus, it is certainly possible for a high control situation to be threatening. However, in such cases people are not attempting to combat a fear that the outcomes in their lives are random and therefore still should not exhibit enhanced preferences for boundaries.

Practical Implications

Given the findings of this research, marketers should be more aware of the degree to which their consumers are yearning for structure in the environment. A good place to start would involve understanding their consumers' feelings of control. Low feelings of control might be instigated by the acts of marketers themselves (e.g., out of stocks, sweepstakes and contests, unpredictable high-low pricing schemes), situations outside of marketers' control (e.g., terrorist attacks, economic recessions, natural disasters), as well as the chronic characteristics of their target consumers (e.g., income, health, mobility, etc.). In such situations, marketers should consider the ways that people will seek structure through boundaries in the environment. For example, low income consumers, who typically have lower feelings of control than their high income counterparts, might be particularly likely to benefit from a new emphasis on tangible and intangible boundaries in their neighborhood grocery store. In sum, marketers should take heed of consumers' need for structure and acknowledge the value and beauty of boundaries.

APPENDIX

Bounded

Unbounded

Example Choices from Study 2 (Logo Choices)



Choice from Studies 3 and 5



Examples of Choices from Studies 3, 6 and 7



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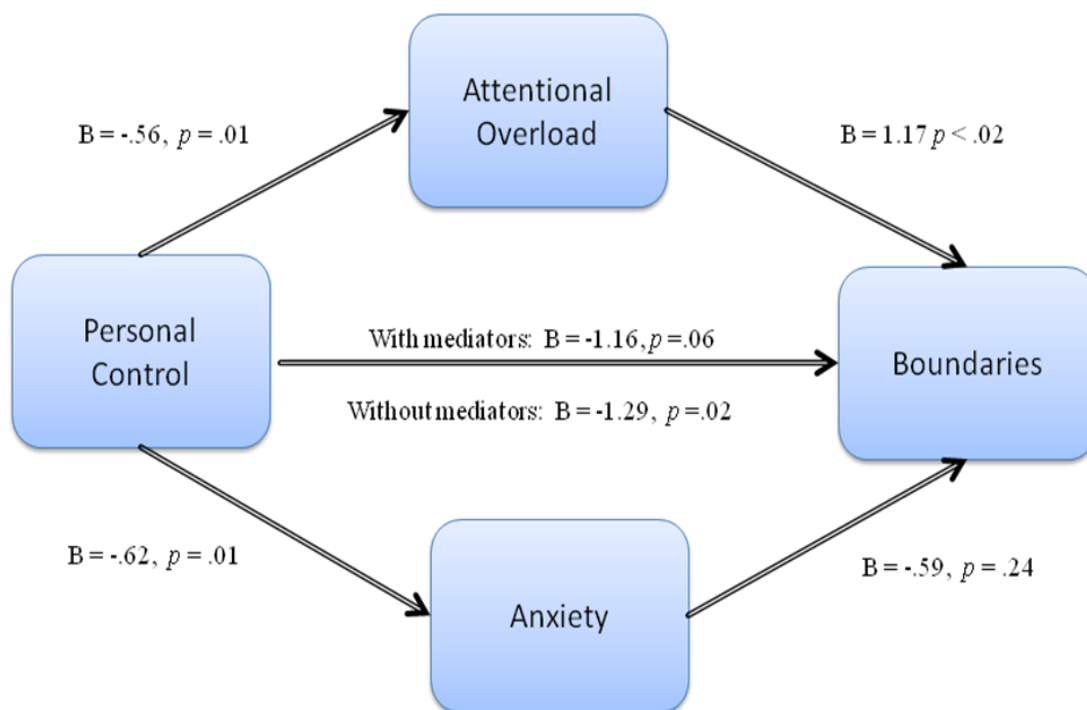
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FIGURE 1

MEDIATION BY ATTENTIONAL OVERLOAD

FIGURE 1
MEDIATION BY ATTENTIONAL OVERLOAD



1) THE DESIRE FOR STRUCTURE

2) Structured Consumption through Boundaries

3) *Tangible Boundaries*

3) *Intangible Boundaries*

2) Functional and Symbolic Value of Boundaries

2) Overview of Experiments

1) STUDY 1: SILENCE IS GOLDEN

2) Method

3) *Participants and Procedure*

2) Results and Discussion

3) *Manipulation Check*

3) *Results and Discussion*

1) STUDY 2: LUCKY DRAW

2) Method

3) *Participants and Procedure*

2) Results

3) *Pre-test*

3) *Results and Discussion*

1) STUDY 3: STRUCTURED BY DESIGN

3) *Sample 1*

3) *Sample 2*

1) STUDY 4: A PLACE FOR EVERYTHING & EVERYTHING IN ITS PLACE

2) Method

3) *Participants and Procedure*

2) Results

3) *Pre-test*

3) *Main Results*

2) Discussion

1) STUDY 5: ART OF ATTENTION

2) Method

3) *Participants and Procedure*

2) Results

3) *Manipulation Check*

3) *Attentional Overload and Anxiety*

3) *Dependent Variable*

2) Discussion

1) STUDY 6: LET GO AND LET GOD

2) Method

3) *Participants and Procedure*

2) Results

3) *Manipulation Check*

3) *Main Results*

2) Discussion

1) STUDY 7: LIFE SUPPORT

2) Method

3) *Participants and Procedure*

2) Results

3) *Manipulation Check*

3) *Main Results*

2) Discussion

1) GENERAL DISCUSSION

2) Future Research

2) Practical Implications