Nonconscious Goals and Consumer Choice

TANYA L. CHARTRAND
JOEL HUBER
BABA SHIV
ROBIN J. TANNER*

This work examines the process through which thrift versus prestige goals can nonconsciously affect decisions in a choice task. Drawing upon research on nonconscious goal pursuit, we present a theoretical framework detailing how consumer choices are affected by incidentally activated goals. We show that such primed goals have motivational properties consistent with goal pursuit but inconsistent with mere cognitive activation; the effects are greater with a longer time interval between the priming task and the choice and are less pronounced when the primed goal is satiated in a real, as opposed to a hypothetical, intervening choice task. Additionally, we show that subliminally evoked retail brand names can serve as the cues that activate purchasing goals.

Consider the following scenario: You are at a local shopping center to purchase crew socks from a sports store. On the way to the sports store, you pass by either a Nordstrom, where you are incidentally exposed to images of prestige (e.g., luxury, extravagance), or a Wal-Mart, where you are incidentally exposed to images of thrift (e.g., "everyday low prices"). The sports store carries two brands of crew socks, one more expensive and prestigious (e.g., Nike), and the other a better value (e.g., Hanes). The question is, does your incidental exposure to Nordstrom (Wal-Mart) activate a nonconscious prestige-oriented (thrift-oriented) goal that increases the likelihood that you will choose Nike (Hanes)? The goal of the present research is to explore this intriguing possibility. Drawing upon research on nonconscious goal pursuit (e.g., Bargh et al. 2001; Chartrand and Bargh 1996, 2002; Chartrand, Dalton, and Cheng, forthcoming), we examine whether incidental exposure to cues can activate different shopping goals and, in turn, influence subsequent decisions on unrelated choice tasks in a nonconscious manner.

It is now widely accepted from research spanning three decades that consumer behavior is largely goal-directed. Goals are credited with being a key motivational construct guiding consumer decision making (Bettman 1979; Bettman, Luce, and Payne 1998; Fishbach and Dhar 2005; Higgins 2002; Kivetz, Urminsky, and Zheng 2006; Shiv and Huber 2000; Soman and Cheema 2004). Despite the preponderance of research on goals in marketing, several scholars have noted that little research on goals has explicitly examined the factors that determine how consumer goals actually come to be selected and pursued (Bagozzi and Dholakia 1999; Huffman and Houston 1993). In a rare exception, Bagozzi and Dholakia (1999) outline a conceptual framework for thinking about how goal setting and goal pursuit influence consumer behavior. However, this framework deals primarily with the conscious aspects of goal pursuit and leaves aside the possibility of nonconscious factors influencing goal pursuit.

In recent years, a growing body of research has documented the possibility of nonconscious goal pursuit, challenging the traditional view that consumers are fully cognizant of the goals underlying their decisions (e.g., Bargh 2002; Chartrand et al., forthcoming). Specifically, research on nonconscious goal pursuit suggests that goals can be activated by situational cues and can influence behavior outside of awareness until the desired outcome has been attained (Chartrand and Bargh 1996). This form of goal pursuit operates without need for conscious intervention but has behavioral consequences that parallel those arising from consciously set goals.

*Tanya L. Chartrand is associate professor of marketing and psychology at the Fuqua School of Business, Duke University, Durham, NC 27708–0120 (tlc10@duke.edu). Joel Huber is Allan D. Schwartz Professor of Marketing at the Fuqua School of Business, Duke University, Durham, NC 27708–0120 (joel.huber@duke.edu). Baba Shiv is professor of marketing at the Stanford Graduate School of Business, Stanford, CA 94305 (shiv_baba@gsb.stanford.edu). Robin J. Tanner is a PhD candidate in marketing at the Fuqua School of Business, Duke University, Durham, NC 27708 (Rob.Tanner@duke.edu); after July 2008, he can be reached at the Wisconsin School of Business, 975 University Avenue, Madison, WI, 53706 (rtanner@bus.wisc.edu). The authors contributed equally to this research and are listed in alphabetical order. The authors thank Himanshu Mishra and Justin Petersen for their help in administering the studies and coding the debriefings and thank the editor, the associate editor, and the three reviewers for their feedback at various stages of this project.

John Deighton served as editor and Stephen M. Nowlis served as associate editor for this article.

Electronically published April 29, 2008

As stated above, a primary objective of the research presented here is to examine the nonconscious activation and pursuit of consumer goals related to prestige versus thrift. These are fairly abstract-level goals that are likely to be associated with various subgoals (e.g., saving money) and plans of action (e.g., buying sale items). The importance of these goals may differ from individual to individual (some consumers are chronically more concerned with prestige or with thrift) and vary over time or in different purchase contexts. Within that premise, this article seeks to answer the following questions about nonconscious goals. First, do consumers need to be conscious of the activation and pursuit of such goals in order for purchase behaviors to be altered? Or is it possible that these nonconscious goals are sometimes activated and pursued outside of conscious awareness, without consumers realizing the influence of such goals on their purchases? If the latter is the case, would such nonconsciously activated goals share kinship with conscious goals, which are often associated with a relatively complex set of actions? For instance, as time passes without a resolution of the nonconscious goal, would the intensity with which the goal is pursued increase, as it does with conscious goals (see Bargh et al. 2001)? Also in parallel with conscious goals, would nonconscious goals diminish in strength once they have been satiated? Answering these questions is important not only to substantiate any goal-based account of priming effects but also to achieve a more complete understanding of such factors, without which we cannot begin to explore the various ways by which consumers, and indeed marketers, can control or change their actions (Chartrand 2005).

The following section provides a theoretical foundation for answering these questions. Subsequent sections then demonstrate, across four studies, that exposure to prestige or thrift cues does indeed engender consumer behavior consistent with a goal pursuit account. In these studies, we demonstrate that these nonconscious goals work similarly irrespective of whether they are supraliminally (studies 1–3) or subliminally (study 4) activated (Bargh and Chartrand 2000). It should be noted that the current work is the first demonstration of the satiation of nonconsciously pursued goals. Additionally, it yields the important finding that although real choices render such satiation, hypothetical choices do not (study 3). Finally, study 4 constitutes the first demonstration that subliminally induced retail brands can themselves invoke consumer goals.

THEORETICAL BACKGROUND

The theoretical framework proceeds in two broad steps. First, we present a detailed conceptualization of nonconscious goal pursuit, leading to a general hypothesis about the effects on choices of priming prestige-related versus thrift-related goals. Then we discuss two factors that are likely to moderate the effects of these goals on choice: the time interval between the goal prime and the choice, and the satiation of the primed goals prior to the choice task. These moderators enable us not only to delineate some practical boundaries of the effects of nonconsciously held goals on choice behavior but also to provide support for our goal pursuit conceptualization and reduce the viability of alternative explanations of our findings.

Nonconscious Goal Pursuit

Goals are desired end states (Custers and Aarts 2005; Dijksterhuis, Chartrand, and Aarts, forthcoming) that once activated affect behavior in a wide variety of ways. Exactly how goals affect our behavior is a matter of debate in the literature (Van Osselaer et al. 2005). According to a purely cognitive perspective, goals are mentally represented in the same way as are such constructs as schemas, stereotypes, attitudes, and traits (Bargh 1990; Shah and Kruglanski 2003). Once the mental representation of a particular construct is activated, its associated actions will be triggered and performed. For example, being reminded of a goal to save money should trigger the associated goal-driven behavior. However, other theories have posited that positive valence is an important part of the goal representation and plays a role in the motivational processes underlying goal-directed behavior (Custers and Aarts 2005). Specifically, the end state must be linked to affect in order to lead to motivational behavior. Thus, the consumer must have positive feelings toward the desired end state (saving money) in order for a savings-related cue to drive future behavior. For the purposes of the current research, we are agnostic with respect to the affective component of goal pursuit. From our perspective, the important piece is common to both theoretical views: goals are mentally represented, and their activation leads to goal-directed behavior.

This activation can occur in multiple ways. The most intuitive way occurs when individuals consciously decide to pursue a goal or engage in goal-directed behavior. However, Bargh (1990) argued that there are other ways to activate goal constructs in memory. Specifically, environmental cues can be linked to goals in memory. If a certain goal is often pursued in a certain situation, then eventually the two become linked in memory and the presence of the situational feature will automatically activate the goal through a mechanism that shares kinship with stimulus-response conditioning. Once activated, the goal is pursued as if it were consciously chosen, even though the operation of the goal requires no conscious guidance.

According to Bargh (1990), once a goal (at whatever level of abstraction) is activated, the strategies and plans of action associated with that goal should also be automatically activated and should direct subsequent behavior. Supporting this theory, Aarts and Dijksterhuis (2000) found that goal activation led to the nonconscious activation of specific behavioral strategies previously used to attain the goal. These action plans could guide subsequent behavior without the person's awareness or intent.

Chartrand and Bargh (1996) were the first to demonstrate that nonconscious goals activated by environmental cues operate in a fashion similar to those consciously initiated and pursued. Their demonstration built upon the classic find-

ing of Hamilton, Katz, and Leirer (1980)—that participants given an explicit goal to form an impression of a target person subsequently displayed superior memory for the target's behaviors than did participants specifically tasked with memorizing those behaviors. Chartrand and Bargh replaced the explicit instruction used in the original research with a supraliminal priming technique to activate the impression formation goal. In a scrambled-sentence task, participants were exposed to words related either to impression formation (e.g., to evaluate, to judge) or to memorization (e.g., to retain, to absorb). This task unobtrusively primed participants with either an impression formation goal or a memorization goal (see Srull and Wyer 1979). Despite the absence of explicit instruction to form an impression of the target, the study replicated the Hamilton et al. findings: participants previously exposed to impression formation words demonstrated significantly superior recall compared to participants exposed to memorization words.

Since the original demonstration of the parallel functioning of conscious and nonconscious goals, this basic effect has been replicated across a variety of goals, using a variety of both supraliminal and subliminal priming techniques (Aarts and Dijksterhuis 2000; Bargh et al. 2001; Fishbach, Friedman, and Kruglanski 2003; Fitzsimons and Bargh 2003; Shah 2003; Shah and Kruglanski 2003). A critical feature of this line of research is that extensive debriefing of participants consistently reveals a complete absence of any conscious awareness of the nature or effect of the priming manipulations used. As argued by Chartrand (2005), an individual may be unaware of the source of a process, the process itself, or the outcome of the process. In the case of nonconscious goal pursuit, individuals are unaware of the goal activation (source) and goal pursuit (process) but are usually aware of engaging in a particular behavior (outcome). That individuals can be unaware of the source of a goal that becomes active may not be as surprising as the notion that they can also be unaware of pursuing the goal itself. Yet research has shown that goal pursuit leads to the same outcomes regardless of whether the goals are consciously activated or introduced outside of awareness.

Separating Nonconscious Goals from Trait Priming

Although the evidence supporting nonconscious-goal pursuit is compelling, one could offer alternative explanations for the behavioral effects found. Recall that the most common technique for exploring nonconscious goals is to prime words related to the goal construct and then test for effects on behavior. Such goal-related words may, however, also be activating other constructs, such as stereotypes and traits (Bargh 1997). These nonmotivational constructs have also been shown to automatically alter individuals' behavior, leading, for example, to slower walking after exposure to words related to the elderly, without the individuals' conscious intent or awareness (Bargh, Chen, and Burrows 1996; Dijksterhuis and Bargh 2001). We refer to such temporary increases in association with a particular behavioral construct as a *trait-priming explanation.* Thus, whenever nonconscious effects on behaviors are studied, it is important to distinguish between motivational goal-related processes and cognitive associational processes.

In response to these concerns, researchers have developed techniques designed to tease apart the motivational effects of goal activation from the nonmotivational effects of trait priming. One method relies on the finding that recently acquired goals initially increase in strength over time unless fulfilled (Atkinson and Birch 1970), whereas once activated, nonmotivational constructs decline in strength over time. We refer to this as the *temporal escalation criterion.* Bargh et al. (2001) were the first to use the predictions for temporal escalation to validate the goal-directed nature of prime-influenced behaviors. Participants primed with performance-goal-related stimuli then engaged either in an impression formation or in a word search task, immediately or after a 5-minute delay. The authors predicted that those engaged in impression formation would be more likely to judge the target as achievement oriented in the near term compared with those who experienced a delay. However, because the word search task reflected goal-directed-action tendencies, performance on it should actually improve with the delay. This temporal escalation was exactly what the authors found. While the perceptual effects of the achievement prime (as measured by the extent to which participants judged the target to be achievement oriented) decayed over the delay period, participant performance in the word search task significantly increased with the delay, a result consistent with a goal pursuit account.

A second method used in the current research to distinguish between goal pursuit and associational processes relies on the fact that goals should decrease in strength once the goal has been achieved (Atkinson and Birch 1970). By contrast, associational processes should, if anything, increase as attention is brought to them through achievement. We refer to this distinction as the *goal-satiation criterion.* Thus far, research has not yet assessed goal satiation for nonconsciously held goals. However, substantial evidence exists that the accessibility of goal-related constructs is enhanced while a consciously held goal is active but is inhibited once the goal is fulfilled (Forster, Lieberman, and Higgins 2005; Marsh, Hicks, and Bink 1998; Marsh, Hicks, and Bryan 1999). Because the operation of nonconsciously held goals has been found to be largely indistinguishable from that of consciously held goals, we expect that similar satiation effects would ensue upon the fulfillment of nonconsciously pursued goals.

An issue also arises with respect to what counts as goal satisfaction. Although the initiation of a goal can be evoked by simply cuing the goal (Chartrand and Bargh 1996), it is not clear whether satiation can be as easily evoked. Satiation may require actual satisfaction, particularly if the underlying need has not gone away. For example, attempting to satiate hunger through hypothetical meals will only make the situation worse. We propose that hypothetical satisfaction of

thrift and prestige goals should not work to satiate—rather, that real purchases would be needed to satiate such goals.

Overview of Studies

Four studies explore the effects of priming goals related to prestige versus thrift on hypothetical and real choices. Study 1 demonstrates the basic effect of nonconscious goal activation on choice. Study 2 tests the temporal escalation criterion by manipulating the time delay between goal prime and choice. Study 2 also tests the goal-satiation criterion by having participants make a series of sequential choices. The idea behind this choice task is that if each choice successively satiates the primed goal, then the effects of priming ought to diminish from the first to the last choice. Study 3 continues the exploration of goal satiation effects by examining both real and hypothetical choices. Study 4 demonstrates that naturalistic subliminal cues (in this case, retail brands) can serve to prime the goals.

These studies enable us to make the following claims: First, activating consumer choice goals in a purportedly unrelated priming task alters subsequent choices. Second, the observed effects are in line with the theory of nonconscious goal pursuit. Specifically, the effects occur outside of awareness; they initially increase with a greater time interval between the priming and the choice task, and they decline when satisfied by an intervening real and not hypothetical choice. Finally, rather than being restricted to supraliminal experimenter-generated primes, subliminal exposure to environmental features such as brand names can serve as the primes that activate the goals.

STUDY 1: DEMONSTRATING THE EFFECT OF NONCONSCIOUS CONSUMER GOALS

Study 1 provides an initial test of the ability of nonconsciously activated thrift versus prestige goals to influence subsequent consumer choices.

Design and Procedure

Study 1 randomly assigned 51 participants to either a prestige condition or a thrift condition in a single-factor between-subjects design. Participants initially engaged in a scrambled-sentence task, adapted from Chartrand and Bargh (1996), in which they constructed grammatically correct sentences using four from a list of five scrambled words. For the prestige-primed group, words invoking prestige goals were embedded in the list (e.g., "he prestige what want did"; the solution for which is "what did he want"). For the thrift-primed group, words invoking thrift goals were used (e.g., "he frugal what want did"; the solution for which is the same as in the example presented above). Following a 5-minute filler task, participants made a hypothetical choice between two sock options described as follows: "You notice that it is time to throw away your cotton crew socks and buy new ones. You are considering the following two options: Nike at $5.25 a pair and Hanes at $6 for two pairs." Participants were subsequently thanked and debriefed.

The debriefing involved a funneled questionnaire protocol (e.g., Bargh and Chartrand 2000; Chartrand and Bargh 1996; Fitzsimons and Shiv 2001) that probed the participants for any suspicions they might have had about the relationship between the original goal-priming task and the experimental task. The participants answered general questions, first, about what they thought the point of the experiment was and, second, about whether they thought that one part of the experiment might have affected another part. If a participant did not indicate any suspicion of a connection, he or she was asked to guess how the original scrambled-sentence task might have been related to the later choice tasks.

Results and Discussion

The results were consistent with our hypothesis. A greater proportion of participants chose the higher-priced Nike socks in the prestige condition than in the thrift condition (48.0% vs. 19.2%; $\chi^2 = 4.75$, $p < .03$). The funneled debriefing indicated that none of the respondents correctly guessed the general purpose of the study or believed that incidental exposure to words might have altered their choice.

These findings provide initial evidence that nonconscious goals can impact consumer behavior outside of participant awareness. However, study 1 cannot distinguish between a motivational goal pursuit and a trait-priming explanation (Dijksterhuis and Bargh 2001). Study 2 was thus designed to discriminate between these explanations.

STUDY 2: THE IMPACT OF PRIMES INCREASES WITH GREATER INTERVENING TIME

The purpose of study 2 was to replicate the findings of study 1 and provide support for our goal pursuit account. Two changes allowed us to test the motivational nature of the study 1 results. First, we manipulated the time interval between the goal-priming task and the choice task, and, second, we presented participants with a sequence of three different choice tasks, each requiring a trade-off of thrift versus prestige. According to our motivational conceptualization, if the observed effects on choice are indeed related to the activation and pursuit of goals, then increasing the time between the goal prime and the subsequent choices ought to strengthen the activated goals, escalating the effects of goal priming on choice. Further, when presented with a series of goal-relevant decisions, the effect of the prime should diminish as the successive choices begin to satisfy the primed goal.

Design and Procedure

Two hundred and forty-nine participants were randomly assigned to one of the four conditions in a 2 (goal prime: prestige vs. thrift) × 2 (time delay: high vs. low) between-subjects design. The procedure paralleled that used in study

1 except that participants made choices in two additional product categories (apartments and sound systems). As in study 1, participants first engaged in a scrambled-sentence task containing either prestige- or thrift-related words. They then completed a filler task in which they watched a neutral video of either 3 minutes or 8 minutes in length purportedly being pilot-tested for a different study. (In a separate pilot test, participants drawn from the same population as the main study watched the video for either 3 minutes or 8 minutes, as in study 2, and then responded to a 20-item PANAS mood scale [Watson, Clark, and Tellegen 1988]: the results revealed that mood states were no different across the 3-minute vs. 8-minute video conditions ($p > .20$).)

After the time delay filler task, participants chose between two options in each of three different product categories. The first task replicated the crew sock choice presented to participants in study 1. In the second task, participants chose between apartment A, with rent at $810 per month, an excellent view (cityscape and a river), and a bright and sunny atmosphere, and apartment B, with rent at $490 per month, a poor view (the back of another building), and a somewhat dark and dreary atmosphere. In the final task, participants chose between a Bose sound system priced at $1,499, which offered very small speakers and a sleek design that was bound to get "Wows from experts and amateurs alike," and a Toshiba sound system priced at $669, which offered larger speakers and acoustics that were "Rated favorably by experts in home electronics."

Results

Choice. Table 1 presents the proportion of times the more expensive items were chosen. In line with our predictions, an omnibus logit model across all three product categories with goal prime-, time interval-, and two-product-category-specific dummy variables revealed a significant goal prime by time interval interaction ($\chi^2 = 7.6$, $p < .006$) and a significant main effect of goal prime ($\chi^2 = 55.9$, $p < .0001$). It is noteworthy that there were no significant interactions between the product category dummies and the independent variables of interest—namely, goal prime and time interval (all p's $> .20$). Finally, as in the previous study, the funnel debriefing once again revealed no respondents who correctly linked the sentence construction and the choice task.

Effect of Time Delay. As shown in figure 1, across the three product categories the pattern of results in the short time interval conditions confirmed our conceptualization. Specifically, choice of the more expensive options was higher in the prestige goal prime condition (52.7%) than in the thrift goal prime condition (34.4%; $\chi^2 = 15.77$, $p < .0001$). Further, as predicted, choice of the more expensive option when prestige was primed increased as the time interval increased from low (52.7%) to high (63.5%; $\chi^2 = 5.45$, $p < .02$). In contrast, choice of the more expensive option when thrift was primed decreased as the time interval increased from low (34.4%) to high (23.5%; $\chi^2 = 6.46$, $p < .01$).

Stated differently, the difference in choice of the expensive option between the prestige and the thrift goal prime conditions was higher when the time interval was high (63.5% vs. 23.5%) than when it was low (52.7% vs. 34.4%; $\chi^2 = 11.13$, $p < .0001$).

Effect of Satiation. An intriguing result was the lack of the expected interactions between the product dummies and the goal prime (p's $> .75$), suggesting that the impact of the goal prime did not diminish across the three choices. That is to say, we did not observe the expected satiation of the primed goals, whose effect in fact persisted.

Discussion

The results of study 2 provide further support for the notion that activating prestige versus thrift goals in an unrelated task can give rise to nonconscious goal pursuit. First, across three product categories, choice of the more expensive option was higher when the earlier priming task exposed participants to words related to prestige rather than thrift.

TABLE 1

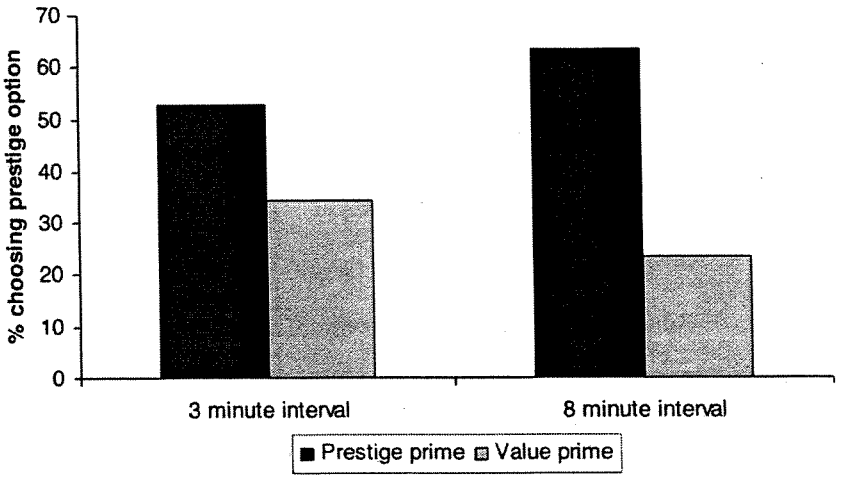
IMPACT OF PRIME INCREASES CHOICE OF THE PRESTIGE OPTIONS WITH GREATER TIME INTERVAL: STUDY 2

	3-minute interval		8-minute interval			
	Prestige prime (%)	Thrift prime (%)	Prestige prime (%)	Thrift prime (%)	Significant effects	χ^2 values
Crew socks	26.8	12.3	38.6	3.6	GP	20.1*
					GP × TI	4.2*
Apartments	78.6	63.2	86.0	47.3	GP	26.3*
					GP × TI	4.0*
Sound systems	53.6	35.1	63.2	23.6	GP	21.4*
					GP × TI	3.5†
Combined choice	52.7	34.4	63.5	23.5	GP	55.9*
					GP × TI	7.6*

NOTE.—GP = goal prime; TI = time Interval.
†$p < .10$.
*$p < .05$.

FIGURE 1

EFFECT OF TIME DELAY ON CHOICE OF THE PRESTIGE OPTION ACROSS ALL THREE CATEGORIES: STUDY 2



Consistent with a goal-priming account but not with a trait-priming account and in line with the temporal escalation criterion, this effect was further augmented with an increase in the time interval between the priming task and the choice tasks. Second, the observed effects seemed to occur outside of awareness inasmuch as extensive questioning of the participants during debriefing revealed no indication of conscious awareness or suspicion of the effect of the priming task on the subsequent choices.

A notable finding is that we did not observe a satiation of goals as the choice task progressed from the first set to the last. On the contrary, the effect of the goal primes persisted consistently across all three choices. A possible explanation for this lack of satiation is that the choices were hypothetical in nature and that real choices are necessary to bring about satiation. Study 3 tests this possibility.

STUDY 3: GOAL SATIATION WITH REAL VERSUS HYPOTHETICAL CHOICES

Study 3 continued the process of replicating the findings of studies 1 and 2. In addition, study 3 explored the moderating role of choice realism on goal satiation by examining the impact of a first choice that was either real or hypothetical on a second (real) choice.

Design and Procedure

The study used a 3 (goal prime: prestige vs. thrift vs. neutral) × 2 (goal satiation: high [real choice] vs. low [hypothetical choice]) between-subjects design. In the neutral goal prime conditions, neutral words replaced the prestige or thrift words in the scrambled-sentence task. One hundred and eighty participants were randomly assigned to one of the six conditions.

The study was carried out in two different rooms. In the first room, the goal prime factor was manipulated as in studies 1 and 2. Following the goal priming task, participants watched a video for 5 minutes. Participants then moved to the second room, one individual at a time. On their way to the second room, participants chose between one pair of Tommy Hilfiger socks against three pairs of Hanes (both options valued at $6). Participants in the high-goal-satiation conditions read this statement: "This is a real choice. That is, you will actually receive the option you pick. Now, please check the option of your choice." Participants in the low-goal-satiation conditions saw: "Pretend that this is a real choice. That is, pretend that you will actually receive the option you pick." Participants in the neutral goal prime conditions also engaged in the intervening task. Their choices in both the intervening task and the final choice task were no different across the goal-satiation conditions. Their responses were, therefore, collapsed across the two goal-satiation conditions to create a control condition. As a consequence, our analyses were carried out with the following design: 2 (goal prime: prestige vs. thrift) × 2 (goal satiation: high vs. low) plus a control.

Participants then entered another room, where they learned about the second choice through the following statement: "By taking part in this study, you will automatically be entered in a lucky draw. Two winners will be declared at the end of the experiment. If you are the winner, you will receive a prize worth $100. Please let us know which of the two options on display you would like, should you be the winner of the lottery." Participants were then shown a display that featured (*a*) Timex watches (ladies' or men's), with a sign stating: "TIMEX ($22.50 value) plus $77.50 in cash," and (*b*) Guess watches, with an accompanying sign stating "GUESS ($75 value) plus $25 in cash." Participants indicated their choice on the instrument that was handed to them. Care was taken that the two choice tasks occurred completely out of sight and out of earshot of the other respon-

dents and the experimenters, in order to control for social and normative factors, which could have otherwise influenced participants' decisions (see Ratner and Kahn 2002; West and Broniarczyk 1998).

Finally, participants responded to a series of measures and were then debriefed. The measures included a manipulation check for the goal satiation factor and checks for potential confounds. Specifically, participants indicated on seven-point scales the extent to which they (*a*) treated the choice tasks as being real, (*b*) deliberated, (*c*) paid attention, (*d*) spent time in making up their minds, and (*e*) treated the task seriously.

Results

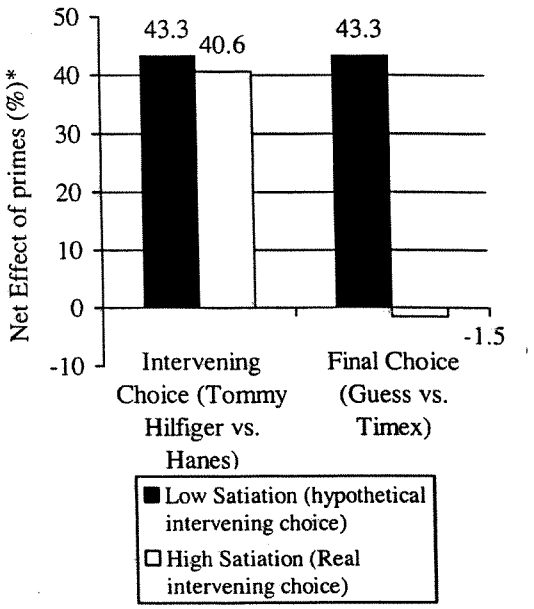
Intervening Choice. A logit model on intervening choices revealed a significant main effect of the goal prime factor ($\chi^2 = 20.27, p < .0001$). None of the other treatment effects were significant. The pattern of results was in line with our conceptualization. Specifically, in the first choice task the selection of Tommy Hilfiger socks was higher in the prestige condition (62.8% and 62.2% in the high- and low-goal-satiation conditions, respectively) compared with the thrift goal prime condition (22.2% and 18.9% in the high- and low-goal-satiation conditions, respectively; $\chi^2 = 11.18$, $p < .0008$, in the high-goal-satiation conditions; $\chi^2 = 13.09, p < .0003$, in the low-goal-satiation conditions). The choice of Tommy Hilfiger socks in the control condition was 40%.

Effect of Satiation. More critical for our hypothesis, the goal-priming manipulation carried over to the subsequent "final" choice task when goal satiation was low (i.e., when the intervening choice was hypothetical) but not when it was high (i.e., when the intervening choice was real). Specifically, a logit model on the choices made in the final choice task revealed a significant goal prime by goal satiation interaction ($\chi^2 = 7.62, p < .006$), in addition to significant main effects of goal prime ($\chi^2 = 8.0, p < .02$) and goal satiation ($\chi^2 = 4.17, p < .04$). Within the high goal satiation conditions, choice of the Guess watch (plus $25 in cash) was no different across levels of the goal prime factor (42.9% and 44.4%, in the prestige and thrift conditions, respectively; choice of the Guess watch in the control condition was 42.9%). In contrast, within the low goal satiation hypothetical conditions, choice of the Guess watch was higher in the prestige condition (64.9%) than in the thrift condition (21.6%; $\chi^2 = 13.0, p < .0003$).

Stated differently and as shown in figure 2, when participants had previously made a real choice, the net effect of priming (i.e., the difference in choice of the Guess watch between the prestige and the thrift prime conditions) vanished in the second choice (−1.5%) in contrast to prime-consistent behavior when the previous choice was hypothetical (43.3%; $\chi^2 = 7.62$, $p < .006$). The hypothetical results replicate what was found with hypothetical choices in study 2, while the real choices demonstrate extinction of the cued goals in line with the goal satiation criterion.

FIGURE 2

NET EFFECT OF PRIMES ON INTERVENING AND FINAL CHOICES: STUDY 3



*Net effect of primes = Difference in the choice of the prestige option between the prestige and thrift prime conditions

Also of note, the results relative to the control display largely symmetric effects for the prestige and the thrift primes. That is to say, the percentage of participants choosing the more expensive options in the intervening and the final choice control conditions (40% and 43%, respectively) lies midway between the choice percentages for the appropriate prestige and thrift conditions (excluding the high goal satiation final choice condition, where the effect of the primes was attenuated).

Discussion

In addition to replicating the effect of subtle goal activation on consumer choice found in studies 1 and 2, study 3 provides further support for our motivational account by demonstrating attenuation of the effect of the prime after a real choice is made. We believe this provides the first empirical demonstration of the satiation of nonconsciously held and pursued goals. Furthermore, study 3 builds on study 2 by documenting the important finding that while real choices can satiate nonconsciously held goals, hypothetical choices may not.

The three studies provide convergent evidence that consumer choices are influenced by nonconscious goals operating outside of the consumers' awareness and intent. These studies rely on a supraliminal priming procedure (i.e., the scrambled-sentence task). We use subliminal priming—an even more conservative priming paradigm—in study 4 to provide convergent validity and increase the generalizability

of our findings. Moreover, by making the subliminal cues brand names, we test the possibility that brands may be a viable trigger for the activation of consumer goals. Study 4 addresses this issue by measuring preferences for prestige- and thrift-oriented products after subliminal presentation of names of retail stores.

STUDY 4: BRANDS AS SUBLIMINAL CUES TO GOAL ACTIVATION

Faced with the mounting evidence that goal priming can affect behavior outside of awareness and intent, research has started to explore naturalistic triggers of nonconscious goals. In the original conception of nonconscious goal pursuit (Bargh 1990), environmental features that are consistently paired with goals develop the ability to automatically activate those goals in the future. Thus, a social party environment may trigger nonconscious self-presentation goals in an individual chronically concerned with appearances. Researchers have identified a variety of naturalistic environmental triggers of nonconscious goal pursuit, including situations of power, self-esteem threat, presence of temptations, significant others, and situational norms (Aarts et al. 2005; Aarts and Dijksterhuis 2000; Bargh et al. 1995; Chartrand, Dalton, and Fitzsimons 2008; Fishbach et al. 2003; Fitzsimons and Bargh 2003; Shah 2003; Spencer et al. 1998).

Study 4 investigates an unexplored class of potential triggers of nonconscious goals—retail brands. As illustrated in our initial vignette, the potential for such brands to become cues for goal activation is of particular interest to marketers whose customers are exposed to brands throughout the entire purchase process. For example, when a consumer visits Wal-Mart with a goal to save money and sees its price-cutter ads, the goal of thrift may become linked to exposure to Wal-Mart. If so, a consumer on the way to a sports store who passes a Wal-Mart on the way may have a thrift goal nonconsciously activated that then may influence sock selection in the sports store. Automatic goal activation may thus open the door to an intriguing new way to think about the role and power of brands.

Design and Procedure

Study 4 randomly assigned 107 participants to a simple two-cell (subliminal prime: prestige retail brands vs. thrift retail brands) between-subjects design. The experiment was implemented in a room containing six personal computers with dividing screens between each to ensure that participants were not distracted by what others were doing. Participants were asked to remain upright in their chairs and to adjust the screen height to ensure its center was level with their eyes, so that the priming stimuli would be presented outside of participants' foveal visual field. Dimmed lights prior to the priming task enhanced the conditions for priming (Bargh and Chartrand 2000). The visual acuity exercise consisted of two tasks. First, respondents were asked to calculate and recall the cumulative total of numbers flashed on the center of the screen. This task ensured that participants focused on the center of the screen. Second, participants were informed that a series of random flashes would occur throughout the experiment and were asked to indicate if the flashes occurred on the left or right side of the screen by pressing either the *f* key or the *k* key on their keyboard as soon as possible after they saw the flash.

Each flash consisted of the stimulus prime for 60 milliseconds immediately followed by a 100-millisecond backward mask (i.e., a string of letters in the same location). The masking string ("XQFBZRMQWGBX") contained a variety of letter patterns and was structurally similar to the preceding stimuli. To further ensure that participants focused on the center of the screen, they were told: "Because the location and timing of the flashes are random, it is important to keep your eyes on the center of the screen if you are to perform well on both tasks."

Each stimulus word appeared at one of four locations on the computer screen (i.e., in each of the four corners). At these locations the stimulus words were within participants' parafoveal visual field but outside the foveal visual field associated with conscious awareness (Bargh and Chartrand 2000). We constructed a randomized-location order and gave all participants the same sequence, with 2 seconds separating each stimulus word. The combination of these precautions—brief prime duration, immediate masking and placement in the parafoveal processing area—have been found to prevent awareness of priming stimuli in previous subliminal priming studies (e.g., Bargh and Chartrand 2000; Chartrand and Bargh 1996).

The stimulus words used were U.S. retail brands presented in Times New Roman typeface. In the prestige condition, the brands were Tiffany, Neiman Marcus, and Nordstrom, while in the thrift condition they were Wall-Mart, Kmart, and Dollar Store. These particular brands emerged from a pretest of 35 participants who listed retail brands that they considered to be strongly prestige oriented or thrift oriented.

Following the visual acuity task, participants indicated their relative preference of either a thrift or a prestige option for both a socks choice and a microwave choice. The combed-cotton socks scenario was identical to that used in studies 1 and 2; the Nike socks at $5.25 for one pair, the Hanes socks at $6.00 for two pairs. In the microwave scenario, participants were told: "Your microwave has broken, and you are considering the following two options." The available options were a 1-cubic-foot Haier microwave for $69 or a 1-cubic-foot Sharp microwave for $99. Preferences in each scenario were captured on a 1–7 scale anchored at the bottom, middle, and top with the terms "strong preference for [name of thrift option]," "indifferent," and "strong preference for [name of prestige option]."

Upon their arrival, the experimenter showed participants to their seats and told them that they would be taking part in two unrelated studies, the details of which were briefly explained. The supposed unrelatedness of the studies was reinforced by the fact that participants had seen faculty names from both the psychology and the marketing departments in

the electronic sign-up process. Participants took six practice trials to become familiar with the nature of the first task, each trial consisting of one number and one flash. The flashes in the practice trial consisted of random letter strings rather than brand names. The computer then informed them of the correct cumulative total for the practice trials and requested participants to press a key to start the actual trials. Participants then completed 75 experimental trials (25 exposures to each brand in a random order) in approximately 4 minutes.

After the participants had completed the priming procedure, the computer asked them to continue to the second experiment, in which they indicated their preferences for the two consumer product choices previously described. Finally, participants were thanked for their participation and debriefed.

Results and Discussion

The relative preference ratings of the prestige and the thrift options are shown in table 2. A repeated-measures ANOVA revealed a significant main effect of brand prime ($F(1, 105) = 3.58$, $p = .03$). As expected, for both the socks and the microwave scenarios, participants primed with the thrift-orientated brands expressed stronger relative preference for the thrift option than those participants primed with the prestige brands.

The responses to the funneled debriefing questions once again supported our contention that participants were unaware of the goal activation and the subsequent goal-driven nature of their behavior. None of the participants suggested that their choices in the second study had been influenced by the first. Even when subsequently prompted to guess at a possible link, participants did not come close to detecting the true design. We note that this continued absence of any reported awareness by participants of the primes' influence on their behavior, combined with the subliminal nature of the primes used in this study, renders possible demand explanations for our results extremely unlikely.

Thus, the subliminal exposure to retailers' names associated with either thrift or prestige products appeared to activate associated goals in our participants. To the best of our knowledge, this provides the first evidence that such brands can automatically activate purchase goals in individuals and that these goals can influence consumers' product preferences without their awareness or conscious intent.

GENERAL DISCUSSION

Taken together, the four studies demonstrate that fundamental consumer goals can be automatically activated and pursued outside of conscious awareness. Through the use of both supraliminal primes (studies 1, 2, and 3) and subliminal primes (study 4), as well as extensive debriefing, we establish that the goals are activated without the conscious knowledge of the participants, and we demonstrate that these goals then operate outside of awareness to influence choices and preferences. Empirical support for our motivational account includes both the observed strengthening of the choice effects after a delay (study 2) and the attenuation of the effect of the prime after a real choice has been made and goal satiation has occurred (study 3). Study 4 additionally demonstrates that subliminal exposure to retail brands can trigger similar goal activation.

TABLE 2

RETAIL BRAND NAMES AS CUES TO GOAL ACTIVATION: STUDY 4

	High-end store primes		Low-end store primes	
	Preference rating	SD	Preference rating	SD
Sock choice	3.22	2.1	2.60	1.9
Microwave choice	2.65	1.9	2.05	1.5

NOTE.—Higher numbers indicate greater preference for prestige option on 1–7 scale.

Implications for Consumer Decision Making

These results may seem surprising because the idea of nonconscious goals is so paradoxical. After all, goal pursuit seems almost by definition to be an intentional process. From a conceptual perspective, it is hard to imagine that a drive for a desired end state, with all the accompanying complexities associated with such goal striving (e.g., the need for flexible actions during goal pursuit in response to obstacles), can occur without conscious awareness. Further, to be effective, goal strength needs to vary; it needs to intensify initially but decrease when satiated. Nevertheless, our studies demonstrate that all this is indeed possible during nonconscious goal pursuit.

We may well prefer to believe that, as rational beings, we retain full conscious control of our actions, thoughtfully processing all the stimuli our senses collect and arriving at sensible conclusions and optimal decisions. However, our work contributes to a growing body of research that suggests that a substantial part of our adaptive mental functioning is rooted in nonconscious processing and thus challenges the rational model of decision making as a functionally impractical view. In our view, the ability to invoke goals automatically from environmental cues without substantial conscious processing is both efficient and adaptive and is no less relevant in consumer settings than in a number of other contexts. For example, consider the usefulness of automatically invoking goals to resist temptations when walking down the ice cream aisle or to avoid making a quick decision when dealing with a persuasive salesperson.

The current work suggests that the role of nonconscious processing may be as relevant to consumer choice as it is, for example, to memory, social perception, emotional appraisal, or causal attribution. Consumers may think they fully understand why they like and choose the products they do, but the current studies suggest there are at least three components of the process of which they can be unaware: (*a*) the activation by incidental environmental cues of goals outside of awareness, (*b*) the nonconscious pursuit of these

goals, and (*c*) the resulting consequences of these goals for choice or expressed preference (see also Chartrand 2005). Clearly, the importance of these issues is not restricted to marketplace choices alone. Researchers need to be aware of the potential consequences of nonconscious goal activation in their studies. Whenever the effects of an initial manipulation on subsequent behavior are examined, the possibility of the manipulation cuing unintended goal activation, in addition to affecting the construct of interest, needs to be considered.

Nor does nonconscious goal pursuit appear to be a fleeting or rare phenomenon. Our studies are consistent with prior research in demonstrating it is quite robust to the individual's potential awareness of the process—be it unambiguously nonconscious when subliminal primes are used (study 4) or nonconscious in the sense of awareness of the priming stimuli but not of the causal link (studies 1, 2, and 3). Furthermore, since study 4 demonstrates that retail names themselves can serve as the cues that activate such goals, and given the ubiquity of such brand exposure in daily life, our results are consistent with the emerging view that preferences may not be anywhere as stable as consumers would like to believe.

Implications for Nonconscious Goal Pursuit

The current results contribute to the nonconscious goal pursuit literature in two important ways. First, our work is the first to investigate the conditions under which nonconscious goals are satisfied and what happens when this goal satiation occurs. Study 3 demonstrates a clear attenuation of the effect of goal primes once a consequential goal-congruent choice has been made. While previous work has shown decreased goal activation upon fulfillment of consciously held goals (Forster et al. 2005), it has not been tested with goals operating outside of awareness. These findings are consistent with the emerging view that once activated, nonconsciously held goals operate in a fashion largely indistinguishable from that of their consciously pursued counterparts.

Second, our work provides the first evidence of the important finding that hypothetical goal-congruent choices are less satiating to nonconsciously held goals than are real choices. In study 3, we observed that changing the description of an otherwise identical choice from real to hypothetical was sufficient to attenuate goal satiation effects. An interesting question, one the current research did not address, is whether this property is unique to nonconsciously held goals. Would the conscious mind consider a hypothetical choice sufficient to fulfill a consciously held goal? We leave this question to future research.

This satiation finding joins a small but emerging body of work that identifies circumstances in which hypothetical choices may be imperfect surrogates for real choices. For example, the shopping-momentum effect (Dhar, Huber, and Khan, forthcoming) pertains to real but not hypothetical purchases. The current data suggest caution may sometimes be merited for studies utilizing multiple choices as dependent variables. Researchers need to be aware of the fact that goal satiation effects have the potential to lead to disparities in choice between sequences of otherwise identical real and hypothetical options. While we continue to believe hypothetical choices are a valuable and efficient part of a consumer researcher's toolbox, the current research does raise a flag of caution, because—at least for satiation of nonconscious goals—they may not always be good proxies.

A second issue related to satiation concerns the specificity of the target goals. Our goals of thrift and prestige define directions rather than specific end states. Thus, it is not clear when either goal is satisfied and thus satiated. We expect that our results would be even stronger had there been a clearly defined end state to the elicited goals, such as a goal to spend less than a certain amount or to put together a high-status outfit. In those cases, one would expect the goal strength to increase as one approached the goal (e.g., Kivitz, Urminsky, and Zheng 2006) and would further expect a greater magnitude of goal satiation.

Marketplace Implications

It is important to recognize that our research utilized a tightly controlled laboratory environment in which participants were exposed to multiple congruent cues, all of which were designed to invoke the same goal. While our experimental environment may bear little resemblance to the chaotic display of images across stores at a mall, it is more consistent with the emphasis on coherent images within most stores. Consider the repetition of thrift images at Wal-Mart or the status images within Nordstrom. Still, it is important to understand how more heterogeneous goal cues in quick succession may activate unrelated, congruent, or opposing goals. Might initially activated goals suppress the activation of other goals until satiated? Is nonconscious goal activation an additive process, such that multiple cues of a similar type will lead to stronger behavior effects? Although now we may stand at only the beginning of the road to answering these questions, we believe there is clear potential for the current research to ultimately inform policy decisions.

First, given the potential complexities involved, we believe field experiments should focus on the clear managerial opportunities. For example, a retailer desirous of inducing consumers to trade up to higher-margin products in certain categories might want to try strategically embedding mini-displays of prestige items adjacent to displays of goods in those categories. Such "pockets of prestige" would aim to maximize the likelihood of prestige-type goals being activated in consumers as they browse the categories in question. Similarly, advertisements running on in-store displays (a growing trend) could be strategically biased toward prestige items in general.

Second, the time consumers spend in retail stores is often equal to or greater than the 8-minute period over which we observed substantial strengthening of goal-related behaviors. Thus, an additional factor for a retailer motivated to up sell consumers would be to expose shoppers to a disproportionate volume of prestige cues at the entrance to the

store and/or on end-of-aisle displays. The intent here would be to maximize the chance that prestige goals would be activated early in the shopping experience and to give them the maximum opportunity to strengthen before shoppers arrive at the parts of the store where their critical purchase decisions will be made. Appropriate positioning could increase the likelihood of high-margin choices while decreasing the probability that an intervening status purchase will satiate the goal.

An ideal context for testing the managerial implications of goal cuing arises out of actual or simulated retail Web sites. For instance, the banner side ads could be manipulated to evoke goals, with the placement of a focal promoted item either right after the cues or with a time lag. One could expect that the response to a promoted item will depend on the match between the cued goal and the focal product and that this response will initially increase with time but decrease with an intervening choice that satisfies that cued goal.

Directions and Implications for Future Research

Future research could profitably extend the current work in a number of different ways. First, although the current research was focused on examining the effects of priming thrift- and prestige-orientated goals, we believe that a wide variety of consumer goals can similarly be activated and pursued, influencing consumer choices in important ways. For example, to broaden the spectrum of goals examined, one might fruitfully investigate the nonconscious pursuit of effort and accuracy goals. Would, for instance, the nonconscious activation of an accuracy goal render a consumer less susceptible to falling prey to a positivity effect in inferring broad-service-provider quality from a single interaction (Folkes and Patrick 2003)? Widening the net of goals examined might also lead to research on regulatory orientation exhibited in prevention or promotion goals (Aaker and Lee 2006; Avnet and Higgins 2006) or on status versus functional choices (Poehlman et al. 2006).

Second, while the current research focuses on the effects of nonconscious goals on choice and preferences, future research might usefully explore subsequent downstream consequences such as product usage and enjoyment. For example, could consumers' enjoyment of a chosen option, or the attraction of a forgone option, be influenced by the goals that were activated at the time of purchase or use (Carmon, Wertenbroch, and Zeelenberg 2003; Nowlis, Mandel, and McCabe 2004)? Indeed, might perceptions of product performance, and thus of product satisfaction, be influenced by whether such a goal was consciously or nonconsciously activated and pursued (and, therefore, subsequently available or not available in memory)?

Third, more research is needed to examine the process by which nonconscious goals influence choice. For instance, is it possible that in a given choice task, nonconscious goals result in a biased weighting and/or evaluation of information as documented in research on predecisional distortion (Bond et al. 2007)? Finally, moving beyond research on goals per se, we believe the supraliminal and subliminal priming techniques used in the current research offer researchers a valuable tool with which to explore the moderation of given effects of interest. While other techniques often risk demand effects, the nonconscious nature of the priming techniques used here is largely immune to such concerns. For example, researchers interested in product contamination might use these priming techniques to temporally heighten accessibility of the disgust construct as part of an effort to examine its culpability as a moderator of perceived contamination (Argo, Dahl, and Morales 2006). The fact that nonconscious manipulations are, by definition, resistant to demand conditions, combined with the general finding that conscious and nonconscious goals act in very similar ways, suggests that research using nonconscious cuing can be expected to be more and more valuable in consumer research.

Conclusion

Despite the continued interest in the role of goals in consumer decision making, not much attention has been paid to factors that determine how goals actually come to be selected and pursued. Building on the notion that goals can be pursued nonconsciously (e.g., Bargh 2002; Chartrand et al., forthcoming), this article presents evidence suggesting that goals can be activated by situational cues and pursued until satiated by real choices and that the activation as well as the pursuit can occur nonconsciously. This article is, therefore, an attempt at challenging the notion that mental functioning is and needs to be conscious—a notion widely held among marketers—by presenting a case for revising it on the lines that a substantial part of our adaptive mental functioning may actually be rooted in nonconscious processing.

REFERENCES

Aaker, Jennifer L. and Angela Y. Lee (2006), "Understanding Regulatory Fit," *Journal of Marketing Research,* 43 (February), 15–19.

Aarts, Hank, Tanya L. Chartrand, Ruud Custers, Unna Danner, Giel Dik, Valerie E. Jefferis, and Clara Cheng (2005), "Social Stereotypes and Automatic Goal Pursuit," *Social Cognition,* 23 (December), 465–90.

Aarts, Hank and Ap Dijksterhuis (2000), "Habits as Knowledge Structures: Automaticity in Goal-Directed Behavior," *Journal of Personality and Social Psychology,* 78 (January), 53–63.

Argo, Jennifer J., Darren W. Dahl, and Andrea C. Morales (2006), "Consumer Contamination: How Consumers React to Products Touched by Others," *Journal of Marketing,* 70 (April), 81–94.

Atkinson, John W. and David Birch (1970), *A Dynamic Theory of Action,* New York: Wiley.

Avnet, Tamar and E. Tory Higgins (2006), "How Regulatory Fit Affects Value in Consumer Choices and Opinions," *Journal of Marketing Research,* 43 (February), 1–10.

Bagozzi, Richard P. and Utpal Dholakia (1999), "Goal-Setting and Goal-Striving in Consumer Behavior," *Journal of Marketing,* 63 (Special Issue), 19–32.

Bargh, John A. (1990), "Auto-motives: Preconscious Determinants

of Social Interaction," in *Handbook of Motivation and Cognition*, Vol. 2, ed. E. Tory Higgins and Richard M. Sorrentino, New York: Guilford, 93–130.

_____ (1997), "The Automaticity of Everyday Life," in *The Automaticity of Everyday Life: Advances in Social Cognition*, Vol. 10, ed. Robert S. Wyer Jr., Mahwah, NJ: Erlbaum, 1–61.

_____ (2002), "Losing Consciousness: Automatic Influences on Consumer Judgment, Behavior, and Motivation," *Journal of Consumer Research*, 29 (September), 280–85.

Bargh, John A. and Tanya L. Chartrand (2000), "Studying the Mind in the Middle: A Practical Guide to Priming and Automaticity Research," in *Handbook of Research Methods in Social Psychology*, ed. H. Reis and C. Judd, New York: Cambridge University Press, 253–85.

Bargh, John A., Mark Chen, and Lara Burrows (1996), "Automaticity of Social Behavior: Direct Effects of Trait Construct and Stereotype Activation on Action," *Journal of Personality and Social Psychology*, 71 (August), 230–44.

Bargh, John A, Peter M. Gollwitzer, Annette Lee-Chai, Kimberly Barndollar, and Roman Trötschel (2001), "The Automated Will: Nonconscious Activation and Pursuit of Behavioral Goals," *Journal of Personality and Social Psychology*, 81 (December), 1014–27.

Bargh, John A., Paula Raymond, John B. Pryor, and Fritz Strack (1995), "Attractiveness of the Underling: An Automatic Power-Sex Association and Its Consequences for Sexual Harassment and Aggression," *Journal of Personality and Social Psychology*, 68 (May), 768–81.

Bettman, James R. (1979), "Memory Factors in Consumer Choice: A Review," *Journal of Marketing*, 43 (Spring), 37–53.

Bettman, James R., Mary Frances Luce, and John W. Payne (1998), "Constructive Consumer Choice Processes," *Journal of Consumer Research*, 25 (December), 187–217.

Bond, Samuel D., Kurt A. Carlson, Margaret G. Meloy, J. Edward Russo, and Robin J. Tanner (2007), "Precommitment Bias in the Evaluation of a Single Option," *Organizational Behavior and Human Decision Processes*, 102 (March), 240–54.

Carmon, Ziv, Klaus Wertenbroch, and Marcel Zeelenberg (2003), "Option Attachment: When Deliberating Makes Choosing Feel Like Losing," *Journal of Consumer Research*, 30 (June), 15–29.

Chartrand, Tanya L. (2005), "The Role of Conscious Awareness in Consumer Behavior," *Journal of Consumer Psychology*, 15 (3), 203–10.

Chartrand, Tanya L. and John A. Bargh (1996), "Automatic Activation of Impression Formation and Memorization Goals: Nonconscious Goal Priming Reproduces Effects of Explicit Task Instructions," *Journal of Personality and Social Psychology*, 71 (September), 464–78.

_____ (2002), "Nonconscious Motivations: Their Operations, Activations, and Consequences," in *Self and Motivation: Emerging Psychological Perspectives*, ed. Abraham Tesser, Diederik Stapel, and Joanne Wood, Washington, DC: American Psychological Association, 13–41.

Chartrand, Tanya L., Amy Dalton, and Clara Cheng (forthcoming), "Consequences of Nonconscious Goal Activation," in *Handbook of Motivation Science*, ed. James Shah and Wendy Gardner, New York: Guilford.

Chartrand, Tanya L., Amy Dalton, and Gavan Fitzsimons (2008), "Nonconscious Relationship Reactance: When Significant Others Prime Opposing Goals," *Journal of Experimental Social Psychology*, 43 (September), 719–26.

Custers, Ruud and Hank Aarts (2005), "Positive Affect as Implicit Motivator: On the Nonconscious Operation of Behavioral Goals," *Journal of Personality and Social Psychology*, 89 (August), 129–42.

Dhar, Ravi, Joel Huber, and Uzma Khan (forthcoming), "The Shopping Momentum Effect," *Journal of Marketing Research*.

Dijksterhuis, Ap and John A. Bargh (2001), "The Perception-Behavior Expressway: The Automatic Effects of Social Perception on Social Behavior," in *Advances in Experimental Social Psychology*, Vol. 33, ed. Mark P. Zanna, San Diego, CA: Academic Press, 1–40.

Dijksterhuis, Ap, Tanya L. Chartrand, and Hank Aarts (forthcoming), "Automatic Behavior," in *Automatic Processes in Social Thinking and Behavior*, ed. John A. Bargh, Philadelphia: Psychology Press.

Fishbach, Ayelet and Ravi Dhar (2005), "Goals as Excuses or Guides: The Liberating Effect of Perceived Goal Progress on Choice," *Journal of Consumer Research*, 32 (December), 370–77.

Fishbach, Ayelet, Ronald S. Friedman, and Arie W. Kruglanski (2003), "Leading Us Not unto Temptation: Momentary Allurements Elicit Overriding Goal Activation," *Journal of Personality and Social Psychology*, 84 (February), 296–309.

Fitzsimons, Gavan J. and Baba Shiv (2001), "Nonconscious and Contaminative Effects of Hypothetical Questions on Subsequent Decision Making," *Journal of Consumer Research*, 28 (September), 224–38.

Fitzsimons, Gráinne M. and John A. Bargh (2003), "Thinking of You: Nonconscious Pursuit of Interpersonal Goals Associated with Relationship Partners," *Journal of Personality and Social Psychology*, 84 (January), 148–63.

Folkes, Valerie S. and Vanessa M. Patrick (2003), "The Positivity Effect in Perceptions of Services: Seen One, Seen Them All?" *Journal of Consumer Research*, 30 (June), 125–36.

Forster, Jens, Nira N. Lieberman, and E. Tory Higgins (2005), "Accessibility from Active and Fulfilled Goals," *Journal of Experimental Social Psychology*, 41 (May), 220–39.

Hamilton, David L., Lawrence B. Katz, and Von O. Leirer (1980), "Cognitive Representation of Personality Impressions: Organizational Processes in First Impression Formation," *Journal of Personality and Social Psychology*, 39 (December), 1050–63.

Higgins, E. Tory (2002), "How Self-Regulation Creates Distinct Values: The Case of Promotion and Prevention Decision Making," *Journal of Consumer Psychology*, 12 (3), 177–91.

Huffman, Cynthia and Michael J. Houston (1993), "Goal-Oriented Experiences and the Development of Knowledge," *Journal of Consumer Research*, 20 (September), 190–207.

Kivetz, Ran, Oleg Urminsky, and Yuhuang Zheng (2006), "The Goal-Gradient Hypothesis Resurrected, Purchase Acceleration, Illusionary Goal Progress and Customer Retention," *Journal of Marketing Research*, 43 (February), 39–58.

Marsh, Richard L., Jason L. Hicks, and Martin L. Bink (1998), "Activation of Completed, Uncompleted, and Partially Completed Intentions," *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 24 (March), 350–61.

Marsh, Richard L., Jason L. Hicks, and Eric S. Bryan (1999), "The Activation of Unrelated and Canceled Intentions," *Memory and Cognition*, 27 (March), 320–27.

Nowlis, Stephen M., Naomi Mandel, and Deborah B. McCabe (2004), "The Effect of a Delay between Choice and Consumption on Consumption Enjoyment," *Journal of Consumer Research*, 31 (December), 502–9.

Poehlman, T. Andrew, Eric Luis Uhlmann, Ravi Dhar, and John

A. Bargh (2006), "Nonconscious Influences on Consumer Choice," Working paper, Marketing Department, Yale University.

Ratner, Rebecca K. and Barbara E. Kahn (2002), "The Impact of Private versus Public Consumption on Variety-Seeking Behavior," *Journal of Consumer Research*, 29 (September), 246–57.

Shah, James Y. (2003), "Automatic for the People: How Representations of Significant Others Implicitly Affect Goal Pursuit," *Journal of Personality and Social Psychology*, 84 (April), 661–81.

Shah, James Y. and Arie W. Kruglanski (2003), "When Opportunity Knocks: Bottom-Up Priming of Goals by Means and Its Effects on Self-Regulation," *Journal of Personality and Social Psychology*, 84 (June), 1109–22.

Shiv, Baba and Joel Huber (2000), "The Impact of Anticipating Satisfaction on Consumer Choice," *Journal of Consumer Research*, 27 (September), 202–16.

Soman, Dilip and Amar Cheema (2004), "When Goals Are Counter-Productive: The Effects of Violating a Behavioral Goal on Performance," *Journal of Consumer Research*, 31 (June), 52–62.

Spencer, Steven J., Steven Fein, Connie T. Wolfe, Christina Fong, and Meghan A. Dunn (1998), "Automatic Activation of Stereotypes: The Role of Self-Image Threat," *Personality and Social Psychology Bulletin*, 24 (November), 1139–52.

Srull, Thomas K. and Robert S. Wyer (1979), "The Role of Category Accessibility in the Interpretation of Information about Persons: Some Determinants and Implications," *Journal of Personality and Social Psychology*, 37 (October), 1660–72.

Van Osselaer, Stijn M. J., Suresh Ramanathan, Margaret Campbell, Joel B. Cohen, Jeannette K. Dale, Paul M. Herr, Chris Janiszewski, Arie Kruglanski, Angela Y. Lee, Stephen J. Read, J. Edward Russo, and Nader T. Tavassoli (2005), "Choice Based on Goals," *Marketing Letters*, 16 (December), 335–46.

Watson, David, Lee Anna Clark, and Auke Tellegen (1988), "Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Scales," *Journal of Personality and Social Psychology*, 54 (June), 1063–70.

West, Patricia M. and Susan M. Broniarczyk (1998), "Integrating Multiple Opinions: The Role of Aspiration Level on Consumer Response to Critic Consensus," *Journal of Consumer Research*, 25 (June), 38–51.