Chapter 24

Can Satisfaction Reinforce Wanting?
A NEW THEORY ABOUT LONG-TERM CHANGES IN STRENGTH OF MOTIVATION

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The purpose of this chapter is to provide a preliminary, speculative statement of a new motivational theory. We propose that motivation for a certain outcome can gradually change in strength over time as a function of whether it is satisfied or frustrated. Specifically, we propose that satisfaction will increase the strength of the motivation, whereas nonsatisfaction will gradually weaken it.

This theory runs directly contrary to the standard motivational theories, which have long held that satisfaction will reduce drive (Hull, 1943; Spence, 1956). However, we do not present the new view as a contrary or rival view, but rather a compatible one. The difference lies in the time frames. In the very short run, satisfying a motivation will decrease the drive. In the longer run, however, satisfaction will ensure that when the drive does come back, it will do so with increased strength. Satisfaction reinforces desire, and so when desire emerges again, its strength will be increased. Conversely, to want something without getting it is at best an absence of reinforcement and quite possibly is punishing, and so this experience will gradually diminish and perhaps ultimately extinguish the motivation.

STATEMENT OF THEORY

From our perspective, the field of motivation theory is hardly full of metatheory or other integrative, overarching theories. The main—and often implicit—integrative model is what we call the satiation cycle, which is the presumption that motivation conforms to a standard pattern: A person desires something, pursues satisfaction, and achieves satisfaction, whereupon the motivation diminishes substantially. At some point (and for possibly unexplained reasons), the motivation reemerges, and the cycle of seeking and getting starts again.

We have no quarrel with the satiation cycle. We propose, however, that if one adopts a longer temporal view, there is another pattern that
motivation theorists have overlooked. The idealized form of the satiation cycle (wanting, seeking, getting, not wanting, then wanting again) is not a steady state. Rather, when it occurs on a regular basis, the latter wanting may become stronger than the initial wanting, which is what the current theory suggests. Conversely, if the satiation cycle is frustrated, such that wanting and seeking do not meet with satisfaction, the subsequent wanting may be diminished.

Hence our theory proposes two central hypotheses. The first, which we have dubbed *getting begets wanting*, holds that when a motivation leads to satisfaction or some other form of reward and then temporary satiation, the subsequent reemergence of that same desire will be stronger. The subjective feeling of wanting the same outcome will be stronger and possibly longer-lasting as a result of having achieved satisfaction previously. The second hypothesis is that *not getting leads to less wanting*: When a drive repeatedly fails to reach satisfaction, the subsequent desire is likely to be weaker and less frequent. This has also been referred to as “extinction of the wanting response” (A. Baddeley, personal communication, July 24, 2004).

Regarding the second hypothesis: If the satiation cycle theory were fully and simply correct, then the experience of not getting (despite wanting) would bring about a state of subjective torture by means of heightened and uncontrollable wanting. Desire would simply increase linearly over time, forever. Clearly, this is not what normally happens. Rather, we propose that a motivation that goes unmet or unsatisfied will be experienced in most cases as only moderately uncomfortable and unlikable. Furthermore, this state of unsatisfied desire is proposed to grow less uncomfortable with time, in concert with a lessening of desire. In the form of a concrete example, not going jogging for 1 or 2 or 14 days should be experienced by a regular jogger as perhaps unsettling or annoying, but not as a completely horrible state, with the degree of felt annoyance lessening over time and contributing to the weakening of the desire to jog.

Those two central hypotheses require a further assumption: namely, that satisfactions must be somewhat enjoyable in order to strengthen subsequent desire. That is, if the motivation is satisfied in a way that fails to be rewarding—such as if the experience of getting what one has wanted turns out to be either repulsive or simply nonrewarding—then the model would predict that this particular form of getting should not stimulate the wanting response, precisely because the wanting has not been satisfied.

The definition of reward (“liking”) in the current model is rather broad, because what is rewarding to some people and for some drives may not be the same as what is rewarding to other people pursuing other drives. For the model to be broad enough to cover the range of motivations that seem to be described by the pattern of getting and subsequent wanting, the concept of reward must also be similarly broad. We conceptualize reward as being any of the following: a feeling of pleasure from the outcome of a motivated response; satisfaction with an outcome that one deems as the “correct” response in a given situation (e.g., moral or rational decisions that may not feel good but are perceived as the right thing to do); perceptions of progress under novel circumstances or circumstances involving learning; or perhaps a neutral feeling that one is safe, at rest, and out of danger (see Zajonc, 2001, for “all clear” as a reward signal; see also Weiss, 1971).

To reiterate, our theory complements the satiation cycle. Across multiple iterations of the satiation cycle, the strength of the urge will increase or decrease as a function of whether the drive has been met with satisfaction or dissatisfaction. In this chapter we outline the basic tenets of the getting-begets-wanting model (including contrasting it with the dominant models of satiation and catharsis), discuss possible examples, describe various mechanisms to account for it, and illustrate its utility with some applications.

**THE MECHANICS BEHIND THE MOTIVATION**

Why should getting beget wanting? One simple, plausible explanation would invoke reinforcement theory. Wanting something may be regarded as an operant response and, as such, subject to strengthening via positive reinforcement and weakening via negative reinforcement (nonsatisfaction). To be sure, proposing that operant conditioning can modify motivation raises the question of whether such patterns exist throughout the animal world. They may. We think, however, that human beings are plausibly different. The expanded time perspective in humans (the extended now; Vohs &
Schmeichel, 2003) should enable rewards and punishments to influence behavior across broader time spans than are possible for other animals. Roberts (2002) has summarized considerable evidence indicating that operant conditioning among most animals requires that the reward or punishment follow the behavior immediately—that is, within a range of 0.5 to 5 seconds. Wanting something therefore cannot be subject to reinforcement or punishment unless the outcome follows immediately. In contrast, the extended now (Vohs & Schmeichel, 2003) of the human psyche should potentially allow responses to be strengthened or weakened as a function of outcomes occurring after substantially greater delays.

Given the extended now, a subjective feeling of desire for an outcome, object, or state that is followed by satisfaction of that desire should result in a subsequent strengthening of that desire. We readily concede that the dynamics of satiation (cf. Carver & Scheier, Chapter 20, this volume) would entail that the immediate effect of getting what one wants will be a reduction in the desire. However, rather soon thereafter the desire may reemerge, and our central hypothesis is that the reemerging desire will be stronger as a function of having recently achieved satisfaction. The gratification of the desire will be deeply rewarding, and this will reinforce the pattern of wanting. The pleasure of satiation will strengthen the desire.

Conversely, if one desires something and fails to get it, the result will be an aversive state (e.g., frustration) that should effectively punish the person for wanting. (At least, it should be a failure to provide the anticipated reward.) The long-term result should be a reduction or extinction of the wanting response. The subjective state of desire without satisfaction should be aversive. In other words, imagine that a woman has a regular habit of jogging four times a week. If she breaks an ankle and is not able to run for, say, 6 weeks, her desire to run will have been unmet during that time and, from the current perspective, will dwindle. After the 6 weeks, her ankle may be fully recovered, but she may not have the same eagerness and enthusiasm to hit the track that she had 2 months ago. Whether such diminishment of drive is pure extinction (in the sense of lack of reward) or counterconditioning (punishment for wanting) is something we do not know, but in either case the desire should be reduced. Most likely both processes are possible: Desire that meets with no satisfaction, with no emotional result, should lead to gradual extinction, whereas acute frustration and other negative states that attend unsatisfied desires should constitute punishment and produce counterconditioning.

Theorists have recently begun to tackle the issue of wanting as separate from liking, although previous attempts to integrate the two concepts date back to Freud’s (1915/1957) catharsis theory. We discuss the wrongheadedness of the catharsis theory later, in our review of evidence on catharsis and aggression. A more sophisticated analysis by Berridge (1999) makes the point that liking and wanting are separate concepts, which suggests that an outcome is acted upon with a response that brings about either liking or nonliking. This state of liking or nonliking further paves the way for the theory presented here: namely, that liking or nonliking (generally speaking) not only sates desire for the current moment, but also feeds back and subsequently affects (increase or decrease) the future degree of wanting.

We submit that motivational plasticity is a likely moderating factor. The more hard-wired the motivation is (i.e., the more evolutionarily based it is), the less scope there is for waxing and waning. As a result, culturally constructed motivations (such as money and self-esteem) should show more evidence than innate ones (such as food and sex). In this way, basic motivations, such as the need to belong, sex, and food, may not be affected as much as cultural motivations. In the culturally constructed motivations, wanting may be much more stable, and getting is much more variable—but because of the necessity of stimulating the basic motivations to be strong (probably no one has perished because he or she couldn’t satisfy a desire to go running). As an extension, we think of motivational plasticity as an evolutionary adaptation to make people more cultural.

Baumeister (2005) has elaborated a distinction among three levels of motivations. First, there the most basic motivations, such as those for food, shelter, safety, and control, that humans share with almost all animals. Second come the social motivations, such as aggression and belongingness, that are specific to social animals. Third come the cultural motivations, which are more or less unique to humans and possibly a few very close animal relatives. These include the desire for money, fame, a meaningful life, and self-esteem. Baumeister
has observed that the cultural motivations typically build on or elaborate some of the more basic, natural motivations, such as how the desire for money is probably based on the motives for control and for social status. In this scheme, the cultural motivations probably have greater plasticity and may therefore be more subject to the pattern of getting begets wanting, though this is not a strong or central predication of our theory.

One force that is central not only to the current theory, but also to all addictive processes, is the fact that organisms like and strive to feel good. A desire to feel good as an end unto itself is in fact the foundation on which addictive processes are built. If humans were robots, they would not care if an action felt good; they would only make mental notes of whether an action helped to achieve a goal. The clever trick of evolution made the actions that bolstered the odds of securing survival and reproduction feel good. As humans have evolved, feeling good has become a goal itself—and achieving this goal has apparently become paramount, given the myriad behaviors enacted simply because they elicit pleasurable feelings (Baumeister, 2005). As humans have become more oriented toward the conscious experience of pleasure, actions that lead to pleasure have gained in power over the motivation system, thereby setting the stage for getting-begets-wanting effects.

Our theory builds upon and goes beyond an evolutionary explanation of motivation. We differ, first, in that we posit that more than only evolutionarily beneficial behaviors will adhere to the getting-wanting pattern of motivation. We differ, second, in that we posit a specific curve to the forgoing of rewards to which one has been accustomed. On this point, we propose that people slowly but steadily lose motivation for a certain outcome with time since they have last experienced it. The end result is that people will cease to want a certain outcome if they have not been exposed to it in some time. We expand upon these two points throughout the course of this chapter.

**POSSIBLE EVIDENCE**

We are proposing a new theory of motivation, and so almost by definition there exist no empirical tests of it. If there were a large mass of relevant findings that we could reinterpret, then our project might succeed as a literature review, but here again the available information falls short of what we might like. Hence in this section we offer a set of observations that could become relevant to testing our theory. This section might also serve as a research agenda.

**Psychoactive Drugs**

We do not cover the wide variety of psychoactive drugs that can elicit patterns of addiction (also called *dependence*, as per the American Psychological Association's [APA's] current requirements), but it is important to review the criteria for dependence. According to the APA (2000), substance dependence involves the experience of three of the following criteria within a 12-month period: tolerance; withdrawal symptoms (compensatory reactions that are the opposite of the effects of the drug); increasing doses; unsuccessful efforts to cut down intake of the substance; a considerable amount of time spent obtaining or using the substance; interference with important social, occupational, or recreational activities; and continued use despite recognition of physical or psychological problems. More broad than the APA definition, the World Health Organization's (1977) definition of dependence centers on "a compulsion to take the drug on a continuous or periodic basis."

Addiction is sometimes regarded as a peculiar, highly specific pattern of motivation. Our view is that it is not so atypical after all. In any case, addiction seems a relatively straightforward version of the pattern we have hypothesized. The person initially may have no desire to ingest a drug, having never experienced it. The first experiences are rewarding because they bring pleasure, and they cause the person to begin desiring the drug. Repeated and perhaps more frequent experiences cause the craving to intensify, and so the person wants more and takes more. Where initially there was no motivation, now the person has a powerful and frequent desire for the drug.

As the review that follows indicates, many of these criteria can be met by desires for things other than psychoactive drugs. We propose that the behavioral and psychological patterns of people addicted to psychoactive drugs can also be observed in the motivations for aggression, esteem, love, money, and sex, as well as in various other passions.
Catharsis and Aggression

One of social psychology’s early and dramatic contributions to the broader understanding of human behavior was the discrediting of the so-called catharsis hypothesis. This hypothesis, which is traced to Freud (1915/1957), regarded aggression as a drive that steadily builds up until it finds satisfaction in any sort of expression, whereupon it should be substantially reduced (until a subsequent buildup). Freud’s theories about aggressive displacement also held that almost any outlet should satisfy the drive—a view that still enjoys wide support in the popular (and pop psychology) views, which advise people to vent their anger by hammering nails, hitting walls or pillows, or at most fighting each other with foam bats (Bushman, Baumeister, & Stack, 1999).

The catharsis hypothesis was roundly discredited in many experiments studying the effects of provocation on people who, after they were made angry, were permitted either to watch an aggressive film (Geen & Berkowitz, 1966) or to behave aggressively in another context (Geen & Quancy, 1977). The hypothesized reduction of aggression never materialized, and in general the effect went in the opposite direction. Summarizing the results of multiple studies, Geen and Quancy (1977) said that it was time to regard the catharsis hypothesis as wrong and to discard it. More recent work has continued to discredit this hypothesis, such as by showing that even people who believe in the value of venting anger do not show reduced subsequent aggressiveness (Bushman et al., 1999). On the contrary, they too become more aggressive after venting their anger.

We concur with the conclusion that the catharsis hypothesis is wrong. If it were merely wrong, however, then allowing people an aggressive outlet should simply fail to produce any reduction in subsequent aggression, thereby producing a no-difference finding. However, quite commonly persons who aggress or witness aggression end up being more aggressive than others. Why the increase?

A possible answer is that the aggression is pleasant or rewarding in some way, and that this reward serves as a reinforcer for the aggressive impulses. From this perspective, engaging in aggression should elicit a pleasurable response, which then feeds back and produces a desire for more. When people feel angry or upset, they anticipate that aggressing will make them feel better, and so they aggress (Bushman, Baumeister, & Phillips, 2001).

Empirical support comes from research in which some people were induced to kill five bugs, and others were induced to kill only one (Martens, Kosloff, Greenberg, Landau, & Schmader, 2006). A self-paced “extermination” phase followed, which constituted the dependent measure of killing. As would be predicted by the current model, killing increased after participants had earlier killed five bugs, as opposed to one.

Motivation for Esteem

Although the motivation for aggression may represent a negative interpersonal side of the getting-begets-wanting pattern, there are positive interpersonal reinforcers as well. The first social reinforcer on which we focus is a craving for admiration from others, which leads to a need for more self-esteem; next we turn to love for a specific person as an addictive state.

Although many if not most people desire to be seen positively by others, an addiction-like cycle of wanting even more social regard is particularly pronounced among narcissists (Baumeister & Vohs, 2001). Although narcissism has several defining features, one key aspect is the need for greater levels of reassurance and admiration over time.

Narcissists love to hear good things about themselves—a characteristic that is a hallmark of both colloquial and clinical descriptions of narcissists. A more nuanced look has shown that narcissists think of themselves not as any more likeable than others, but rather as deserving more respect and admiration (Campbell, Rudich, & Sedikides, 2002; Rhodewalt & Morf, 1995). This difference may help explain why they are insensitive to the reductions in likeability that accompany a constant need for admiration (Campbell et al., 2002).

Narcissists’ understanding of themselves as special people allows them to embrace favorable outcomes and positive social feedback (which may or may not be a result of their own abilities, given that they respond similarly to contingent and noncontingent outcomes; see Morf & Rhodewalt, 2001) and derive a boost in self-esteem as a result. Since narcissists care tremendously about being held in high regard, the boost to their self-esteem is great (Rhodewalt, Madarian, & Cheney, 1998) but short-lived. The impact of a self-esteem boost is
curtailed among narcissists by two processes, both stemming from the same root: a narcissist’s identity as a special person who deserves good outcomes.

Seeing oneself as special and as deserving of good outcomes means first that a narcissist can quickly assimilate the positive information into his or her self-concept, thereby immediately giving it meaning (e.g., “This happened because I am so terrific”). Making meaning of the positive feedback, however, detracts from its peak self-esteem impact and lessens its durability (Wilson, Gilbert, & Centerbar, 2003). That meaning making shortens the durability of the self-esteem boost is crucial from the standpoint of the getting-begets-wanting model, because it suggests that the craving for more self-esteem will begin that much sooner. For a person who is unaccustomed to fluctuations in self-esteem, conversely, a self-esteem boost may be more difficult to incorporate into his or her self-concept (“How did this wonderful thing happen?”) and thus will have a longer-lasting, more intense psychological impact (Wilson et al., 2003).

The second process that attenuates the self-esteem boost is that a narcissist readily adjusts to the new level of self-esteem and consequently comes to assume that the new level of adoration is now the baseline. That is, when narcissists encounter positive feedback from others, they soak up the attendant increase in self-esteem (see Rhodewalt et al., 1998), and we suggest they further assume that this is the new status quo. Adaptation and the assumption of a new status quo, combined with a deep craving for social approval, spur the narcissists to seek new opportunities to accrue social rewards from which to gain another dose of esteem. One instance of this can be seen in narcissists’ failure to perform well when the chance for public glory is low (Wallace & Baumeister, 2002). Similar also to people with substance dependence, narcissists are constantly on the lookout for new sources. Research on the romantic style of narcissists show that even in the midst of a current relationship, they are highly attentive to other potential partners in the hope that they can get a better-quality mate (Campbell, 1999).

Regarding the withdrawal aspect of addiction, narcissists hold fast to their positive views of themselves and are generally unwilling to put aside their views or the impression that others adore them. Narcissists are ready to see the world as supporting their uniqueness, but when they perceive that their special selves are not being supported by the social environment, they lash out in hostility and aggression (e.g., Bushman & Baumeister, 1998). We think of these responses as being akin to the aversive reactions of substance-addicted individuals who are denied a much-needed dose.

In sum, the narcissistic pattern of wanting increasingly higher doses of self-esteem is closely aligned with the addictive patterns of reward, tolerance, and withdrawal. Narcissists, like those with other addictions, seem to experience the rewards (a rise in self-esteem with social acclaim) more strongly than do non-narcissists, who are happy to be seen positively by others but for whom the constant need to feel highly valued is not present. Narcissists work very hard to feed their esteem addiction, seeking more sources and opportunities for social glory. They are distressed when they face hindrances to getting what they want, and are reluctant to give up the idealized views of themselves they possess.

**Motivation for Love (with a Specific Person)**

Another positive interpersonal exemplar of the getting-begets-wanting pattern concerns love for another person. In this case, the feelings of love, positivity, and optimism are the reinforcers that follow being in the presence of a loved one. The initial stages of love are strikingly similar to those of addiction: a state of euphoria that conjures up urges to be around the loved one in greater doses. Spending hours on the telephone or an entire weekend by the other’s side is not unheard of and only seems to fuel a deeper craving for the other person.

A scholarly treatment of love as addiction was introduced by Peele and Brodsky (1975), who (similar to the current perspective) sought to broaden the use of the term addiction to include a variety of interdependences. Peale and Brodsky thought of love as the ideal case to which to apply principles of addiction, given that two people in love show signs of intense dependence. In their view, each person in the couple comes to rely on the presence of the other in order to feel calm, comfort, and security, or experiences distressing symptoms of withdrawal during separation.

Regarding the feeling of being in love, it is our view that being with the person one loves is like a drug that elicits a euphoric high. The
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high is so pleasurable that the person seeks more time with or attention from the loved one, with the eventual consequence that any time apart renders each lover miserable and experiencing symptoms of withdrawal (cf. the term lovesick). There is never enough time with the lover, and even when one is able to spend 24 hours a day with him or her, this still is not enough. Given, however, that one cannot beg, borrow, or steal more time (as an individual with substance dependence can do with money to get the drug), this ceiling effect means that there is no way to achieve more time together than all the time that is available. As a result, the tolerance that comes from becoming accustomed to the love from this person, combined with the fact that no more time is available to increase exposure to the person, renders each dose of the love somewhat less potent with time. Thus the declining rate of passionate love with time can be explained by tolerance and lack of options for increasing the amount of exposure to the loved one.

There are, however, factors that can rejuvenate the sense of love euphoria. Akin to using a drug in a novel environment, which is known to increase the potency of the drug (as well as to increase the risk of overdose; Siegel, Hinson, Krank, & McCully, 1982), people who perform exciting activities together also report increased intimacy and passion (Aron, Norman, Aron, McKenna, & Heyman, 2000). Being apart from one another is like being denied a drug when one is in a craving state, and when one is finally given a dose of the drug, one needs a smaller amount in order to get the standard (or more intense) effect. Similarly, Baumeister and Bratslavsky (1999) showed that interpersonal conflict between romantic lovers spurs feelings of passion. More broadly, Baumeister and Bratslavsky suggested that any upward changes in intimacy bring about similar changes in passion. Thus, from the viewpoint of the current model, sharing exciting activities (akin to taking the drug in a novel environment), as well as being apart or experiencing conflict (as a temporary denial of intimacy), would bring about increased sensitivity to love such that small doses can have a big effect.

Motivation for Money

Aside from motivations aimed directly at survival or reproduction, the motivation for having money is perhaps the most potent human motivator. What drives people to acquire more money than they could ever possibly need? Aside from considerations such as children’s inheritance, retirement years, and general “rainy day” funds to be saved in case of an unfortunate event in the future, we propose that one reason why people seek to attain more money is that the experience of acquiring money has been rewarding in the past. The more money people get, the more they want. Indeed, the fact that Americans are exceptionally materialistic (Kasser & Ryan, 1993), despite being residents of the richest country in the world, attests to the strong pull of the getting-begots-wanting pattern; from most perspectives, Americans should be the most sated when it comes to material goods, since they have the most.

People’s happiness or satisfaction is contingent not on absolute level of wealth, but rather on relative changes in wealth levels, either higher or lower. Economists speak of the hedonic treadmill to explain these patterns: Increases or decreases in personal wealth make people happier or unhappier; ensuing adaptation processes alter the expected level of wealth or the lifestyle that comes with it; and consequently the new level of wealth is the baseline against which subsequent changes in wealth are experienced. In this way, motivations about money involve processes similar to addiction, with relative adaptation theory echoing drug-related tolerance effects.

Thus, if the current level of wealth sets the baseline for what to expect in terms of forthcoming earnings, then one could examine what happens psychologically when a certain level of expected wealth is not met. Research in consumerism has shown that high materialism is related to lower subjective well-being (e.g., Kasser & Ryan, 1993, 1996; Sirgy, 1998). However, from another position, over three decades of research has pointed to a small but positive link between wealth and happiness (Diener, Suh, Lucas, & Smith, 1999). Why is it that having more money makes most people marginally happier, but a strong desire for having more money makes people less happy and less satisfied with life?

A possible reinterpretation of the data on materialistic values and well-being is suggested by the getting-wanting theory. Work by Sirgy (1998) reported that materialism and well-being are negatively associated—a finding that was interpreted as meaning that a desire to pos-
many material goods is largely unattainable for most people, and therefore that their preferred standard of living is out of reach. Seen from the viewpoint of the current theory, these persons have probably been given nice products in the past and found them to be highly rewarding, therefore stimulating the desire to have more goods. Not being able to satisfy this want, they are disappointed in their material status, and hence have lower subjective well-being. In other words, negative well-being comes from a lack of positive correlation between getting and wanting.

Related to the want for more money or material goods is an addiction to gambling. There are many aspects of gambling that are unrelated to the monetary payoff, but the reward does matter. Research on schedules of reinforcement demonstrated that the partial reinforcement schedule yielded strong responses that were resistant to extinction (Lewis, 1952). Many of these studies were conducted in a quasi-realistic environment, with slot machines paying out monetary rewards (Lewis & Duncan, 1956, 1957, 1958). Probably, rewards as tickets or points that are not exchangeable for money would still be exciting, but far less so—and very unlikely to develop into an addiction-like pattern.

The APA (2000) classifies pathological gambling as a manifestation of impulse control. Impulse control disorders involve inability to restrain oneself against the temptation of desire, and in this case the desire involves betting and winning money. The emotional states that accompany this disorder include mood swings, depression, anxiety, suicidal thoughts, and worthlessness—all signs of other forms of addiction.

Why does money have these effects? Money is, in some ways, the ultimate cultural reward; among interdependent cultures as well as independent cultures, money still drives much of human behavior. When a person has accomplished something that has worth to the culture, the accomplishment is then rewarded with a token of cultural esteem—namely, money. Thus here money is the reinforcer (like praise to a child from a mother) that signifies accomplishment in the eyes of the culture.

Motivation for Sex

As will be discussed later, motivations that are likely to be heavily governed by the getting-wanting process are more culturally constructed motivations (e.g., playing video games) rather than need-based motivations (e.g., eating, sleeping). One exception to the rule may be that sex, under some conditions, may conform to the getting-wanting pattern. At other times, conversely, getting and wanting sex may conform to a more consistent pattern of wanting regardless of getting (or perhaps the reverse, of not getting leading to more wanting; we discuss this possibility later).

Harmonious and Obsessive Passions

We believe that the types of activities that evoke the getting-begets-wanting pattern can range from the physically and psychologically addicting, such as drugs, to more pedestrian
pursuits, such as golf, jogging, cooking, or playing a musical instrument. These latter types of pursuits were the focus of a recent investigation by Vallerand and colleagues (2003), who detailed two different forms of passions. Passions are defined as activities that people like, that they deem quite important, and to which they devote energy and time. A harmonious passion is characterized by joy, positivity, and a lack of negativity about an activity, whereas an obsessive passion is characterized by increased negativity and less positivity about the activity. Furthermore, an obsessive passion is related to negative emotions when one is blocked from engaging in the activity, whereas a harmonious passion does not show such a link. Notably, one particular aspect that seems to divide the two types of passions is the extent to which a passion comes into conflict with other aspects of a person's life; only an obsessive passion shows a strong, positive correlation with the activity as a disruption. For instance, among a community sample of people who continued bicycling outdoors when cold, snowy winter weather arrived in the province of Québec, Canada, there was a significant showing of obsessive passion, as compared to cyclists who cycled in the other three seasons but discontinued cycling during winter weather.

The getting-wanting pattern is prominent in the data on obsessive passions: People who have this type of passion answer affirmatively to items such as "I cannot live without it [the activity]," "I have a tough time controlling my need to do this activity," and "I have difficulty imagining my life without this activity." Vallerand and colleagues (2003) also reported that people with obsessive passions use the activity to regulate their emotions. All of these aspects are concordant with an addiction-like style of first performing an activity and then wanting to do it again and again. We concur with Vallerand and colleagues that much more research is needed in this area, as we believe that there is much convergence between addiction and passions, and that this nexus may be best explained by the getting-begets-wanting model.

Anecdotal observations suggest that many activities can develop from an initial, possibly innate indifference into consuming passions, and it is plausible that these desires are strengthened by satisfaction and extinguished by lack of contact. Being a sports fan seems an excellent model for this, because almost by definition sports contests do not have any material or pragmatic significance. Yet as people watch sports, they can become devoted, passionate followers who keep track of many apparent details (such as sports statistics, survey-based rankings, and betting odds). Conversely, if one stops following a sport on a regular basis, the fascination seems to diminish. Indeed, to some extent the seasonal nature of most sports is dependent on this, or else football fans would become increasingly desperate across the weeks and months after the season ends.

Our impression is that some people follow the news in much the same way. To be sure, factual news may have some impact on individual lives, and so it is arguably rational and self-interested to follow the news. Then again, people who do not follow the news regularly do not seem much worse off because of it, and if one separates the weather forecast from the rest of the news, the benefits of the remainder are even slimmer. Our point is merely that so-called "news junkies" watch and read about news events to an extent that goes far beyond what rational self-interest and pragmatic concerns dictate. In any case, we suspect that following the news for a week will tend to breed increased interest and ultimately an enhanced motivation to follow the news further, whereas ignoring the news for a period of time will allow that interest to dissipate.

Other culturally created pastimes likewise depend on the pattern that getting stimulates wanting. It is hard to argue that people have an innate desire to solve crossword puzzles, watch soap operas, ski, play video games (or billiards or bridge), and so forth, even though some of these might appeal at some level to aspects of basic or innate motivations. (For example, skiing may capitalize on a basic tendency to enjoy motion and speed, and watching soap operas may be based on a basic curiosity, akin to gossip, about people's private affairs.)

Speculation about the Most Basic Desires

Our theory is essentially one of motivational plasticity, because it allows for people's desires to increase and decrease as a function of how regularly satisfaction is available. If we assume that evolution by means of natural selection helped shape the human psyche to be effective at living in culture (Baumeister, 2005), then it would follow that motivational plasticity
would be helpful: It is easier to live in culture if the organism can continue to adjust its cravings according to circumstances than if the basic drives are immune to current, situational pressures. The reason for this is the assumption that a cultural environment is more changeable and more interdependent on other people than a physical environment.

For those reasons, we have emphasized culturally constructed motives as the most likely candidates to confirm the hypothesis that getting stimulates wanting. But what about the unlikeliest candidates—namely, the innate needs that are necessary for survival? A priori, one would suggest that these might be less amenable to environmental influence. In other words, they might remain more constant regardless of satisfaction and nonsatisfaction. Despite this assumption, our impression is that it is at least plausible that the most basic human motives also conform to the pattern that getting begets wanting and nonsatisfaction breeds indifference.

The requirement of food is certainly one of the most basic motivations. It would hardly be surprising if it proved completely impervious to reinforcement and nonsatisfaction in the way our theory proposes. That is, people who are deprived of food should simply become more and more motivated to eat, period. And yet anecdotal reports of starvation suggest that at some point the craving for food does diminish, as if the hunger is extinguished (this effect occurs more strongly among some people than others; see Pinel, Assanand, & Lehman, 2000, for a discussion of the positive incentive value of food). Converging evidence from studies of anorexia nervosa likewise suggests that the desire for food diminishes among people who refrain from eating for a long period of time (Pinel et al., 2000).

Even if the pattern is not true for all food, it may be true for specific foods. Anecdotally, vegetarians report that they lose the desire to eat meat. We have heard this even from reluctant vegetarians, who are pressured by a spouse or by their religion into forgoing meat. Such patterns speak against the explanation that vegetarians do not really like meat to begin with.

In parallel, the late diet mogul Dr. Robert Atkins (1992) proposed that the body's desire for carbohydrates exhibits remarkable plasticity. His views, which are echoed by some devotees (though we do not know of systematic studies of this pattern), suggest that people who live without carbohydrates lose some of the craving for them. Conversely, indulgence in carbohydrates may stimulate increased desire for them. Atkins (1992) and others have noted that pasta-based Italian food was long regarded as fattening, but in the 1970s the anti-fat theories that dominated nutrition research suddenly declared pasta as ideal for losing weight because of its low fat content. As a result, many Americans began consuming more carbohydrates without fat. This shift in national eating patterns was soon followed by an unprecedented rise in the national rate of obesity, which had been stable for decades. Quite possibly, eating more carbohydrates made people crave them more, and so they ate more and gained weight, much to their own discomfiture.

There are reports that the reduction in desire for food (or for a certain food) often reaches a point of either not desiring the food at all or feeling repulsion at the thought of the food. Vegetarians frequently say that they do not miss meat, but their claims are of course also contributed to by the fact that they may not have liked meat initially, which is why (or how) they became vegetarians. Similar reports come from individuals recovering from alcoholism, who no longer drink alcohol and who later report not missing it—or at least not missing it as much as they anticipated they would. These are people who once obviously liked alcohol very much, so they provide somewhat stronger evidence for the not-getting-not-wanting cycle. Stronger evidence comes from people who are put on a specific diet for health reasons, such as people who are allergic to gluten or dairy products. To the extent that substitutes are available (such as soy cheese or gluten-free bread), however, the desire for the food category may not wane, but instead may be satisfied by the substitute food and thus stimulate further demand for the forbidden food. We doubt, however, that craving for water will ever show this pattern, because regular infusions of water are needed for survival, though in some respects fluid consumption can be increased or decreased by culture.

Sleep, however, may be a better bet. Our impression is that some people grow accustomed to lesser amounts of sleep and do not suffer as much as newly deprived individuals. That is, if two people would both naturally like to sleep 8 hours every night, and one regularly does so while the other normally gets only 6, then a
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particular night of 6 hours of sleep will be much more troubling and tiring to the person who regularly gets 8 hours than to the one who has grown accustomed to getting by with less. The latter has learned to get by with less because the body adjusts its need for sleep.

Studies Directly Testing the Getting-Begets-Wanting Theory

We conducted two studies to test tenets of the getting-begets-wanting model. In both studies, the goal was to instigate a motivation for an object or state that did not exist prior to the study's commencement. Then, several days later, participants were tested to see which activity they preferred, as a sign of their motivation for the activity.

In one study, we asked participants to take home either a crossword puzzle book filled with puzzles that ranged in difficulty or a handheld electronic game of solitaire (participants were randomly assigned to condition). A third group, a control condition, performed only the pre- and postexperimental tasks to provide a baseline against which we could compare the two motivation conditions. For five days, participants in the solitaire or crossword puzzle conditions played their game for 20 minutes each day and completed questionnaires about their mood (before and after the activity), their success at the activity, and how much they had thought about the activity during the previous 24 hours. Results showed that as the days progressed, participants enjoyed their respective activities more, thought about them more, and felt more successful. They were also significantly more likely to think about their activity than control condition participants. Furthermore, upon completion of the 5-day experiment, participants dropped off their questionnaires, were thanked and given their experimental credit, and then were asked whether they would perform another short experiment that was ongoing in the department. After consent, participants were led into a different room with a different experimenter and given several filler questionnaires, which were intended to allow the concept of the game task to decay. Next, they were given the choice of performing one of several different types of activities; one of these was their activity for the previous 5 days, but the rest of the activities were different games. The results of this part of the study showed that participants were more likely to chose their assigned activity from the previous “experiment” than would have been predicted by chance.

A second study used a different method to test the getting-begets-wanting process. We focused on the desire to take a nap as an activity that entrains the getting-wanting cycle, such that after people start taking naps, they have a subsequent urge to take naps more often and more urgently. In this study, either participants were asked to take a nap for 15 minutes a day for 4 days of 8 possible days, or they were asked to think about taking a nap for a period of 8 minutes on each of 8 subsequent days. We used this method to test whether merely thinking of the activity was sufficient to instigate the getting-wanting cycle, or whether one must actually perform the activity to show the effects. (We grant that this may not have been the strongest test, insofar as we did not train people to engage in visual imagining, which would have been a stronger test of whether a specific, detailed visualization could stimulate getting-wanting patterns. However, we allowed participants to use the visualization processes they would use when naturally imagining an activity.) Much as in the first study, we queried participants in advance of the study as to whether they enjoyed napping, and then asked during the course of the 8-day trial about the degree to which they enjoyed the activity, found it satisfying, and thought about the activity when they were not performing it. We found that participants in the actual-napping conditions thought about the activity more, were more satisfied, and enjoyed the experiment more as the days progressed—as well as relative to participants in the thinking-about-napping condition. Moreover, we asked participants how much they intended to nap after the experiment was over; those in the actual-napping condition reported they were more likely to nap than those in the thinking-about-napping condition. This last comparison is particularly important, given that simply thinking about napping—without being able to engage in it (participants in this condition were instructed not to nap for the duration of the 8-day trial)—may have evoked a desire to nap that went unmet and therefore may have brought about increased likelihood to nap from that day forward. Instead, it did not seem to arouse desire to nap; rather, those participants who engaged in the activity were more likely to say that they would do it in the future.
Results from two experiments directly testing the getting-begets-wanting pattern support the model. We found that getting people to engage in an activity—be it crossword puzzles, a hand-held electronic game, or napping—led them to like the activity more as their practice of the task went on and, more importantly, resulted in choices or reports that they would perform the activity subsequently. Note that a novelty-based explanation would have predicted the opposite: that participants would prefer a new task when given the choice (in Study 1) and would report no increased desire and perhaps less desire to take naps (in Study 2) at the conclusion of the study. We continue to look for new, creative ways to test the getting-wanting model, and we encourage researchers interested in cultivating new methods to contact us for possible collaborative efforts.

COUNTEREXAMPLES, TYPES OF MOTIVATIONS, AND THEIR RELATION TO THE MODEL

One can imagine outcomes and processes differing from those that have been specified here. For instance, when one considers what happens to an unmet desire, the getting-begets-wanting model anticipates that the desire will wither and decrease drastically, if not fall away altogether. However, one can conjure up instances whereby an unmet desire only serves to strengthen the resolve or desire to achieve a certain outcome. From our understanding, two components are likely to distinguish this from the getting-wanting process: the strength of the initial wanting (before being unmet) and the duration of time in which the desire has gone unrewarded.

Let’s take as an example anecdotal evidence suggesting that sex therapists at times attempt to strengthen sexual desire (literally) by making sure that it is not satisfied (a phenomenon similar to marketers’ attempts to stimulate demand for a product by reducing its supply). This means that a couple is instructed not to have sex for a specified period of time, with the idea that knowing that sex is not available will stimulate urges for sex and then, when sex is allowable again, the couple will experience heightened desire and a better sex life.

First, we submit that one condition that may elicit the pattern of not getting leading to more wanting would be a strong and reliable state of wanting, as is likely to be the case for a motivation as fundamental as sex. This is especially likely to occur for men, whose sex drives are far stronger and more reliable than women’s sex drives (Baumeister et al., 2001; but see our earlier discussion for the emergence of getting-wanting patterns among those with low sex drive). To varying extents, motivations to eat, sleep, have positive and stable relationships with others (Baumeister & Leary, 1995), seek meaning in one’s life (Heine, Proulx, & Vohs, 2006), and fulfill other basic needs may not die down if unmet and may in fact increase. We would expect this pattern for motivations that guarantee human survival, such as reproduction and the abilities increasing the likelihood that one will be an accepted member of a cultural species (Baumeister, 2005). Hence someone who has gone without water for days upon end would probably not turn down the offer of a glass of water, most likely because the state of dehydration would be so miserable that he or she would want to end it as soon as possible.

On the other hand, there are motivations that are more culturally based, and we would expect these motivations to show the getting-wanting pattern to a much greater degree than more basic motivations. Baumeister’s (2005) analysis of humans as a cultural species suggests that culture may have developed the motivational getting-begets-wanting pattern so as to have a mechanism whereby desires outside the few basic motivations could form. Given the wealth and specificity of modern human motivations, it is impossible for nature to have prepared humans with thousands of latent motivations just waiting to be unleashed under the right circumstances. It is more likely that the drive to perform basic behaviors beyond eating, sleeping, having sex, and so on developed on top of the same structure that exists for basic motivations.

Hence, to return to the idea that the strength of the motivation is a crucial component of whether the getting-begets-wanting pattern will arise (particularly after a long period of not getting), cultural motivations are likely to be weaker than basic motivations because they are not, on their own, ultimately necessary for a person’s survival and reproduction. The basic motivations may show more consistent wanting patterns, even in conditions when the getting is variable; the cultural motivations may show a stronger link between the getting and subsequent wanting, whereas the association
may be weaker among the basic motivations for which nature would have been foolish to link survival-related efforts to a factor as tenuous as whether the behavior has been performed in recent times. Hence a sex therapist may in fact be able to stimulate short-term desire between partners by forbidding them to have sex—an effect that occurs in part because the desire for sex is a strong biological drive that may be less affected by getting–wanting influences.

We now move to the second qualifier of whether and when desire increases in the absence of satisfaction—duration of the not-getting period. Let’s consider another example: If the woman jogger in our earlier example was obliged not to jog for a certain period of time, would her motivation to jog increase? Maybe, but only initially. With time we would expect it to decrease, which leads us to our second point that the length of time that the desire has gone unrewarded is crucial to predicting the level of subsequent motivation for the object. As mentioned before, the unique human state of a mental extended now (Vohs & Schmeichel, 2003) means that the getting–wanting influences on behavior can take place along a rather broad time span; hence desire for an unobtainable object may rise at first, but then fall and dissipate to a not-wanting state over time.

This may be one explanation for the observation that wanting an unattainable object may initially increase immediately after it is found to be unattainable. This rise would be expected in part, due to a continuation of the getting–wanting cycle: The person was previously getting and wanting and getting and wanting; thus the wanting may continue to rise in the hopes of leading to attainment. A rise in desire may also be due to reactance in response to being denied access to something one wants (Brehm, 1966). However, with the possible exception of basic evolutionary motivations such as food, need to belong, sex, and so on, we predict that desire for other objects after a period of being unobtainable (which may result in a short burst of increased wanting) should drop and eventually dwindle to a lack of drive for the object.

There is also the consideration that people do grow tired of engaging in certain activities or receiving certain pleasures. For instance, a person who goes on a ski trip presumably does not feel an increase each day in desire to ski. The decrease of desire for sex within a stable relationship may be another example. It may be in these cases that when satisfaction is readily and consistently available, the desire (wanting) ceases to build up very far, so there is nothing to reinforce. Although we have no direct evidence, it seems plausible that some level of wanting needs to be present for the reinforcement effects to occur.

RELATION TO OTHER THEORIES

Our theory bears some resemblance to adaptation-level theory (Helson, 1964), which is a more specific theory regarding the experience of positive states. This theory states that people grow accustomed to what they have and consequently will come to crave a more extreme version. Adaptation-level theory says that people’s initial pleasure wears off with time, and therefore the same level ceases to have the same positive effect as it did initially. Accordingly, they need more or a stronger version to get pleasure from the object again. (Hence the phrase hedonic treadmill, which is often used in conjunction with this theory; Brickman & Campbell, 1971.) Adaptation is a process similar to the getting-begets-wanting process, insofar as it employs concepts akin to tolerance and craving from addiction theory. However, the current theory differs from adaptation-level theory insofar as the getting-begets-wanting model applies not only to having positive states, but also to the denial of positive states to which one has grown accustomed. We have explicated this point above, in the section addressing seemingly discrepant outcomes.

Our theory differs in some crucial respects from the recent theorizing and data on habits as a form of motivation. One model of habit formation (Wood, Quinn, & Kashy, 2002) posits that the more often someone has engaged in a behavior to meet a goal, the more likely it is that the behavior will become a habit, which is to say that it will occur again in the future. Similarly, our model posits that a motivational drive is strengthened to the extent that it has been met with a satisfactory behavior in the past. However, we posit the presence of a desire and, accordingly, the pairing of a desire and a behavior that over time become linked. The main difference between the desire–behavior link described here and the Wood and colleagues (2002) model of habitual behaviors is that the latter lacks a wanting component, which provides the basis for reinforcement.
Habits are devoid of emotion, drive, or conscious thought, whereas each of these is sufficient to stimulate the getting–wanting model. A second, more speculative difference between this habit formation model and the getting–wanting model is that habits are associated with higher feelings of control (Wood et al., 2002), whereas getting and subsequent wanting, conversely, are characterized by lower feelings of control. Not feeling completely in control of one’s wants or of one’s ability to obtain relief again mirrors our emphasis on the getting-and-wanting pattern as a process akin to addiction. Thus a habit may be a behavior that is also predicted from earlier enactments of the behavior, but a lack of reinforcement and consequent unemotional process separates habits from getting–wanting processes.

One common and convincing manner of dividing the various human motivations is to think of a drive either to move toward or to recoil away from a target (good or bad, respectively) outcome (Elliot & Thrash, 2002; Higgins, 1997; Shah & Higgins, 2001). For instance, two sisters performing the same behavior of attending their children’s school plays may be differentially motivated. One sister is driven by a desire to be a good mother (an approach motivation), whereas the other is driven by a desire not to be a bad mother (an avoidance motivation). Theorists (e.g., Carver, Sutton, & Scheier, 2000) have noted the difficulty of achieving avoidance motivations (e.g., the Nancy Reagan-inspired “Just say no to drugs” is a famous avoidance-motivated slogan that failed miserably). Instead, motivation theorists recommend transforming an avoidance motivation into an approach motivation because it tends to yield better outcomes. One reason, although there are several for the success of approach-motivated endeavors may be that approach motivations allow for getting–wanting processes. In approach-motivated goals, a person with a drive to satisfy can use getting–wanting processes to his or her advantage. For instance, a woman may want to be in better shape, so she starts jogging. As long as jogging does not cause her severe physical pain or mental anguish, she may jog again—and the more often she jogs, the more she will want to jog, according to the model. Thus her overall goal of getting in shape is being reached. It is less easy to envision how an avoidance motivation can take advantage of the getting–wanting process (see Wegner, Ansfeld, & Pilloff, 1998, on the difficulty of avoidance-related control strategies), but there may be some cases that are applicable to the getting–wanting process, such as therapeutic desensitization (discussed next). That said, most of the goals that we detail are approach-motivated, and we are encouraged for now about the ready appeal of the model to approach-motivated outcomes.

The therapeutic tactic of desensitization may be one form of the getting–wanting process that uses avoidance-related goals. This tactic is used in clinical psychology settings among patients who are intensely afraid of an object (e.g., a snake). To treat the phobia, these individuals are exposed to the feared object at different levels of intensity (e.g., first handling a picture of a rubber snake, then touching a rubber snake, then handling a picture of a live snake, and finally being exposed to and later touching a live snake). In a sense, then, the motivation to avoid the object (snake) is not reinforced, so it diminishes.

Two parallel mechanisms by which the getting-begets-wanting pattern may be reinforced are the valuation and devaluation effects. The valuation effect (Tversky & Kahneman, 1986) pertains to increased worth of an object that is perceived as allowing for the satisfaction of a need, such as the higher prices that people who smoke are willing to pay for cigarettes when they are in a state of nicotine deprivation than when they have recently satisfied their need for nicotine. The devaluation effect (Brendl, Markman, & Messner, 2003), conversely, has been proposed to explain the lower value of objects that are seen as unrelated to satisfying a need. Due to the valuation effect, when a need is satisfied by a particular object at Time 1, then that object will be known to be need-satisfying and therefore will be wanted more (i.e., will have high value) during subsequent occasions when the need is experienced. If the same object ceases to satisfy the need, it will eventually lose its high valuation and become, through the devaluation effect, less important. Eventually, if nothing can or does satisfy the need, the need itself may wither.

**SUMMARY AND CONCLUSION**

The statement that someone is highly motivated for success implies a general view that motivations are stable characteristics of a per-
son. The tendency to look for stable dispositions has perhaps led motivation theory to focus inadequately on how a person's level of a particular motivation or drive will change over time. The main such focus is what we have called the satiation cycle. When a drive is high, a creature will seek satisfaction, but when satisfaction is achieved the drive diminishes, only to reemerge gradually over time as the satisfaction wears off. When it's been a long time since eating, you feel hungry, which motivates you to seek and obtain food, but after you have eaten you feel less urgency to secure more food.

We have no quarrel with the satiation cycle. It depicts one pattern of within-animal fluctuation in motivation strength, and it seems likely that it is correct. We want to suggest another pattern of systematic fluctuation within the same animal, though possible only creatures with the cognitive flexibility of humans can fully exhibit this pattern.

Specifically, the pattern is what we have called getting begets wanting (and not getting gradually reduces subsequent wanting). Due possibly to the extended now of human mental processing, people can learn from rewards and punishments that come more than a few seconds after the operant. And we suggest that motivational states operate like operants, such that rewarded ones will become stronger and more frequent, whereas unsatisfied ones will gradually diminish in force and frequency.

The broad implication is that human desires will ebb and flow as a result of whether they find and bring satisfactions. A desire for something that is followed by intense, blissful satisfaction is likely to emerge again soon, and so the person will look again for the satisfaction he or she has found. A desire that leads nowhere except to boredom and frustration may be a bit slower to emerge the next time around, and it may not feel as strong the next time.

To have drive states wax and wane as a function of their apparent consequences should create a broad motivational plasticity. It should allow people to become progressively less troubled by hopeless desires, and conversely it should enable them to zero in on activities and spheres where they can and do find satisfaction. In this way, a person's complement of motivated strivings will shift to feature the motivations that are productive and that therefore ultimately improve survival and reproduction.

Ultimately, this process should to some degree shift the balance of power between person and environment. Essentially, it should allow people to change their hierarchies of motives and strivings toward sets that will be workable in their cultural environments. An organism that can reposition its deck of motivations so as to emphasize ones that do bring satisfaction will fit into its environment much better than an organism whose wants and needs stubbornly remain constant, impervious to circumstances and opportunities.

To put it more bluntly: It is better (more useful, more productive, more adaptive) to want what one can get than what one can't get. Thus it would be beneficial for getting to stimulate further wanting, and for chronically unfulfilled yearnings to diminish over time.

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