

Temptation

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Temptations are stimuli in one's immediate environment that prompt thoughts, feelings, and behavior that are contrary to one's goals and values. Temptations rest at the heart of self-control dilemmas—decisions that require choosing between smaller-immediate and larger-distal outcomes (e.g., Mischel, Shoda, & Rodriguez, 1989). Motivationally, self-control can be understood as a conflict between competing motivations—a desire for something now versus a desire for some other outcome of greater magnitude (Fujita, 2011). The ability to secure some small outcome immediately may tempt people to forgo outcomes that are more valuable yet not immediately available. Dieters, for example, might be tempted to abandon their weight-loss efforts when presented with an opportunity to eat chocolate cake now. Substance abusers may struggle to advance their desire to be sober when their drug of choice is freely available. The end of a long, hard day in the office may tempt the sedentary to watch TV rather than work out at the gym. Successful self-control requires overcoming temptations, advancing the pursuit of larger-distal ends over these smaller-immediate outcomes. The omnipresence of temptations in one's social environment poses one of the greatest challenges to achieving and maintaining personal health. Although people may value health, securing and maintaining this end requires overcoming numerous temptations—that is, self-control.

It is important to observe that temptations are subjective in nature. What constitutes a temptation depends on idiosyncratic motivations, values, goals, and desires, which vary from person to person. What represents a temptation for one person may not necessarily represent a temptation for another. First, people must find temptations appealing in some way. Chocolate cake may represent a temptation for someone who likes chocolate. This same object, however, would not represent a temptation for someone who dislikes the taste of chocolate. Second, even when the immediate outcome is desirable in some way, it is only a temptation to the extent that it competes with or undermines some more valuable end. For example, although the allure of cake may represent a temptation for someone concerned with weight loss, it would not represent a temptation for someone unconcerned about their weight. Without this

conflict, rewarding stimuli are simply rewarding stimuli, not temptations. What makes a stimulus a temptation is that it idiomatically makes people “want their cake and eat it too”—it evokes a situation in which two competing desires are activated, only one of which can be satisfied. Critically, of these two competing desires, one can be satisfied immediately yet is of lesser value, whereas the other cannot be satisfied immediately yet is of greater value. In short, for a stimulus to be considered a temptation, it must *both* appeal to immediate desires and impede progress toward more distal but more valued ends.

Self-control is not generally viewed as a problem of knowledge. Self-control failure is defined by acting on a temptation despite knowing in some way that doing so is detrimental to securing more valuable outcomes. To take an extreme example, suppose some dieters erroneously believe that eating donuts will lead to weight loss. It would be inappropriate to label these donuts as temptations for these individuals, just as it would be inappropriate to label their behavior as a self-control failure, since they did not know that eating donuts would harm their weight-loss goals (in this example, the dieters actually thought that eating these donuts would help advance those valued goals). Objects are not temptations if individuals acting on them are not aware implicitly or explicitly that acting on them is detrimental to their broader objectives.

A final, often overlooked, aspect of temptations that is important to consider is that temptations come in the form of both positive *and* negative incentives. One can be tempted by a desire to obtain some smaller yet immediate rewards at the expense of larger yet not immediately available rewards. Examples of this type of temptation include the enjoyment of consuming tasty yet unhealthy food, the highs substance abusers experience from taking harmful drugs, or the hedonic pleasure of engaging in risky sexual behaviors. One might also, however, be tempted by a desire to avoid some smaller yet immediate cost. Examples of this type of temptation include wanting to avoid the discomfort associated with strenuous exercise, the inconvenience and anxiety associated with diagnostic medical tests, and the negative minor side effects of drug regimens. In short, temptations can correspond to desires to obtain proximal rewards or to avoid proximal costs, as both forms have the potential to conflict with and derail more valued goals and objectives.

Deleterious Effects of Temptations

Much of the work done on self-control in the field of psychology has focused on the deleterious impacts of temptations on people’s goal-directed behavior (Kelley, Wagner, & Heatherton, 2015). Generally, this work tends to argue that exposure to temptations leads to self-control failure because it triggers cravings and urges to act on immediately gratifying motivations. For example, tobacco users and drug addicts report the strongest urges to use drugs during, or immediately following, exposure to temptation cues such as drug paraphernalia, pictures of drugs, or *in vivo* presentations of drugs or tobacco (see Carter & Tiffany, 1999).

This research argues that these cravings and impulses influence thoughts, attitudes, and behaviors in the direction of favoring indulgence in the temptation. Evidence for this idea comes from the finding that exposing dieters to tempting food cues (e.g., the smell of fresh baked pizza) leads dieters to report stronger cravings to indulge, which subsequently predicts greater consumption of unhealthy foods (for review, see Kelley et al., 2015). At the neural level, researchers have shown that increases in activity in regions of the brain that process rewards (the nucleus accumbens) in response to temptation cues predict future indulgence in those temptations (Kelley et al., 2015). Indeed, a great deal of research across a variety of health domains has documented cases in which exposure to a temptation cue increases the likelihood of indulgence in that temptation and hence self-control failure.

Underlying much of this work is an implicit (or sometimes explicit) assumption that exposure to temptations automatically activates positive thoughts, feelings, and behavioral tendencies that promote indulgence (e.g., Baumeister & Heatherton, 1996; Fujita, 2011). These automatic impulses influence behavior unless people inhibit or override them. This inhibition process, however, is believed to be effortful, requiring sufficient cognitive and motivational resources. It follows from these premises that any burden on these resources, such as cognitive load or distraction, reduces the likelihood that people will successfully inhibit these impulses, thus leading to an increased likelihood of indulging in temptation.

One especially influential line of research has proposed that this effortful inhibition process not only requires having sufficient cognitive resources but also depletes a motivational resource, much like a battery or muscle (Baumeister & Heatherton, 1996). Proponents of this limited resource model of self-control suggest that all acts of self-control draw on the same limited supply of energy and that an initial exertion of self-control will result in a period of depletion and thus a temporarily diminished capacity to inhibit further automatic impulses that favor temptations. For example, Vohs and Heatherton (2000) showed that dieters who restrained from eating popcorn in an initial task subsequently ate more ice cream on a following task. Similarly, Hofmann, Rauch, and Gawronski (2007) showed that after regulating their emotional responses during an initial movie viewing task, participants' candy consumption was predicted by their automatic attitudes toward candy (which tended to be positive) rather than their dietary restraint standards. These findings support the idea that when people lack the requisite energy to engage in effortful inhibition and are thus "depleted," their behavior is more susceptible to automatic temptation impulses and self-control failure.

Overcoming Temptations

Despite the abundance of research demonstrating the deleterious consequences of exposure to temptations, people also possess a remarkable array of psychological mechanisms and behavioral strategies at their disposal for dealing with temptations.

Motivation to Overcome Temptations

The question of how to overcome and resist temptations is fundamentally a question about how to maintain the motivation to behave in line with valued ends when confronted with the opportunity to indulge in more immediate rewards. The more motivated people are to achieve these more distal ends, the more likely they will be to initiate, engage, and persist in coping behaviors and strategies to deal with and overcome temptations (Trope & Fishbach, 2000). The role of motivation is particularly evident in situations that research suggests people are most vulnerable to temptations—when their cognitive and motivational resources are taxed. For example, providing monetary incentives to increase people's motivation to resist temptation has been shown to improve people's self-control even following periods of depletion (for review, see Masicampo, Martin, & Anderson, 2014). The nature of people's motivation also appears to play an important role in self-control. Research suggests that when people are intrinsically rather than extrinsically motivated—when they are pursuing an end that they are personally relevant and important—they are less susceptible to depletion (see Masicampo et al., 2014).

Research, moreover, indicates that people's beliefs about themselves can impact their motivation to exert the necessary effort to overcome temptations. Motivational theories suggest

that bolstering people's beliefs that they are indeed capable of resisting temptation and procuring more desirable end states (i.e., self-efficacy; Bandura, 1977) should increase their self-control motivation and help them resist temptations. Indeed, it has been shown that increasing people's self-efficacy beliefs about their ability to quit smoking and their ability to lose weight results in greater smoking reduction and more weight loss (for review, see Strecher, DeVellis, Becker, & Rosenstock, 1986).

Beyond self-efficacy, research also points to the important role of people's beliefs about the nature of self-control in their successful resistance to temptations. Research indicates that some endorse a limited view of self-control—a belief that one's ability to resist temptations is finite and can be depleted—whereas others do not (Job, Dweck, & Walton, 2010). Endorsing the view that self-control is limited appears to lead people to give in to temptation more readily, whereas endorsing a more unlimited view appears to motivate more sustained effort to overcome temptation. For example, those who endorse a limited versus unlimited view of self-control tend to eat less healthily, achieve poorer grades, and show less persistence in the face of difficulty (Job, Walton, Bernecker, & Dweck, 2015). Research, moreover, indicates that these beliefs can be changed, suggesting the possibility of leveraging these beliefs about the nature of self-control as a potential point of intervention (Job et al., 2010).

Cognitive Habits

Given sufficient motivation, research suggests that people can develop what might be termed “cognitive habits” to enhance resistance to temptation. In other words, although self-control is often believed to be effortful and involve intensive use of psychological resources, research suggests that people can automate their psychological responses to temptations and be successful in self-control without such resource-intensive effort. Those highly committed to dieting goals, for example, evidence a cognitive readiness to evaluate tempting foods negatively (Fishbach & Shah, 2006). These automatically activated attitudes induce a readiness to resist temptations without requiring effortful deliberation and control.

Beyond evaluations and attitudes, research suggests that sufficiently motivated individuals also develop cognitive associations that bias their thoughts in favor of valued ends rather than more immediate smaller rewards. Self-control should be enhanced to the extent that thoughts about temptations cue thoughts about overriding goals (e.g., “cake” cues “weight loss”), whereas thoughts about those overriding goals does not reciprocally cue thoughts about temptations (e.g., “weight loss” does not cue “cake”). This asymmetric pattern of activation should in turn bias more frequent thoughts about overriding goals rather than temptations. Indeed, research suggests that those committed to their goals are those most likely to display these adaptive asymmetric temptation–goal associations (Fishbach, Friedman, & Kruglanski, 2003). Importantly, people display these associations even under suboptimal processing conditions, such as states of cognitive load—suggesting that these processes may enhance self-control efficiently and without requiring the intensive effort that is commonly assumed necessary for resisting temptations.

It is often assumed that “cognitive habits” to overcome temptations require repeated practice over time, much like a learned skill. However, research suggests that these habits can develop relatively quickly through what is referred to as “implementation intentions” (Gollwitzer & Sheeran, 2006). Implementation intentions are simple “if-then” action plans that link anticipated situations or cues with goal-directed behavior (e.g., “If I'm bored and want a snack, then I will eat an apple!”). They are designed to automate goal-directed behavior such that when a given cue is encountered (e.g., “I am bored”), people will automatically react

with their stated intention (e.g., “eat an apple”). Research has shown that these simple plans can increase health behaviors such as cancer screenings, exercise and physical activity, and dietary restraint and appears to do so by promoting self-control in the face of temptations and under suboptimal processing conditions such as resource depletion (for a review of findings, see Gollwitzer & Sheeran, 2006).

Prospective Control

The most effective strategies that one can employ to overcome temptation may be those involving prospective control. Prospective control seeks to combat the allure of immediate temptations by developing strategies to overcome them prior to exposure. Classic research on self-control has shown that decisions that are made for the future and in the absence of temptations tend to be more in line with people’s valued goals and best interests (Ainslie, 1975). Prospective control facilitates the overcoming of temptation by encouraging people to make decisions to pursue their more valued ends and committing to these decisions in advance of encountering temptations.

Prospective control strategies can be divided into two classes: strategies that seek to regulate the availability of temptations and strategies that seek proactively to regulate responses to temptations. Regulating the availability of temptations involves modifying behavior or selecting situations that make it less likely that one will be encountering temptations and thus less likely that they will feel impulses or desires to indulge the temptations. For example, a dieter who takes an alternative route to work in the morning to avoid the donut shop is utilizing prospective control. In this example, the dieter is purposefully avoiding the sight and smell of donuts that may serve as cues that trigger cravings to eat the donut. By reducing the availability of temptations and avoiding temptation cues, the dieter decreases the likelihood of breaking his diet by eating a donut. Other examples of regulating the availability of temptations and exposure to temptation cues would be a recovering alcoholic staying at home on New Year’s Eve instead of going out to the bars, or a past drug addict refraining from hanging out with drug-using friends. Avoiding temptations from the outset is one of the most effective strategies that people can employ to decrease the likelihood of succumbing to temptation (Mischel et al., 1989). Individuals cannot give in to temptations upon which they never have the opportunity to act.

A second prospective self-control strategy that people can employ to overcome temptation is to regulate potential responses to temptations and precommit oneself to behavior in line with more valued ends. A typical precommitment strategy involves manipulating the contingencies and outcomes associated with acting on the temptation through means such as self-imposed penalties and success-contingent rewards (also referred to as “side bets”; Ainslie, 1975). In one demonstration of self-imposed punishment, Trope and Fishbach (2000) presented people with a medical screening opportunity that promised to provide accurate and useful health information but entailed uncomfortable procedures. To protect their health goals from the temptation of averting physical discomfort, participants agreed to pay higher monetary fines for failing to meet their screening appointment. People also will structure self-control decisions to render rewards contingent on success. In another study by Trope and Fishbach, participants preferred to delay receiving a monetary reward until after (rather than before) they completed the medical screening. By self-imposing penalties and making rewards contingent on success, these strategies served to precommit people to a course of action that served their more valued health goals.

Implementation intentions, which were discussed earlier, can be viewed as a form of prospective control in that they are designed to regulate responses to temptations proactively by

specifying action plans prior to exposure. So while self-imposed penalties and success-contingent rewards regulate responses by changing the cost–benefit contingencies of acting on temptation, implementation intentions regulate responses by automating responses to be in line with more valued ends. As reviewed earlier, research suggests that implementation intentions are indeed an effective means of countering negative influence of temptations, particularly in the health domain (e.g., Gollwitzer & Sheeran, 2006).

The Role of Construal

Another major factor that influences people’s motivations to overcome or indulge in temptations is their construal of the temptation. It is a truism of modern psychology that people’s understanding and experience of the world is subjective in nature. The same object or situation can be construed and experienced by different people in different ways or by the same person in different ways depending on the context and that person’s motivations. For example, consider a candy bar. A candy bar can be construed as “tasty snack” or as a “fattening overindulgence.” Clearly, these different construals have different evaluative connotations and suggest divergent responses to the same target. Construing the candy bar as a “tasty snack” promotes consumption and may promote self-control failure among those concerned about weight loss. By contrast, construing the candy bar as a “fattening overindulgence” promotes restraint and may promote self-control success among those concerned about weight loss. In this way, how people construe temptations may impact their self-control decisions.

Research suggests that changing people’s construals of temptations is a particularly effective strategy for dealing with and overcoming temptations. The less people incorporate the alluring and rewarding features of the temptation into their construals of it, the less likely people are to want and pursue the temptation (Mischel et al., 1989). Similarly, the more people think about the temptation in terms of the more valued ends that it threatens to undermine, the less appealing it is and the less likely they are to succumb to it (Fujita & Carnevale, 2012).

However, one of the major challenges of self-control is that the immediacy of temptations available in the here and now often prompts people to construe them in concrete ways, leading them to be viewed as an isolated opportunity for visceral, tangible, and immediate reward. Such concrete thought tends to lead people to act on these more proximal motivations and indulge in the temptation. Research suggests that key to overcoming this tendency is adopting a more abstract construal (Fujita & Carnevale, 2012). Abstract construals extract the central, stable, and enduring aspects of a target or situation. Consider a choice between a candy bar and an apple. Whereas a concrete construal might focus deliberations on the pros and cons of “this candy” vs. “that apple,” a more abstract construal focuses decision-making processes instead on the more essential, global features of the choice—namely, “hedonism” vs. “health.” In general, whereas concrete construals of temptations tend to highlight their rewarding properties, abstract construals relate temptations to a person’s more valued goals and motives. These construals in turn change the experience of temptations by changing what the temptations mean to people. Abstract relative to concrete construals help individuals transcend the pull of the immediate situation to see the bigger picture and thus to evaluate, plan, and act in accordance with more global, superordinate goals and motives. Extensive research has shown that abstract construals help people resist alluring temptations and enhance self-control (Fujita & Carnevale, 2012).

Of note, research suggests that implementation of many of the psychological mechanisms and behavioral strategies discussed earlier (i.e., cognitive habits, prospective control) may be contingent on more abstract rather than concrete construals. Abstract rather than concrete

construals of temptation, for example, lead people to associate temptations with negativity, which in turn promotes self-control (Fujita & Han, 2009). Similarly, asymmetric temptation–goal associations are more evident when people adopt more abstract versus concrete construals of temptations (Fujita & Sasota, 2011). Moreover, abstract rather than concrete construals promote the use of prospective self-control (Fujita & Roberts, 2010). Thus, people’s construal of temptations appears to represent a key variable in promoting resistance to temptations.

Importance

The ubiquity of temptations in people’s environments makes maintaining and sustaining personal health and well-being goals challenging. Although temptations can undermine health goals, people have at their disposal a wide variety of psychological tools to combat them. Indeed, research suggests that those better able to resist temptations are healthier, happier, and more well adjusted (e.g., Mischel et al., 1989). This link would thus suggest that understanding how people react to temptations and how they successfully overcome them is key to promoting and supporting health behavior change.

Author Biographies

David A. Kalkstein is a doctoral candidate in social psychology at New York University. David’s research focuses primarily on how cognitive processes of abstraction aid in self-regulation, self-control, and social exchange.

Kentaro Fujita is an associate professor of psychology at the Ohio State University. His research focuses on why people so often make decisions and behave in ways that they know are contrary to their goals and values. To understand these self-control failures, Dr. Fujita’s research draws from a number of areas in psychology, including motivation, cognition, self-regulation, and judgment and decision making.

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