TARGET ARTICLE

Self-Regulation Failure: An Overview

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The major patterns of self-regulatory failure are reviewed. Underregulation occurs because of deficient standards, inadequate monitoring, or inadequate strength. Misregulation occurs because of false assumptions or misdirected efforts, especially an unwarranted emphasis on emotion. The evidence supports a strength (limited resource) model of self-regulation and suggests that people often acquiesce in losing control. Loss of control of attention, failure of transcendence, and various lapse-activated causes all contribute to regulatory failure.

Modern American society suffers from a broad range of problems that have self-regulation failure as a common core. Crime, teen pregnancy, alcoholism, drug addiction, venereal disease, educational underachievement, gambling, and domestic violence are among the social problems that revolve around the apparent inability of many individuals to discipline and control themselves. Although economic, political, and sociological causes may be relevant to such issues, the proximal importance of self-regulation failure to many cases is undeniable. Moreover, there are many additional problems with self-regulation that cause considerable suffering to individuals even if they do not menace society at large (e.g., eating binges, spending sprees, procrastination, and inappropriate goal setting).

Researchers in the psychology of the self have recently begun to recognize that one of the most elusive, important, and distinctively human traits is the capacity of human beings to alter their own responses and thus remove them from the direct effects of immediate, situational stimuli. An understanding of self-regulation failure would therefore have considerable value not only for its applications to widespread social and personal problems, but also to basic research and the construction of an adequate theoretical account of human selfhood.

Although conceptions of volition and self-control have long been of philosophical, religious, and legal interest, only recently have psychologists focused on the extent to which people influence, modify, or control their own behavior. Pioneers such as Mischel (1974) and Bandura (1977) proposed and demonstrated that human beings do seem to have the unique capacity to alter their own responses. Over the past 2 decades, theory and research have advanced the understanding of self-regulation considerably (Carver & Scheier, 1981; Kanfer & Karoly, 1972) and models of self-regulation have been applied in diverse areas (e.g., education, drug treatment, emotional control, and task performance). Despite the substantial progress in studying how self-regulation can function, however, relatively little effort has been devoted to direct examination of failures at self-regulation (cf. Kirschenbaum, 1987).

The purpose of this article is to offer a theoretical treatment of self-regulation failure. We have recently reviewed the multiple literatures dealing with the many specific spheres of self-regulation failure (Baumeister, Heatherton, & Tice, 1994), and in this article we articulate some of our main conclusions. Because the empirical literature on these topics is extensive, we cite evidence here only to illustrate key points. A comprehensive review of current research knowledge is beyond the scope of this article, and interested readers are referred to the book.

Self-regulation is a complex, multifaceted process, and so it can break down in several different ways. Therefore, it is not possible to identify a single cause or causal sequence that will explain all instances of self-regulation failure. Instead, there are several main pat-
The most basic distinction is between underregulation and misregulation (e.g., Carver & Scheier, 1981). Underregulation entails a failure to exert self-control; often, the person does not bother or does not manage to control the self. In contrast, misregulation involves the exertion of control over oneself, but this control is done in a misguided or counterproductive fashion, and so the desired result is not achieved. At present, there is more research available on underregulation than on misregulation, and it also appears that underregulation is the more common sort of problem. After a brief discussion of the nature of self-regulation, we examine underregulation first and then proceed to misregulation.

Three Ingredients of Self-Regulation

Feedback-loop models of self-regulation, such as the one elaborated by Carver and Scheier (1981, 1982; also Carver, 1979), indicate three main ingredients of self-regulation, and these suggest three main possible pathways for self-regulation failure. The first ingredient is standards, which are ideals, goals, or other conceptions of possible states. Without clear and consistent standards, self-regulation will be hampered. Therefore, either a lack of standards or a dilemma of conflicting, incompatible standards can prevent effective self-regulation. There is indeed evidence that such inner conflicts can impair action and undercut efforts at self-regulation (e.g., Emmons & King, 1988; Van Hook & Higgins, 1988). Moreover, inappropriate standards (i.e., those that are too high or too low) can also hamper and thwart self-regulation (Heatherton & Ambady, 1993).

The second ingredient is monitoring. The “test” phase of feedback-loop models involves comparing the actual state of the self to the standards, and to do that the person must monitor him- or herself. Keeping close track of one’s actions and states is often vital to successful self-regulation, and so when people cease to monitor themselves they tend to lose control. Eating binges, for example, seem to occur when the person ceases to keep track of what he or she is eating (for a review, see Heatherton & Baumeister, 1991; Polivy, 1976). A particularly important factor is alcohol consumption, which reduces self-attention and therefore makes people less able or less willing to monitor themselves (Hull, 1981). Alcohol consumption has been found to promote self-regulatory failure in many different spheres (Baumeister et al., 1994; Steele & Southwick, 1985). The failure to judge one’s abilities accurately may also impede successful self-regulation.

For instance, people who underestimate their abilities may fail to initiate attempts to achieve their goals.

The third ingredient of self-regulation is contained in the operate phase of the feedback loop. The idea is that when the test phase reveals that the current state falls short of the standards, some process is set in motion to change the current state. Past theories have not devoted a great deal of attention to how these processes actually function to bring about change, partly because they may have seemed complex and heterogeneous. Still, it is clear that self-regulation failure can occur despite clear standards and effective monitoring, simply because the person is unable to bring about the desired change.

We have found it useful to conceptualize such operate changes in terms of one internal process overriding another. Certain responses are set in motion, either by innate programming, learning, habit, or motivation—and self-regulation involves overriding them. In other words, a great many instances of self-regulation involve a response that is initiated by a combination of latent motivations and activating stimuli; self-regulation is a matter of interrupting that response and preventing it from running to its normal, typical outcome. For example, a beer commercial (an activating stimulus) may bring to the fore one’s liking for alcohol (a latent motivation) and create an impulse to consume alcohol; however, the person who is trying to reduce his or her drinking will seek to override the response sequence and prevent it from leading to the consumption of such a beverage.1

In many cases, impulses are automatic in the sense of being beyond a person’s volitional control. Thus, the term impulse control is misleading. Self-regulation is a controlled process that overrides the usual consequences of an impulse rather than preventing the impulse from occurring. The problem is not that people have impulses; rather, it is that they act on them.

Self-Regulatory Strength: A Limited Resource

We turn now to the issue of what enables a person to override a habitual or motivated response sequence. How does the pacifist turn the other cheek and how does the dieter refrain from eating his or her fill? It is clear

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1We use the term impulse to refer to an inclination to perform a particular action on a particular occasion. Thus, impulses are highly specific in contrast to motivations, which may be general or abstract. Impulses arise when motivations encounter specific, activating stimuli in a particular situation. For example, hunger is a motivation, whereas the wish to devour one of those fragrant, sizzling cheeseburgers on the grill is an impulse.
that impulses and motivations vary according to strength, and the weaker ones are those that are easier to control and stifle. If the impulses have strength, then whatever stifles them must presumably consist of some greater strength. Our own research (Baumeister et al., 1994) led us to concur with other scholars such as Mischel (in press) who have suggested that strength models are apt and useful for self-regulation theory. Underregulation is thus often a matter of the inadequacy of one's strength to override the unwanted thought, feeling, or impulse. More precisely, our overview of the self-regulation literature suggests that each person's capacity for self-regulation appears to be a limited resource, which is renewable over time and can be increased or decreased as a result of gradual developments or practice. One cannot regulate everything at once.

Adopting a strength model of self-regulation has several important corollaries for understanding self-regulatory failure. There will be important individual differences in self-regulatory strength, which should be consistent across a variety of spheres. There is some evidence to support this view. Thus, individual differences in the capacity to delay gratification predict a variety of interpersonal traits and behaviors that reflect self-control (Funder, Block, & Block, 1983) and can even predict academic performance over a decade later (Mischel, Shoda, & Peake, 1988; Shoda, Mischel, & Peake, 1990). Also, the same individuals show self-regulatory deficits across a broad spectrum of both legal and illegal behavior. A typical criminal, for example, will not specialize in one particular kind of illegal activity, but rather will commit a variety of crimes, and he or she will also be prone to smoke cigarettes, spend impulsively (thereby dissipating any financial gains from crime), become involved in unwanted pregnancies, fail at marriage, abuse alcohol and drugs, have high absenteeism at work or school, and engage in other behaviors indicative of poor self-regulation (Gottfredson & Hirschi, 1990).

The second implication of a strength model is that a person can become exhausted from many simultaneous demands and so will sometimes fail at self-control even regarding things at which he or she would otherwise succeed. As a limited resource, self-regulatory strength can be temporarily depleted. At any given time, a given person will only be able to regulate so much of his or her behavior, and so when strength is depleted by demands in one sphere, self-regulatory breakdowns may occur in others. In particular, fatigue and overexertion will deplete the person's strength and hence undermine some patterns of self-control.

The evidence regarding such short-term depletions is not extensive but it is broad and consistent. In particular, many patterns of self-regulation break down when people are under stress, presumably because the stress depletes their self-regulatory capacities. People become more emotional and irritable, they are more likely to increase smoking, break diets or overeat, abuse alcohol or other drugs, and so forth when under stress. Glass, Singer, and Friedman (1969) found that coping with stress seemed to have a "psychic cost" that took the form of lowered self-regulatory capacity, as measured by subsequent capacities to make oneself persist in the face of frustration and to concentrate on a difficult task.

Likewise, if we assume that people are generally fatigued late in the evening, then self-regulation should break down more at such times than at others. Evidence about the timing of such self-regulatory failures is consistent with the fatigue hypothesis (although some of these effects are confounded by the fact that people are more likely to have consumed alcohol late in the day and alcohol impairs monitoring, thereby also weakening self-regulation). Diets are most often broken late in the evening; sexual acts that one will later regret are likewise most common then; people smoke and drink most heavily late in the day; most violent and impulsive crimes are committed between 1:00 and 2:00 a.m.

These first two implications of the strength model furnish a basis for predicting the intercorrelations among indications of self-control in multiple spheres. If there are individual differences in self-regulatory strength, then over the long run there will be positive correlations because strong people will tend to have relatively high levels of self-control in all spheres. On the other hand, in the short run the correlations will be negative because devoting one's self-regulatory efforts to one sphere will take away what is available for controlling oneself in other spheres. Researchers interested in overlaps between self-regulatory effectiveness in different spheres may need to be alert to these opposing empirical tendencies.

The third implication is just as it is possible to increase strength by regular exercise, so self-regulation should become easier the more one does it. This has been asserted by James (1890/1950) and many other observers of human behavior but we do not know of strong empirical tests of the hypothesis. In this connection, it is of considerable relevance that new programs for prisoners (e.g., "boot camps") involve military-style training, in which an attempt is made to instill self-discipline by means of enforcing external discipline. Although the effectiveness of these programs has yet to be decided, we predict that their success at rehabilitating prisoners will be in proportion to their success at strengthening self-regulatory capacities.
One implication of the notion of increasing strength is that people may become better at practicing self-denial or impulse control over time. Ironically, this could mean that people who repeatedly quit smoking or go on diets may gradually become more effective and successful. Schachter (1982) contended that people improve at quitting smoking with practice. Prochaska and DiClemente (1984, 1986) argued that people become better at quitting a variety of addictions when they do it multiple times. Of course, the fact that they are quitting again means that the prior effort to quit was not a permanent success but it may be the case that one learns to quit through successive approximations. There could be several reasons for progressive improvement at impulse control but one of them clearly is the possibility of increasing strength.

Inertia and Attention

A fair amount of evidence suggests that psychological responses are marked by something akin to inertia, which makes them difficult to interrupt. The term inertia is borrowed from physics, in which it referred to the (now discredited) theory that bodies in motion acquired a force that sustained them in motion.

We propose that psychological processes do acquire a kind of inertia (unlike physical processes). Indeed, the longer a response has gone on the more inertia it seems to have and hence the more difficult it is to override. This theoretical principle is not new (indeed, the Zeigarnik effect involved the principle that interrupting an activity becomes more strenuous as it nears its completion) but its importance for understanding self-regulation has been neglected.

Effective self-regulation often seems to involve intervening as early as possible. For example, if the goal of self-regulation is the preservation of chastity, it is often more effective to interrupt sexual activities at the first kiss rather than after an hour's worth of escalating physical contact. The effectiveness of early intervention may well reflect the operation of inertia: To minimize inertia, self-regulatory efforts may be most profitably focused on the very first stages of all response sequences.

Most models of the cognitive control of behavior begin with attention because noticing something is by definition the first stage in information processing. As a result, one would expect that managing attention would be important in many or all spheres of self-regulation, and, as a corollary, the loss of attentional control will be a common first harbinger of self-regulatory failure. Our review of multiple, empirical literatures confirmed these hypotheses. Over and over, we found that managing attention was the most common and often the most effective form of self-regulation and that attentional problems presaged a great many varieties of self-regulation failure. With controlling thoughts, emotions and moods, task-performance processes, and appetites and impulses, the effective management of attention was a powerful and decisive step, and self-regulatory failure ensued when attention could not be managed (Baumeister et al., 1994; see also Kirschenbaum, 1987; Wegner, 1994).

For our purposes, the key point is that the importance of attention is at least partly attributable to the inertia principle. Effective management of attention can prevent the unwanted response sequence from starting, which makes it relatively easy to prevent the unacceptable outcome. In contrast, if attention escapes control it can set the unwanted responses in motion, and once they acquire inertia they are more difficult to control. In simple terms, it is easier to avoid temptation than to overcome it.

Transcendence

One particularly important form of attention control is transcendence. Transcendence is a matter of focusing awareness beyond the immediate stimuli (i.e., transcending the immediate situation). This does not necessarily mean ignoring the immediate present so much as seeing it in the context of more distal concerns (e.g., values, goals, and motivations). Phenomenologists have emphasized transcendence as a particularly important capability of human consciousness.

Dieting offers a clear example of transcendence. Human beings may be the only species on the planet in which hungry individuals will voluntarily refuse to consume readily available, appealing food. Effective dieting does, however, require the person to transcend the effects of the immediate stimuli. By contemplating long-range goals and concerns, such as how one will look in a bathing suit next summer, people are available to frame the attractive food as a problematic or dangerous obstacle rather than an appealing morsel.

Therefore, one proximal cause of self-regulation failure is the failure of transcendence. When attention slips off of long-range goals and high ideals and instead becomes immersed in the immediate situation, self-regulation is in jeopardy. Whatever functions to direct attention to the here and now will tend to weaken the capacity for self-regulation. This may include both situational and dispositional factors. Situational factors include those that promote deindividuation. There are also individual differences in the extent to which people are influenced by environmental cues. Schachter’s
cially prone to be influenced by external cues about eating. The capacity to delay gratification is one of the important roots of self-regulation theory. A successful delay of gratification requires the person to forego immediately available rewards in favor of larger but remote ones, and keeping oneself from thinking about the immediate rewards is often a vital part of that success (Mischel, 1974; Rodriguez, Mischel, & Shoda, 1989). Karniol and Miller (1983) showed that self-regulatory failure (in this case, the failure to choose the delayed gratification) is often preceded by shifts in attention to the immediate reward. This shift in attention to the immediate situation is a form of transcendence failure.

Transcendence is often a vital aspect of emotion regulation. People overcome anger, frustration, or disappointment by looking beyond the immediate situation. They imagine how things could have been worse, conjure up possible positive outcomes that may derive from the current setback, or speculate about possibly beneficial motives that the other (offending) person may have had. Emotion is typically linked to a particular value judgment about a particular event or situation; by transcending the situation, one can escape from the emotion that is linked to that value judgment.

Indeed, it is plausible that the contribution of emotional distress to self-regulation failure is often mediated by effects on transcendence. The interrelations among emotion, attention, and self-regulation are not well understood and so comments must be speculative, but we propose the following: Emotion increases the salience of whatever produces the emotion and so attention will tend to focus on whatever has prompted the emotion. Most commonly, something in the immediate situation is the cause and so emotion tends to have the effect of concentrating attention in the here and now—thereby thwarting transcendence and making self-regulation more difficult. Violent behavior provides an important illustration of such effects of emotion. Violence typically results because the person becomes angry at some pressing stimulus—a rival who insults one, a child who cries excessively, a spouse who frustrates one’s wishes (e.g., Berkowitz, 1989). The anger keeps attention confined to the immediate, provoking situation and so efforts to restrain one’s violent impulses are made more difficult. In their discussion of the role of self-control failure in causing crime, Gottfredson and Hirschi (1990) pointed out that long-range considerations would often militate against violence. Thus, most murders bring far more harm than benefit to the perpetrators themselves, and indeed many murderers can hardly recall even the next day what made them so violent. However, in the heat of the moment (i.e., the short-term attentional focus caused by high emotion), people fail to consider long-range implications and act in response to short-term concerns, which may include winning the dispute at all costs and by violent means.

A second mechanism by which emotional distress may thwart transcendence and impair self-regulation occurs when the source of emotional distress is not present in the immediate situation but is highly available in memory (e.g., just after one has received a major rejection or failure experience). Under such circumstances, people will seek to distract themselves to prevent themselves from thinking about the upsetting event; immersion in powerful, short-term stimuli may be an effective means. Unfortunately, some of the most compelling short-term stimuli are precisely the things that the person is otherwise trying to control (e.g., alcohol, sweet foods, or drugs). A great deal of binge behavior, whether it be shopping, gambling, eating, drinking, or having sex, seems to result when people are seeking to keep their attention focused on immediate, concrete stimuli as a means of keeping it away from some threatening or upsetting thoughts.

To be sure, emotion is not invariably bad for self-regulation. Some emotions, such as guilt, may even help self-control (e.g., Baumeister, 1995; Baumeister, Stillwell, & Heatherton, 1995). Still, these instances are consistent with the general arguments about transcendence because they refer to cases in which the emotion facilitates self-regulation by actually promoting transcendence. A dose of anticipatory guilt may help the person realize that what he or she is about to do may cause damage to important, desired relationships or have other unwanted consequences, and so the person may interrupt the pursuit of some short-term goal or reward. By calling attention to distal outcomes and meaningful implications, guilt helps the individual transcend the immediate situation and its temptations, thereby aiding self-control.

Transcendence is even relevant to some aspects of task performance, which is an important sphere for self-regulation. In particular, persistence at difficult, boring, and unpleasant tasks is a challenge that is endemic to many forms of work, and such persistence often requires the person to transcend the immediate situation, which on its own merits would seemingly favor quitting. Sansone, Weir, Harpster, and Morgan (1992) showed that persistence on boring tasks is facilitated by mentally transforming them into more interesting processes. Indeed, studies of blue-collar manufacturing workers have shown that such workers...
tend to restructure their tedious, repetitious tasks into elaborate games; when they are successful, they become totally engrossed in these games to the extent that they continue to talk about them even during breaks and lunch hours (Burawoy, 1979). By extension, when people are unable to effect such transcendent reconceptions of these tasks, they are more likely to quit, which can be a severely problematic form of self-regulation failure.

We noted earlier that alcohol was implicated as one cause of a great many varieties of self-regulation failure. Although we suggested that alcohol’s impairment of self-monitoring may be one mechanism by which alcohol has these effects, it is plausible that another one is through the impairment of transcendence. Steele and Josephs (1990) coined the term alcohol myopia to describe the way alcohol limits attention and restrains it to a few proximal stimuli. Their argument can readily be extended to say that alcohol impairs the sort of long-range, abstract, meaningful, or mentally flexible thinking involved in transcendence (and, in fact, alcohol does seem to increase the responsivity to immediate stimuli ranging from violent to sexual to appetitive).

Thus, self-control often involves seeing the immediate situation in terms of long-range concerns, values, and goals (see also Carver & Scheier, 1981; Rachlin, 1995; Vallacher & Wegner, 1985). The ability to maintain attention and focus on these long-term issues is one ingredient of self-regulatory strength. In general, factors that bind attention to the immediate situation and pressing stimuli will tend to contribute to self-regulation failure.

**Acquiescence and Overriding**

One of the most important yet controversial aspects of self-regulation failure is the question of the extent to which people acquiesce in it. The question can be appreciated by considering two contrary images of self-regulation failure. Both of them depict a person who feels an impulse to act in a way that runs contrary to his or her normal standards of proper, desirable behavior. Self-regulation failure means acting out that impulse and thus violating the person’s standards. In one image, the well-intentioned person is overwhelmed by an irresistible impulse that no normal person could restrain. In the other, the person simply decides to give in to the impulse rather than go through the exertion and frustration that would accompany self-restraint. Thus, is self-regulation failure a matter of lazy self-indulgence (i.e., heedlessly giving in to temptation) or is it a matter of being overcome by powerful, unstoppable forces?

This question has important implications. One set concerns basic theoretical questions of conscious control and intrapsychic conflict. Another concerns legal issues: Are violent crimes the product of irresistible impulses or deliberate choices? Political issues such as whether addicts, alcoholics, spouse abusers, and others should be treated as needy victims or as criminal degenerates also revolve around this question. Given the sweep of these implications, it is not surprising that there are ample arguments on both sides in both the professional journals and in the popular and mass media. We think that an additional reason for the existence of both sides of the argument is that there is in fact a large, gray area. In our view, self-regulation failure is rarely a matter of deliberate, premeditated choice, but then again it is not often a matter of irresistible impulses either.

During the period we spent reading about and studying self-regulation, we grew increasingly skeptical of the irresistible impulse notion. By definition, such impulses cannot be resisted and so they refer to things people would do even if someone were holding a gun to their heads and threatening to kill them if they did the forbidden acts. Despite the popularity of the notion of irresistible impulses in courtroom settings, it is readily apparent that people could and would refrain from most behaviors if their lives depended on it. The vast majority of impulses are resistible.

Thus, the popular image of the passive victim overcome by powerful, irresistible impulses cannot be accepted except in a few rare and extreme cases (e.g., the fact that people cannot indefinitely postpone certain biological functions such as falling asleep, urinating, or breathing—all things that people will eventually do even despite a gun to the head). In reviewing the empirical literature on self-regulation failure, we found over and over that there was significant evidence of deliberate, volitional participation by the individual in the forbidden activity. These findings and patterns do not rule out the possibility that there are points at which people feel helpless and passive and are overcome by strong impulses. They do, however, suggest that the full episode of self-regulation failure usually involves at least some elements of active acquiescence.

Let us consider some examples in which there is evidence of acquiescence in self-regulation failure (Baumeister et al., 1994). Cigarette smoking is a good example because in the contemporary United States it is typically inconvenient, if not outright difficult, to smoke. The would-be smoker must obtain cigarettes and then find a time and place where smoking is still allowed. The person must then go through the motions of lighting up and inhaling. Smoking is well recognized as a powerful addiction and as a source of strong
cravings and unpleasant withdrawal symptoms, all of which may be beyond the smoker’s control; however, smoking is not a matter of simply going limp, becoming passive, and letting it happen.

Consuming alcohol (or taking other drugs) is subject to a similar analysis. Despite the undeniable addicteveness of alcohol, and despite popular images that many people cannot control their drinking, it is clear that most people who drink alcohol are actively acquiescing in the process. Ordering or pouring a drink and raising a glass to one’s lips are deliberate, volitional acts. Binge eaters likewise often describe their eating as out of control, yet in many cases the person must acquiesce to the extent of ordering or preparing food, putting it into one’s mouth, and chewing and swallowing it.

Procrastination is another common self-regulation problem and procrastinators may often feel like passive, helpless victims, especially during the eventual crisis when the deadline looms and the remaining time is inadequate for the task. Procrastination, however, often involves actively doing other things instead of the deferred activity. Back when there was ample time to begin work on the task, the person was hardly overcome by an irresistible impulse to go out for a beer or watch television instead. Rather, the person actively participated in these other activities.

If procrastination involves a failure to get started, performance is also affected by whether people persist or quit, and so the matter of deciding when to quit can be an important aspect of the self-regulation of performance. Although there are occasionally cases in which sheer exhaustion forces the person to stop (e.g., when marathon runners collapse and are carried away on stretchers), usually the decision to quit is much more fluid and negotiable and the person could have gone on a little longer. Quitting during task performance usually occurs well before the point of full exhaustion. The person somehow selects a point at which to quit and then goes and does something else.

Delay of gratification is one of the prototypes of impulse control; yet, in many studies of delay of gratification, the participant must make some active response to obtain the immediate reward. Making that response is often a matter of deliberate action. Outside the laboratory, failures to delay gratification may often involve even more extensive and obvious forms of active acquiescence (e.g., when the person drops out of college or empties a savings account).

There are of course instances in which the person’s acquiescence is even more extreme. People do sometimes seem to arrange to lose control. Marlatt (1985) described the case of a compulsive gambler who was planning a trip from San Francisco to Seattle and at the last minute (and following an argument with his wife) changed the planned route to pass through Reno, Nevada, which he claimed would be more scenic. (Seattle is north of San Francisco; Reno is east of it.) In Reno, he needed change for a parking meter and so entered the nearest building, which just happened to be a casino. While in the casino, he decided to place a single bet to test his luck. The ensuing 3-day gambling binge was perhaps not deliberately planned in advance but the decisions that brought him there seem disingenuous. In similar fashion, people do pick fights in which they lose control, manufacture reasons for consuming alcohol, place themselves in tempting situations, and engage in other patterns that seem as if they were conspiring to thwart their own self-regulatory programs.

Apart from such extreme cases, it would usually be inappropriate to say that the person planned and engineered the entire scenario in advance; in fact, the person may often be quite chagrined by the eventual outcome. To simply say that the self-regulation failures reflect deliberate free choice would therefore be somewhat misleading. On the other hand, the stereotype of the helpless, passive victim overwhelmed against his or her will by uncontrollable impulses is not accurate either. The person did participate, more or less freely and deliberately, in the actions that constituted the self-regulation failure.

In order to resolve the issue of acquiescence, it is first necessary to appreciate that there are often costs and disadvantages to self-control. Foregoing an immediate, desired pleasure is only one of them. Frustration, withdrawal, and feelings of deprivation may be acute. Moreover, if our hypothesis of self-regulatory strength is correct, then maintaining self-control and resisting temptation can be a tiring and draining experience that can even consume resources that may be needed for other acts of self-control.

Resisting temptation is thus, in many cases, an ongoing (or perennial) and unpleasant exertion. Its difficulty is likely to fluctuate as a function of the strength and salience of the competing impulse and of the self-regulatory capacity. An irresistible impulse is hardly necessary for self-regulation failure; rather, a moment during which the impulse is especially strong or attractive, while the self-regulatory strength is temporarily depleted, may be sufficient. At some point, perhaps, the costs of exerting control may simply seem too high, whereas the anticipated benefits may seem too remote or uncertain or simply too small and so the person gives in.

We are thus portraying the abrogation of self-control as a deliberate choice, but it is one that is made in a very narrow sphere and is strongly influenced by internal and external factors, to which we shall return in a moment. Apparently, however, people often regard the
decision as a single event that is not to be reconsidered, at least not until much later. Once the person decides to start eating, drinking, smoking, having sex, venting emotion, spending money, or assaulting someone, the person will often go ahead and participate actively in the process.

There is thus an important asymmetry in the way many people confront internal conflicts surrounding self-regulation. Maintaining self-control is treated as an ongoing process of negotiation and the fact that one resisted temptation a few minutes ago does not necessarily free one from facing a similar decision again. However, abandoning self-control is treated as if it were a single decision that is not subject to further reconsideration.

Why do people fail to reconsider a decision to go ahead and indulge themselves, abandoning restraint? Several reasons can be suggested. The period of indecision is likely to have been one of anxiety and uncertainty and, in contrast, the decision to go ahead is likely to be marked by relief (and often pleasure). To return voluntarily from a state of relief and pleasure to one of anxiety and uncertainty would certainly be an unappealing transition. Moreover, the unpleasantness of the state of denial and inner debate would be enhanced by guilt or other forms of anxiety resulting from the initial indulgence.

As an example, one may consider a hypothetical case of a dieter tempted to enjoy an appealing dessert. The phase of confronting and resisting temptation is probably an unpleasant one, marked by the internal effort of self-denial and salient thoughts of the foregone pleasure, as well as an ongoing inner debate. Finally, the person decides to go ahead and have the dessert after all, possibly under the influence of some available excuse (e.g., so as not to offend the hostess). This decision most likely brings pleasure and relief, and as the person enjoys the first few bites, the idea of reconsidering—of returning to self-denial or even of just renewing the inner debate about whether one ought to be eating this—would be most unappealing. To resume self-denial while halfway through the dessert would be unpleasant in several respects: It would mean abandoning a very salient pleasure in order to return to the state of deprivation, it would require a strenuous act of self-regulation, and even if one succeeded in putting down the spoon one would already have earned some remorse (e.g., guilt or shame) because of the portion one already ate.

Self-regulation failure can thus occur whenever the person experiences even a very brief period in which the costs seem to outweigh the benefits. The popular image in which a moment of weakness can undermine months or years of virtuous self-denial is somewhat accurate because people tend to treat the decision to abandon control and indulge themselves as irrevocable.

The evidence that people acquiesce in self-regulation failure, as well as the analysis of self-control as an ongoing inner debate that is shaped by perceived costs and benefits, has one more important implication: Cultural and situational factors can exert considerable subtle influence on self-regulation. To put it another way, the point at which people lose (or abandon) self-control is one that can be moved around within a wide gray area, and so many factors can influence self-control by moving that point.

The self-regulation of violent, aggressive behavior is a good example. Many violent acts are experienced and described by perpetrators as episodes of losing control. Consistent with this, it is clear that most people are usually able to prevent anger from resulting in physical violence. The very high contribution of alcohol to intensifying violent responses to provocations is partly due to the fact that it undermines people's capacity to regulate their behavior, so they act out violent impulses more frequently and extremely (Bushman & Cooper, 1990; Steele & Southwick, 1985).

Despite the appearance that violent behavior involves loss of control, there is evidence of acquiescence: People could control their behavior if they wanted to do so. Most people do stop short of lethal violence even when they are extremely angry (Tavris, 1989). Among the Malays, the pattern of running amok institutionalized a general belief that provocations produced anger that led to uncontrollable aggression; but when the British took over and instituted severe penalties for running amok, the practice diminished substantially, indicating that the young men could control it after all (Carr & Tan, 1976). Berkowitz's (1978) study of men in prison for violent assault in Great Britain contained the same mixed message. These men did apparently lose control (often under the influence of alcohol) and beat someone else up to their own disadvantage (hence their imprisonment), but they had managed to restrain themselves from going even farther. In one memorable anecdote, one of Berkowitz's participants described a violent attack on his wife's lover during which he was totally enraged and seemingly out of control. At one point in the attack, he took hold of a bottle by the neck and broke it off to use as a weapon—but then he reconsidered that if he used that weapon he would most likely have killed the other man, which would have had serious consequences for him. As a result, he put down the broken bottle and resumed the attack with his fists, beating the other man senseless but not killing him.

There is thus an undercurrent of control in the loss of control of violent behavior. At some point, people
allow themselves to lose control. The determination of that point is subject to a great many subtle influences.

Theories about aggression once explored the notion of a "subculture of violence." According to that theory, certain subcultures placed a positive value on aggressive behavior and so people sought to gain esteem and prestige by acting aggressively. This view was largely discredited by accumulating evidence that violent people did not apparently seek to win approval or esteem by violent acts (e.g., Berkowitz, 1978) and that members of the supposedly violent subcultures did not report that they placed positive values on violent acts (see Tedeschi & Felson, 1994).

We think, however, that the notion of a subculture of violence may deserve to be reconsidered in another form: Subcultures (or indeed cultures) can influence the point at which people believe it is appropriate to lose control over aggressive impulses. Such collective beliefs can exert considerable influence over the point at which people believe it is appropriate, reasonable, or even desirable to abandon self-control. Thus, many assaults and homicides occur in direct response to verbal insults, but most insults do not lead to physical violence. It takes cultural norms to prescribe which insults, in which settings, will cause the person to retaliate with physical aggression. Studies and interviews with teen gang members, for example, often report that the young men and women say that violent retaliation is appropriate and even necessary in response to certain insults (e.g., Anderson, 1994; Bing, 1991; Currie, 1991; Jankowski, 1991). Likewise, the American South has higher homicide rates than other parts of the country but only for homicides related to arguments, which suggests that Southern culture supports the view that certain provocations require one to lose control of violent, retaliatory impulses (Nisbett, 1993).

Indeed, moving the point at which one loses control may be a major way that a culture can influence self-regulation. From our perspective, various forces in modern American culture have exerted a broad influence to shift this point in ways that make people more likely to abandon self-control. The pervasiveness of self-regulation problems in modern America may be less a result of character flaws or deficiencies than a result of a social climate that encourages people to regard many situations as ones in which an average, reasonable person would supposedly lose control. The notion of irresistible impulses may be weak and dubious as a scientific hypothesis but as a social doctrine (and as a legal defense strategy) it may be powerful and influential. Once it becomes widely accepted, it is likely to operate as a self-fulfilling prophecy.

**Misregulation**

We turn now to examine a very different type of self-regulation failure, namely misregulation. Although underregulation may provide the most familiar and vivid instances of self-regulatory failure, not all instances fit in that category. In underregulation, people end up being unable or unwilling to exert the requisite control over themselves. In misregulation, however, the cause of failure lies in the use to which the efforts are directed. The person may even be quite successful at exerting control over him- or herself but the end result is failure because the efforts are misguided or are wasted in other ways.

Our review of the empirical literature yielded three main causes of misregulation: (a) misunderstood contingencies, (b) quixotic efforts to control the uncontrollable, and (c) giving too much priority to affect regulation. Let us examine each of these in turn.

The first cause involves false beliefs about the self and the world (particularly about the contingencies between them). Well-intentioned and well-executed efforts at self-regulation may end in futility because they were based on false assumptions about what would yield desirable results. Thus, under the influence of inflated egotism and emotional distress, people may set unrealistically high goals that will increase the likelihood or costliness of failure (Baumeister, Heatherton, & Tice, 1993; Ward & Eisler, 1987; Wright & Mischel, 1982). As Heatherton and Ambady (1993) argued, people who are prone to overly optimistic self-views may be especially vulnerable to this form of self-regulation failure.

Unwarranted optimism may also cause excessive persistence in futile endeavors and although the chances of success were minimal all along, the persistence increases the costs (e.g., time, effort, and money) that accompany the failure (Rubin & Brockner, 1975; Staw, 1976). Increased frustration and other emotional costs may result from such failures due to excessive persistence; indeed, in unrequited love, people often persist past the point of rational or optimal hope and the results of such persistence include considerable distress and inconvenience for both the aspiring lover and the target (Baumeister, Wotman, & Stillwell, 1993). One study showed that futile persistence is often mediated by false expectations; when people were educated about common patterns of excessive, fruitless persistence, they were less likely to make the same mistake themselves (Nathanson et al., 1982). Another showed that if people are encouraged to make careful calculations about the probabilities, contingencies, and likely payoffs, they are less likely to fall into the trap of
excessive persistence (Conlon & Wolf, 1980), which also indicates that false assumptions and misguided expectations play a crucial role in this form of misregulation.

False assumptions contribute to another pattern of misregulation in the task-performance realm involving speed-accuracy tradeoffs. On many tasks, speed is increased at the expense of accuracy and vice versa, but the relation is far from linear and there are many cases in which reducing speed will fail to yield greater accuracy. Moreover, people may assume falsely that they can increase speed without substantial losses of accuracy. Heckhausen and Strang (1988) showed that athletes attempting to achieve a record performance on an experimental task tended to increase speed dramatically but the loss of accuracy outweighed the gains brought by the increased speed. The role of false assumptions was evident: The athletes in that study believed that they could maintain high accuracy at higher speeds.

Misregulation can also result from false assumptions about emotions. Many people believe that it is helpful to vent their anger or other forms of emotional distress but they find that such acts often make them more rather than less upset (e.g., Tavris, 1989). Affect misregulation is marked by many patterns of misregulation in which people incorrectly assume that what works once or with one emotion will work with others too. Thus, consuming alcohol often makes people feel good and so they may drink as a way of self-medicating for their own depression; however, they often find that intoxication makes the depression worse rather than better (Doweiko, 1990). Likewise, because socializing with friends is often effective at curing a sad or depressed mood, people may try it to cure angry moods, but in many cases they end up reciting their grievances or problems to these friends and rekindling their own anger (Tice & Baumeister, 1993).

The second general pattern of misregulation involves the quixotic effort to control things that are beyond the scope of potential control. There are many automatic or innately prepared processes that people simply cannot alter and their efforts to control them directly are likely to backfire. One rather clear example is that most emotional and mood states cannot be altered directly by sheer act of will (hence the pervasiveness of indirect strategies for affect regulation). If people try to alter their moods directly, they are likely to be unsuccessful and indeed the failure of their efforts may make them feel worse.

Thought suppression is a good example of such quixotic misregulation. People often seem to believe that they can directly control their thoughts and so they believe that unwanted thoughts can be driven out of their minds. Research has shown that such efforts at thought suppression are at best only partly successful and they create strong vulnerabilities to resurgences of the unwanted thought (Wegner, Schneider, Carter, & White, 1987); indeed, efforts to suppress undesired thoughts may ironically create a “synthetic obsession” with those thoughts (Wegner, 1992, 1994).

Performance can be impaired by this form of misregulation too and indeed one of the most familiar and frustrating kinds of performance failure—choking under pressure—is a classic case of it. Choking, which is defined as performing below the level of one’s ability despite situational incentives and subjective wishes and efforts to do one’s best, arises because the person consciously overrides well-learned patterns of skilled response in the hope of maximizing performance—but then finds that the deliberate, controlled processes cannot perform as efficiently and effectively as the overlearned, automatic ones (Baumeister, 1984). In a typical case, the person has achieved a level of overlearning (i.e., skill) so that performance can flow with a minimum of conscious direction. However, on a particularly important occasion, the pressure and desire to do well cause the person to want to pay special attention and therefore to oversee the performance process consciously. This conscious oversight overrides the automatic quality of skilled performance; sadly, controlled processes cannot match the automatic skills for either speed or accuracy. For example, the typist or pianist who under pressure seeks to consciously monitor every finger movement quickly discovers that both speed and accuracy suffer.

Choking is thus a paradigmatic instance of this second form of misregulation. The person successfully overrides the normal, habitual, overlearned or automatic response but the person cannot make him- or herself perform effectively without using those skills. The result is that the person ends up performing worse than usual as a direct result of efforts to perform better than usual.

The third broad pattern of misregulation involves aiming one’s self-regulatory efforts at a tangential, peripheral, or irrelevant part of the problem. Many problems that confront people have multiple aspects and self-regulatory efforts can be focused on any part of them. If the person selects the wrong aspect of his or her behavior to regulate, the problem will not be solved and may even get worse.

The most common pattern of misregulation involves emphasizing (short-term) affect regulation at the expense of some other, more lasting and substantive aspect. Often a particular problem consists of both practical obstacles or difficulties and subjective, emo-
tional distress, and when people respond by focusing their efforts on emotional regulation they neglect the more fundamental, practical aspects, thereby leaving the problem unsolved or even compounding it. By giving priority to affect regulation, they allow the cause of the problem to get worse and so in the long run they end up worse off. Often they end up feeling worse even though affect regulation was their top priority.

This form of misregulation can be seen in some patterns of procrastination. A person may have a project deadline but working on the project causes anxiety, possibly because the project is important and because the person wants to do very well. Putting off working on the project thus becomes an effective means of affect regulation in the short run because one escapes from anxiety each time one elects not to work on the task; the cumulative effect of such decisions makes the problem considerably worse because the time until the deadline grows shorter, making it ever harder to do a good job. As the deadline looms, the panic response becomes ever better justified.

Giving top priority to affect regulation may also be a factor behind many destructive patterns of failed impulse control. Many consummatory responses are affectively pleasant and so people will indulge in them as a way of regulating their emotions. People may smoke cigarettes, abuse alcohol, take drugs, go on shopping sprees, engage in promiscuous sex, or gamble away their money as a way of escaping from a bad mood, but the consequences of such actions can be even worse than what caused the bad mood in the first place. Thus, eating or drinking binges may occur because the person thinks that eating or drinking will remedy the emotional distress. Shilts (1987) cited some survey evidence that when the AIDS epidemic was first spreading, many gay men became distraught and upset over the danger and responded by going out to engage in promiscuous, unprotected male–male sex to get their minds off those stressful thoughts. Although that response may have been effective as self-distraction, it tended to increase the underlying problem.

Thus, the category of misregulation encompasses several forms of the misuse or ineffective use of self-control. People may fail at self-regulation because they are trying to control the wrong aspect of the process or because they are trying to control something that is essentially immune to control. False beliefs and assumptions about the contingencies between one’s own acts and one’s outcomes often play an important role.

**Lapse-Activated Responses**

Although considerable research has focused on what causes people to violate their standards or other self-regulatory patterns, it is important to realize that the majority of such violations are inherently trivial. A single cookie may violate a weight-loss plan, but the impact of that cookie on the diet is probably minimal. The socially important instances of self-regulation failure tend to involve large-scale breakdowns such as binges. To be sure, a binge may begin with a single lapse, but to understand the lapse is not sufficient to explain the binge.

Our review concluded that in many cases a second and important set of causes of self-regulation failure only enters the picture after an initial lapse, and indeed as a result of that lapse. We use the term *lapse-activated causes* to describe these factors. This concept was anticipated in addiction research by Marlatt (1985), whose term *abstinence violation effect* referred to the tendency for people to respond to an initial indulgence in alcohol or other addictive but forbidden substance by consuming more. The category of lapse-activated responses includes abstinence violation effects as well as other, conceptually similar patterns that are not concerned with abstinence.

An early clear demonstration of lapse-activated misregulation was by Herman and Mack (1975), who termed their effects *counterregulatory eating*. In their study, dieters who had been preloaded with food actually went on to eat more than dieters who had not had such a preload, contrary to what nondieters do (and what common sense would prescribe). Subsequent research has demonstrated that a person’s beliefs are the primary determinants of this disinhibited eating. For instance, dieters will engage in counterregulatory eating when they have eaten very small amounts of perceived high-calorie foods (e.g., a small bite of chocolate) but will be able to maintain their diets if they believe they have not broken their diets (even if they have consumed an incredibly fatty Caesar salad). The dieter’s initial minor transgression leads to such thoughts as, “What the hell, I have blown it, so I may as well eat the whole darn thing.” The irony is that the small amount of fattening food in the initial lapse does not constitute a serious threat to the dieter’s goal of weight loss—but the subsequent binge eating does sabotage that goal.

Marlatt (1985) documented this lapse-activated pattern across a number of addictive and problematic behaviors, including smoking, alcoholism, and heroin addiction. Marlatt’s model suggests that lapses often arise in high-risk situations in which a person has difficulty coping. Marlatt argues that a lapse becomes a relapse largely because of the person’s commitment to complete and absolute abstinence. Performing the forbidden behavior leads to unpleasant dissonance and self-attributions of weakness and failure. The attribu-
tion of failure to the self diminishes the person’s sense of self-control and he or she abandons attempts to rein in subsequent behavior. Thus, a minor transgression is seen as a catastrophe rather than a small slip and this perception induces the person to abdicate all self-control. Marlatt’s research has led to a therapy known as relapse prevention, which consists primarily of cognitive restructuring to help the addict cope with high-risk situations and with lapses.

For our purposes, the key point is that several causal factors come into play as a result of an initial lapse in self-control and these can undermine self-control subsequently. Moreover, it is often the subsequent breakdown in self-control that has the most severe and disastrous results. There are several mechanisms of lapse-activated patterns, as follows.

One important mechanism is that people may cease monitoring themselves after an initial lapse, possibly because it would be distressing to attend to their behavior when they have already failed to live up to standards, and possibly because the initial lapse may provide such pleasure or intense sensation that they focus narrowly on it (i.e., loss of transcendence). Polivy (1976) showed that dieters who had been preloaded with food apparently ceased to keep track of how much they ate, as indicated by errors in retrospective self-reports of subsequent consumption. More generally, eating binges seem to be marked by an immersion in sensation and a cessation of monitoring one’s own behavior (Heatherton & Baumeister, 1991).

Spiraling patterns of distress may also be a form of lapse-activated causes of misregulation. An initial lapse may occur because the person was suffering from some form of distress. The lapse may, however, generate guilt, fear, anxiety, or other forms of distress, thereby making the person feel worse. The escalating distress may contribute to a further abandonment of self-control.

Distress is of course not the only emotion that can be activated by a lapse and contribute to further breakdowns in self-regulation. Lawson (1988) noted that many people will initially engage in extramarital sex on the assumption that it will be a casual, isolated episode and so they invest—and lose—considerably more.

There are of course also interpersonal aspects to many self-control situations, and these can be activated by lapses so as to contribute to escalating failures of self-regulation. The most obvious example would probably involve violent episodes. An initial aggressive outburst may be a momentary lapse in self-control but it may have lasting effects if someone else is harmed or provoked. An aggressive response by others (or even the formation by others of an expectation that the individual is prone to violent outbursts) may lead to further violence.

Ironically, some factors that aid self-regulation up to the point of an initial lapse may turn into factors that produce misregulation as the result of such a lapse. Most prominent among these are zero-tolerance beliefs. Such beliefs, which are common in some spheres, catastrophize the initial lapse as a way of preventing it. People are encouraged to believe that having a single drink, committing a single sexual indiscretion, or taking a single dose of a drug on one occasion will lead to disaster (see also Marlatt, 1985). Undoubtedly such beliefs discourage people from allowing a lapse to happen. If a lapse does occur, however, such beliefs may help produce lapse-activated increases in the un-
Self-regulation is a complex mechanism that can break down in many different ways. Underregulation occurs because people lack stable, clear, consistent standards, because they fail to monitor their actions, or because they lack the strength to override the responses they wish to control. Misregulation occurs because they operate on the basis of false assumptions about themselves and about the world, because they try to control things that cannot be directly controlled, or because they give priority to emotions while neglecting more important and fundamental problems.

We have proposed that the evidence about self-regulatory failures conforms to a strength model; that is, the capacity to regulate oneself is a limited, renewable resource. When stress or fatigue depletes an individual’s strength, self-regulatory failures become more likely. Capacities for self-control are an important realm of stable, long-term individual differences.

The control of attention is central to self-regulation and loss of attentional control is a decisive precursor of many forms of self-regulation failure. In particular, effective self-regulation often requires the individual to be able to transcend the immediate situation by considering long-term consequences and implications. When transcendence is weakened by anything that binds attention to the here and now, the chances of self-regulation failure are increased.

Many spheres of self-regulation failure show signs of lapse-activated causes. That is, an initial and seemingly minor breakdown in self-control may set off other causes and factors that prevent the reassertion of self-control and cause the breakdown to snowball. Indeed, the initial lapse may often be trivial, whereas the binge is catastrophic, and so these lapse-activated factors that produce a snowballing effect are what deserve emphasis in theory, research, and intervention.

The degree of volition and acquiescence in self-regulatory failure is a controversial issue with implications that go far beyond psychology. Our review has led us to reject the model that self-regulatory failure is typically the result of irresistible impulses. Although it would be excessive to say that people freely choose to lose control, they do seem to show considerable active participation and acquiescence in the behaviors that constitute self-regulatory failure. We suggested that self-regulation often involves an unpleasant inner conflict marked by competing wishes and uncertainty. If the person decides even briefly to relax self-control, typically he or she will not consider reinstating it and so a brief abdication of self-regulatory effort can lead to a serious, protracted breakdown. In colloquial terms, the popular image of a moment of weakness is more accurate than the image of the irresistible impulse. Moreover, culture can exert considerable influence by teaching people which circumstances make it appropriate to abandon control.

Unfortunately, the norms and forces that currently dominate modern Western culture seem generally conducive to weakening self-control. As long as this is the case, it seems likely that our society will continue to suffer from widespread and even epidemic problems that have self-regulatory failure as a common core.

Note

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References


SELF-REGULATION FAILURE