

When Saying Yes to the Doughnut Is Not Saying No To Self-Control: A Hierarchical  
Approach to Flexibility in Conflict Representation

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### Abstract

One of the challenges of getting along effectively in the world is responding flexibly to changing situations and demands. While sticking to a daily exercise regimen is typically considered a self-control triumph, rigid adherence to the morning run in the face of a spouse's request for help with the kids could easily be classified as a self-control failure. I explore how a hierarchical self-regulatory framework suggests flexibility in the classic self-control representation. Specifically, I examine how a hierarchical approach sheds light on how the classic vertical self-control conflict representation between levels in a hierarchy (a conflict between a higher-order goal versus a lower-order temptation) can also be represented as a horizontal conflict in a hierarchy (a conflict between two goals or between two means). I examine the implications of vertical and horizontal conflict representations for responses following self-control success and failures and conclude by discussing the trade-offs of these different representations.

There is much to like about self-control. The ability to put aside immediate needs and gratifications in order to achieve important, long-term aims is held up as one of the hallmarks of a civilized society. Successful self-control is linked to many significant and important outcomes, including academic achievement, job satisfaction, well-being, and better health (e.g., De Ridder, 2012; Duckworth, 2011; Moffitt et al., 2011). In Mischel and colleagues' classic delay-of-gratification study (now affectionately dubbed "the marshmallow test"), the longer children were able to hold out for a larger reward (e.g., two marshmallows) compared to a smaller reward (e.g., one marshmallow), the more successful they were later in life; seconds of delay time positively predicted better self-control even 40 years later (Casey et al., 2011; Eigsti et al., 2006; Mischel & Baker, 1975; Mischel & Ebbesen, 1970; Mischel et al., 2011; Moore, Mischel, & Zeiss, 1976). If only I had more self-control, many of us sigh—as we look at our expanding waistlines, our shrinking savings accounts—I would be better, life would be better.

Yet perhaps equally as important as self-control is knowing when to hold out for two marshmallows and when to savor the one right in front of you. In life we are confronted with a myriad of such choices. We can reach for the broccoli or for the brownie. We must choose between going to the gym or going out for drinks with our colleagues. We can take a fabulous vacation or save more for retirement. Always grabbing for the marshmallow right in front of us is one kind of self-regulation failure, the failure most often considered in the self-control literature. But there are other dangers here; we can wait when we should grab—and in extreme cases, can spend a lifetime waiting, stockpiling marshmallows just out of reach. Even more

troubling, it is not always clear what counts as temptation versus goal; choosing to spend time with good friends instead of going to the gym is clearly not *always* a self-control failure. The trick, it seems, is knowing *when* to delay and when to leap.

Perhaps just as important as exerting self-control is the ability to discern when and how to do it (cf. Kashdan & Rottenberg, 2010).

In this paper, I consider these issues within the broader context of self-regulatory hierarchies. I begin by introducing the general idea of self-regulatory hierarchies, and describe how research in this area provides insight into self-regulatory issues more broadly. I then discuss how such a framework might be useful for considering self-control conflicts. In particular, how does a hierarchical approach suggest ways in which the classic goal-versus-temptation self-control conflict representation might be flexible? I discuss how different conflict representations can influence the experience of self-control and subsequent self-regulatory efforts. I conclude by considering the trade-offs of different types of conflict representations and factors that might influence wise discernment and flexibility in choice.

### **Self-Regulatory Hierarchies**

There is a long tradition in psychology of distinguishing between different levels of behavior. Much of the theorizing about hierarchies grew out of a desire to understand how very abstract aims (e.g., “be good”) could be translated into the motoric and even cellular activity necessary for action (e.g., the muscles that move the helping hand). A number of different hierarchical models have been proposed, differing in the types of distinctions that are highlighted—e.g., between goals and

subgoals (Miller, Galanter, & Pribram, 1960), between principles, programs, and sequences of movement (Carver & Scheier, 1998), between low and high levels of action identification (Vallacher & Wegner, 1987, 2012), between life-task goals, strategies, and plans or tactics (Cantor & Kihlstrom, 1987), between self-regulatory systems, strategies, and tactics (Higgins, 1997; Scholer & Higgins, 2008), and between approach and avoidance temperaments, motive dispositions, goals, and behavior (Elliot & Church, 1997; Elliot, Murayama, & Pekrun, 2011; Elliot, 2006; Gable, 2006). Despite their differences, the models are similar in that within each, the levels are involved with different self-regulatory tasks (e.g., defining goals, determining strategies) and at any lower level in the hierarchy, there are multiple means that can serve a higher level (cf. Austin & Vancouver, 1996; Pervin, 1989).

Much recent theorizing about self-regulatory hierarchies has focused not on the structure of the hierarchy per se (i.e., tracing the translation of the higher-order aim into low-level behavior), but on understanding the nature of representations at different levels, the flexibility of these representations, and the relations between and within levels. These approaches take the hierarchy as a given, and ask how actions and goals can be better understood within that framework (Elliot et al., 2011; Kruglanski et al., 2002; Scholer & Higgins, 2008; Trope & Liberman, 2010; Vallacher & Wegner, 1987). In the discussion below, I provide several snapshots of recent theorizing about self-regulatory hierarchies, and focus in each case on the relevant tenets that demonstrate the richness of a hierarchical framework for understanding self-regulation.

Action identification theory (Vallacher & Wegner, 1987; 2012) highlights principles that predict when and under what conditions individuals represent behaviors at higher or lower levels in a hierarchy, emphasizing flexibility in the *identification* of action: the same action can be known by many different names. I lift a fork to my mouth, I eat lunch, I enjoy good food with friends, I nourish my body; all of these descriptions can apply to the same behavior. Furthermore, the different descriptions can be organized hierarchically, such that some capture the “why” of the action and some capture the “how” of the action. The theory predicts (and data supports) the idea that people will tend to use higher-level identities to describe action unless they encounter difficulty or challenge (Vallacher & Wegner, 1987; Vallacher, Wegner, & Somoza, 1989). The rationale for this prediction is thus: People prefer higher-level identification because such labels give meaning to action, but lower-level identification can be useful to effectively control action when obstacles arise. Furthermore, appropriate identification of action is associated with better self-regulation. For instance, Vallacher et al. (1989) found that participants induced to think about an easy or difficult speech task in high versus low level terms did best (i.e., produced more fluent speech) when the level of identification fit task difficulty: Participants in the difficult speech task did best when identification was low-level and participants in the easy speech task did best when identification was high-level.

Action identification theory also provides evidence that the receptiveness to new identities (i.e., the flexibility of representation) depends on one’s current level of identification. People are more likely to accept high-level personality feedback when first induced to consider their behavior at low versus high levels because low

levels permit emergence of new higher-level interpretations (Wegner, Vallacher, Kiersted, & Dizadji, 1986). Specifically, participants induced to think about recent behaviors in low versus high level terms were more likely to accept computer-generated personality feedback that they were cooperative or competitive. Thus, not only is there flexibility in the level at which we represent behavior, but we will also be more or less flexible in our interpretation of behavior (and of ourselves) depending on our current level of identification.

Research in the tradition of construal level theory (Trope & Liberman, 2010; Trope & Liberman, 2003) provides further support for the antecedents and divergent effects of high- versus low-level identifications of action. Construal level theory emphasizes the role of psychological distance in producing abstract (high-level) versus concrete (low-level) construals, whether that distance is social (Liviatan, Trope, & Liberman, 2008), temporal (Trope & Liberman, 2000), spatial (Henderson, Fujita, Trope, & Liberman, 2006), or probability-based (Wakslak, Trope, Liberman, & Alony, 2006). Distant events and objects tend to be represented by central, abstract, and high-level features, whereas near events and objects tend to be represented by peripheral, concrete, and low-level features (Trope & Liberman, 2003).

Construal level theory makes novel predictions in many classic domains by examining when high versus low-level information will influence choice: People weight more heavily low-level construals for near future decisions, but high-level construals for distant future decisions (Trope & Liberman, 2000). In the domain of self-control, research suggests that both abstract and concrete construals can

facilitate self-control, depending on the context (Fujita, Trope, Liberman, & Levin-Sagi, 2006; Schmeichel, Vohs, & Duke, 2011), an interesting issue that I will return to more fully later. Fujita and colleagues (2006) have demonstrated that individuals are generally better able to exert self-control when in an abstract versus concrete mindset, though Schmeichel et al. (2011) find that low-level construals can facilitate self-control in some contexts.

Whereas action identification theory and construal level theory highlight flexibility in the level of action representation, goal systems theory highlights the nature of the relations within and between levels in a hierarchy (Kruglanski et al., 2002). Emphasizing in particular a distinction between two levels—goals and means—goal systems theory takes seriously the idea that we live in a world populated by multiple goals, and proposes an elegant model predicting patterns of activation and inhibition within the system that facilitate (or impede) effective self-regulation. For instance, while links within a level tend to be inhibitory, links between levels tend to be excitatory. In other words, activation of a focal goal will tend to inhibit the activation of other competing goals (Shah, Friedman, & Kruglanski, 2002), but increase the activation of relevant means (Kruglanski et al., 2002; Shah & Kruglanski, 2003). However, such relations can be asymmetric in the case of self-control conflicts for successful self-regulators; for successful self-regulators, temptation means activate goals (i.e., the salient chocolate cake activates my health goal) and activated goals inhibit temptations (Kruglanski et al., 2002; see also (Fishbach & Shah, 2006; Fishbach & Trope, 2008; Myrseth, Fishbach, & Trope, 2009). Beyond simple activation and inhibition, goal systems theory integrates



features of the context (which can determine when means are versus are not substitutable), and considers the influence on the network of other variables relevant to self-regulation, such as affect and commitment.

In my own work, my colleagues and I have suggested that it can often be useful to distinguish between two types of psychologically distinct means—strategies (the general “how”) and tactics (the specific, context-dependent “how”)—particularly as a way of identifying tactical profiles that reveal underlying strategies and motivational concerns (Kammrath & Scholer, in press; Scholer & Higgins, 2008). For instance, our approach suggests that risky tactics by themselves are relatively uninformative about the underlying strategy that drives behavior. It is the pattern of shifts from conservative to risky action that elucidate the underlying strategy. Within the context of regulatory focus theory (Higgins, 1997), we have identified distinct patterns that reveal underlying concerns with security (prevention system) or advancement (promotion system).

Prevention-focused individuals, whose primary concern is maintaining the security of the status quo, prefer conservative tactics when all is well, but seize risky tactics in loss or threat, when for them, the return to the status quo *at any cost* becomes paramount (Scholer, Stroessner, & Higgins, 2008; Scholer, Zou, Fujita, Stroessner, & Higgins, 2010). Promotion-focused individuals, whose primary concern is making progress, will select conservative tactics if enough progress has been made, but will make risky choices when little or no perceived progress has been made (e.g., when they remain stuck at the status quo) (Zou, Scholer, & Higgins, 2013). These distinct tactical profiles speak to fundamental differences in what

counts as success and failure within each system. Beyond regulatory focus, this approach highlights the ways in which distinct profiles and patterns at a lower level in the hierarchy can provide insight into the significance and operation of higher levels, a theme also prominent in Elliot and colleagues' work on approach and avoidance motivations in achievement goal hierarchies (e.g., Elliot & Church, 1997; Elliot, 2006; Elliot et al., 2011).

Across these approaches, it is clear that self-regulatory hierarchies can provide a valuable framework for understanding the dynamics of self-regulation. Self-regulatory hierarchies not only provide a structure for understanding how action arises, but also for thinking about the varied ways in which the same action can be represented in different ways across the hierarchy, as highlighted in particular by action identification theory and construal level theory. Self-regulatory hierarchies also provide a useful framework for thinking about the fluid dynamics within a multiple goal or multiple means system, as highlighted by goal systems theory, Elliot's achievement motivation framework, and our work on distinguishing between psychologically different "how" representations. Building on these approaches, I turn next to a discussion of what a hierarchical framework may suggest about the flexibility of self-control conflict representations.

### **Self-Control Beyond Angels and Devils**

Both lay and theoretical conceptions of self-control (Baumeister, Schmeichel, & Vohs, 2007; Fujita et al., 2006; Hofmann, Vohs, & Baumeister, 2012; Mischel, Cantor, & Feldman, 1996) draw tacitly, if not explicitly, on a hierarchical framework. The classic self-control conflict is represented as a conflict between a higher-order,

central goal (e.g., maintaining a healthy weight) and a lower-order, incompatible temptation (e.g., chocolate cake). Typically, the higher-order goal is seen as providing beneficial, important, long-term outcomes, perhaps at the expense of some immediate pleasure (in colloquial terms, the angel on the shoulder). In contrast, the temptation typically provides immediate, short-term gratification at the expense of long-term outcomes (the devil on the shoulder). This battle between the angel and the devil (lofty, long-term goal versus fleeting and ultimately damaging temptation) is seen as the defining feature of a self-control conflict and has at least three non-trivial implications for the experience of what it means to exert self-control.

First, the classic self-control conflict representation requires individuals to compare options that are not easily compared (an immediate, concrete temptation versus an abstract, long-term goal). Exactly how does the desire to eat a piece of chocolate cake compare to one's goal to be healthy? Because the attributes of the cake are not equivalent to the attributes of the high-level goal to be healthy, the terms of comparison are unclear. This may make it difficult to accurately assess the underlying meaning or significance of the short-term temptation, obstructing an understanding of how the temptation relates to both immediate and long-term goals.

Some interesting work by Magen, Dweck, and Gross (2008) suggests that fuzzy comparisons can have significant consequences for decision-making. In their paradigm, participants had a choice between a smaller immediate reward or a larger reward after some delay (e.g., "\$5 today versus \$8 in 30 days"). In one

condition, participants were given the choice just as I described it above. In another condition, the foregone alternative was made salient (e.g., a choice between \$5 today and \$0 in 30 days versus \$0 today and \$8 in 30 days). Magen et al. found that participants were significantly less impulsive (i.e., better able to delay for a larger reward) when the full comparison was highlighted and the foregone alternative was made salient.

Other research suggests that the uneven terms of comparison within the classic self-control conflict may also often favor the immediate, concrete temptation (Fujita et al., 2006; Metcalfe & Mischel, 1999). At low levels of representation, objects tend to be represented in terms of concrete, corporeal features. This “hot” representation of the object’s appetitive features may exert a strong pull over the relatively cooler, abstract higher-level representation. Both adults and children are able to delay longer when instructed to view temptations abstractly or in “cool” versus “hot” terms (Fujita & Carnevale, 2012; Mischel & Baker, 1975). In the absence of specific instruction, however, hot features likely exert a strong pull in self-control situations.

Second, although there may be a strong pull for the temptation, framing self-control conflicts in the classic way suggests that there is only one “right” choice: avoiding the short-term temptation. Such clarity, however, may come at a steep cost: The “right” option is a rigid and coercive “should”, not what one freely chooses to do. Restrictions on autonomy can lead to reduced motivation and well-being (Deci & Ryan, 2000; Ryan & Deci, 2000). Controlled choice, relative to autonomous choice, has also been shown to be more depleting of self-regulatory resources (Moller, Deci,

& Ryan, 2006). Therefore, even if they choose the classically-defined “right” option, people may subsequently perceive that they have fewer self-regulatory resources, and have less energy to cope with future challenges.

Third, the classic framing of self-control implies that if individuals succumb to the temptation, they are weak and have made a bad choice: Going with the devil is failure. Consequently, an initial failure of self-control may beget a chain of self-regulatory lapses, a phenomenon aptly described in the eating regulation literature as a “what-the-hell effect” (Herman & Polivy, 1984; Polivy & Herman, 1985). This “what-the-hell effect” has also been established in other self-control domains (Cochran & Tesser, 1996; Soman & Cheema, 2004; Wilcox, Block, & Eisenstein, 2011) and the consequences of the negative spiral may be just as pernicious as the initial failure itself.

Given that this classic representation of the self-control conflict carries with it these negative repercussions, a practically-minded person might wonder whether it was the only viable representation. As noted earlier, this classic representation depicts a tension between different levels of higher-order, long-term concerns and lower-order, short-term concerns (e.g., Baumeister et al., 2007). Indeed, most models assume that this vertical representation is an inherent and inevitable property of self-control conflicts. However, a wealth of research suggests that people can reformulate their goals in making decisions more broadly (e.g., Griffin & Ross, 1991; Tversky & Kahneman, 1981). This flexibility in mental representation can also be applied to self-control conflicts, such that these conflicts do not *have* to involve different levels in a hierarchy (Scholer & Higgins, 2010).

When considering the classic self-control conflict between higher-order and lower-order concerns, it is clear that within a self-regulatory hierarchy, such a conflict is represented as a *vertical* conflict, a conflict *between* levels: Between a higher-order goal (e.g., academic success) and a lower-order means of behaving—the temptation (e.g., partying all night)—that is incompatible with or impedes higher-order goal attainment (cf. Fujita et al., 2006). This is not the only type of conflict that can be represented in a hierarchical model, however. Conflicts can also be *horizontal*: They can exist *within* levels in a self-regulation hierarchy (Emmons, 1989; Scholer & Higgins, 2010). Horizontal conflicts can exist between goals, between strategies, or between behaviors. For example, individuals can have a conflict between pursuing two different goals (academic success versus fitness) or between two different means for the same goal (running or swimming to maintain fitness).

The idea that conflicts can be either vertical or horizontal is not new; however, this distinction suggests a new way of examining self-control conflicts. A single self-control conflict can be represented as *either* vertical or horizontal. In other words, not all self-control conflicts are inevitably vertical: They are malleable, mental constructions that can be reformulated (Scholer & Higgins, 2010). This view builds on hierarchical frameworks that have discussed flexibility in the level of object representation to propose flexibility in conflict representations. It is important to note that I am not arguing that all decision or goal conflicts are self-control conflicts. For instance, a conflict between running or swimming as a means to maintain fitness is not a self-control conflict. What I am arguing, however, is that

the vertical representation of many self-control conflicts is not sacred. Just because the conflict *can* be represented vertically does not mean it is an inherent property.

For example, a vertical conflict between the goal of achieving academic success versus the temptation of partying with friends could be reframed as a horizontal conflict representation between the two higher-order goals of connecting with friends versus investing in scholarship. Similarly, the conflict could be reframed as a horizontal conflict between two means (e.g., studying, spending time with friends) that serve the same higher-order goal (e.g., having a balanced, fulfilling life). Whereas a vertical conflict pits angel versus devil, a horizontal conflict suggests a fork in the road with two viable paths. A horizontal conflict may reduce the clarity of what is “right,” but may allow for clearer comparisons, more autonomous choice, and less fall-out after failure. Each representation likely has its trade-offs, as I examine below. Yet understanding that the representation is flexible—and how that flexibility relates to the experience of self-regulation itself—is important to explore.

### **When the Devil Beckons**

Although we can imagine a world where self-control reigns and the devil is always resisted, such a world is a far cry from the one we inhabit. As we know from empirical studies (and likely our own lives), at times the devil beckons and we yield; self-control failures are a part of life (Hofmann, Baumeister, Förster, & Vohs, 2012). This does not mean such failures are inevitable; there are a number of individual difference and situational factors that make it more likely that individuals will succeed at self-control (e.g., De Ridder, 2012; Moffitt et al., 2011; Tangney, Baumeister, & Boone, 2004). Yet in spite of these factors, and self-control failures

still occur. Indeed, most people striving for behavior change make several attempts before the change sticks (Prochaska, DiClemente, & Norcross, 1992; Prochaska & DiClemente, 1983). Despite our best intentions, we lash out, we take another donut for the road, we hit the snooze button one more time, and we tell ourselves we can start saving tomorrow. What happens next, after failure?

Not surprisingly, self-control failures often elicit negative affect (Soman & Cheema, 2004; Tice & Bratslavsky, 2000; Wilcox et al., 2011). Furthermore, as noted earlier, research suggests that self-control failures can prompt a downward spiral of further failure (e.g., “What the hell... I caved and ordered the fries so I might as well get dessert, too”) (Cochran & Tesser, 1996; Polivy & Herman, 1985). This phenomenon has been best documented in the eating regulation literature with restrained eaters, a population of individuals who struggle to regulate their eating effectively (Herman & Mack, 1975). In these studies, typically portrayed to participants as taste tests, some participants are first subtly induced to ingest a “pre-load” to induce a feeling of self-control failure (e.g., a milkshake). In a subsequent task, participants then have the opportunity to sample other foods as part of a second taste test. In control conditions individuals who score high in eating restraint eat *less* in this second task relative to non-restrained eaters, but when they have consumed a pre-load, they eat *more* than non-restrained eaters (see also Coelho, Polivy, Herman, & Pliner, 2008, 2009; Polivy, Herman, & Coelho, 2008). In other words, following an initial failure (the ingestion of the pre-load), restrained eaters are actually more likely to fail to regulate subsequent eating.



Researchers have proposed a number of possible explanations for the what-the-hell effect. Cochran and Tesser (1996) argued that restrained eaters are particularly vulnerable to the effect because they focus on proximal, inhibitional goals (e.g., Do not eat more than 1500 calories). This means that failures are felt acutely at the individual level; furthermore, once the failure has occurred, the opportunity to achieve the proximal goal has been permanently passed by (i.e., the person ate more than 1500 calories for the day), and the goal is likely to be abandoned. Some evidence indeed suggests that approach or acquisitional goals, at which one cannot so definitively and permanently fail, may buffer against the what-the-hell effect; failures to progress do not elicit the same level of negative affect nor invalidate the possibility of ever reaching the goal (Cochran & Tesser, 1996; Soman & Cheema, 2004).

In some contexts, individuals who are typically most skilled at self-control may be most vulnerable to such a downward spiral. Wilcox et al. (2011) found that individuals high in trait self-control are more likely to exhibit what-the-hell patterns in credit card spending under conditions that promote more serious experiences of failure. Although it may seem surprising that people who typically regulate more effectively were more vulnerable to this effect, Wilcox et al. found that it was because individuals high in trait-self control felt credit card debt more acutely that they were likely to subsequently give up on their original goal and spend more. Negative affect can lead even initially committed individuals to abandon goal pursuit, either because the goal feels unobtainable or because escape reduces the salient pain of failure.

In other words, existing research suggests that conditions that make self-control failures more acute will increase the likelihood of the what-the-hell effect. These approaches have focused on a number of factors that may intensify failure: representation of the goal within a hierarchical level (e.g., approaching a desired end-state versus avoiding an undesired end-state), representation of the failure itself (e.g., softening the perception of credit card debt by making the available credit limit larger), or on individual difference factors that intensify failure (e.g., holding higher personal standards; Wilcox et al., 2011). Beyond these factors, it is likely that the *conflict* representation itself may also influence the affective experience of failure. Although speculative, perhaps one reason that both restrained eaters and individuals high in trait-self control are vulnerable to the what-the-hell effect is because they may be more likely to view self-control conflicts as vertical conflicts about what *should* be done and thus they experience greater negative affect after failure.

David Kille and I have been exploring how the nature of the conflict representation might influence affective responses following self-control failure (Kille & Scholer, 2013). One primary difference between vertical and horizontal conflict representations is whether the options are evaluatively tagged, as noted earlier. In a vertical representation, the higher-order goal is clearly the right, good choice; the temptation is the bad choice. In the horizontal representation, in contrast, both options are seen as reasonable. Consequently, we predicted that affective responses to self-control success and failure would be modulated in the horizontal versus vertical representation.

In an initial set of studies (Kille & Scholer, 2013), participants were presented with a description of self-control conflict scenarios common to undergraduate students. All participants were given the same information about the conflict (e.g., “It is Saturday afternoon and you are nearing the end of the academic semester. You have a big paper due on Sunday at midnight, worth 60% of your grade in the course. But some of your friends are planning a night out tonight to celebrate the birthday of a friend”). What varied between participants was the nature of the representation (vertical versus horizontal) and whether participants were asked to imagine self-control “success” (studying) versus “failure” (going out). In the vertical representation conditions, participants were asked to imagine that they were “tempted to go out for your friend’s birthday this evening” but that “unfortunately, you can’t both accomplish your academic goals and go out for your friend’s birthday tonight.” In the horizontal representation conditions, participants were told “unfortunately, you can’t accomplish both of these goals tonight.” As predicted, we found a significant conflict representation X outcome interaction on choice evaluation, such that participants evaluated “failure” more negatively – and said they would feel worse after it – in the vertical versus horizontal condition.

In another version of the study, we induced horizontal versus vertical representation separately from the description of the conflict itself by asking participants to reflect either on temptations or on goals that competed with a number of commonly pursued goals (e.g., academics, fitness, etc.). With this procedure, we primed a horizontal versus vertical conflict mindset while keeping the description of the target self-control conflict exactly the same across conditions.

With this new manipulation, we found the same pattern of results: Greater negative affect and evaluation of choice in the vertical versus horizontal condition after failure. Given the association in prior research between negative affect and greater vulnerability to subsequent self-control failures, we are currently pursuing the what-the-hell implications as well.

Research that Kristin Laurin and I have done does suggest that following failure in a vertical representation, individuals may be less likely to return to the non-chosen goal (Laurin & Scholer, 2013). In one study, participants were asked to recall a recent time in which they chose to engage in social media instead of academics. Not surprisingly, undergraduate students can easily recall such a time. We asked participants to describe the conflict in vertical (e.g., goal versus temptation) versus horizontal (goal versus goal) terms and then asked them to describe what they planned to do in an upcoming weekend. We found that participants were less likely to report intentions to pursue academic goals in the future when they had just recalled a vertical conflict where they “failed” to choose the “right” option, as opposed to horizontal conflict where they had simply chosen to pursue friendship goals. In other words, in both conditions, participants had been reminded of a time in which they did *not* pursue their academic goal, yet in the horizontal condition this did not interfere with subsequent goal pursuit as much as it did in the vertical condition.

These studies suggest that different ways of representing the same objective self-control conflict may have important implications for what happens following an initial choice. In the real world, self-control is not a single-shot occurrence; what

happens over time is arguably just as or more important as what happens in a single instance. One piece of cake, one skipped gym class, one month in which the piggy bank is ignored, is not problematic. It is the accumulation of failures that can lead to real problems. Thus, it is important to understand how we respond when we do fail, and how different ways of thinking about self-control conflicts might mitigate the pernicious cycle of subsequent failures.

### **Angel of my Better Self**

What about those times when we make the “right” choice? If the self-control conflict is considered in isolation, such a question may seem somewhat odd. If people make the right choice, then what more is there to say? Yet just as failures do not happen in isolation, neither do successes. A consideration of horizontal versus vertical conflict representations suggests that just as failure may be a different experience under a vertical versus horizontal representation, so too may success. If vertical conflict representations reduce the experience of autonomous choice, individuals may be less able to hold onto the “right” choices they make under vertical versus horizontal framing.

In particular, we have found that “right” choices under a vertical framing may be harder for people to consistently pursue than right choices under a horizontal frame, particularly when people are not wholly committed to the goal (Laurin & Scholer, 2013). There are many times in life when we choose what we think we should do, even if we chafe against it. Picture a university student who believes that academics are relatively important, but is often tempted to hang out at a local bar with friends instead of studying. Although almost all university students will

evaluate their academic goals as relatively important, there is nevertheless variability (this may come as no surprise to instructors). When participants rate academics as moderately (as opposed to highly) important and make a choice to stay in and study under a vertical versus horizontal frame, they are more likely to spontaneously mention the desire to engage in counter-goal behavior (e.g., partying another night, finishing the work quickly in order to go out later that same night) and report non-academic goal behavioral intentions (Laurin & Scholer, 2013). Sticking with a chosen goal may be harder in a vertical frame, particularly to the extent that the choice feels less autonomous.

These differences may also arise because choices are less guided by central concerns in a vertical versus horizontal frame. In one study, we measured the importance of academic and social goals in a separate session. When participants came to the lab, they were presented with a self-control conflict (academic versus social) presented as a vertical or horizontal conflict. When the conflict was horizontal, people's choices were guided by importance of the social goal, with those who valued social goals more highly choosing the social option more often. In the vertical condition, importance played no role in guiding choices (Laurin & Scholer, 2013). In other words, a horizontal conflict representation may allow greater insight in the decision process, promoting self-regulation that is guided by what really matters to an individual.

These results suggest that there may be some conceptual overlap between horizontal conflict representations and abstract construals. Indeed, Fujita et al. (2006, Study 3b) found that participants primed with high-level construals were

more effective at self-control only if the high-level benefits of the situation were personally important to them. In other words, it is not as if abstract construals themselves lead individuals to effectively exert self-control; abstract construals lead individuals to be more likely to act in accordance with central values, whatever those are. This could lead to more *or* less effective self-control by normative standards; indeed, abstraction may operate in part by permitting a conflict comparison that is horizontal. It is important to note, however, that a horizontal conflict framing does not appear to be simply another way to prime an abstract construal, given that a horizontal representation itself can be low-level (e.g., a conflict between two means). That said, it will be important to explore the similarities and differences between these approaches in future research.

### **Trade-Offs of Flexible Representations**

Considering the classic self-control conflict within a hierarchical framework suggests that the vertical representation may be more flexible than traditionally conceived. As reviewed above, when people consider a self-control conflict vertically versus horizontally, they may be more vulnerable to negative affect after failure and be less likely to return to the non-chosen goal. Horizontal conflict representations may promote choice guided by an individual's central concerns and may lead individuals to be better able to stick with a "right" choice, particularly when their commitment is moderate. While this summary touts the benefits of a horizontal representation, this does not mean that the vertical representation is always worse. In this section, I discuss some remaining questions, particularly with regards to the trade-offs of horizontal versus vertical representations.

To begin, the relative benefits or effectiveness of horizontal versus vertical framing of self-control conflicts may depend on characteristics of the individual. For some individuals, a vertical conflict about what one *should* do may in fact be more motivating than a horizontal conflict that is arguably more about what one *wants* to do. Research in regulatory focus theory suggests that individuals are differentially motivated by sensitivity to duties and responsibilities (the prevention system) versus ideals and aspirations (the promotion system; Higgins, 1997). Furthermore, regulatory fit theory provides evidence that individuals are more engaged when the means of goal pursuit fit or sustain their underlying motivational orientation (Higgins, 2000). Together, these two ideas suggest that prevention-focused individuals may be more effective when self-control conflicts are vertical (likely promoting vigilance), whereas promotion-focused individuals may be more effective when self-control conflicts are horizontal (likely promoting eagerness). Some existing research supports this prediction. Freitas, Liberman, and Higgins (2002) found that prevention-focused individuals, relative to promotion-focused individuals, had higher enjoyment of tasks that involved resisting temptation and outperformed promotion-focused individuals under conditions in which temptations or distractions had to be resisted.

In some cases, at least, it may also be that vertical self-control conflicts cannot be easily conceptualized as horizontal. In other words, not all self-control conflicts are the same. This is perhaps most clear when considering addictive behaviors. For example, the conflict between a higher-order goal to “be healthy” and the temptation of a cigarette cannot be as easily justified as a conflict between two



goals: “being healthy” and “enjoying life’s pleasures.” In this case, a horizontal representation may simply work as a rationalization, providing a justification for an unhealthy behavior. Thus, while it may be helpful for dieters to move away from vertical conflicts that increase the likelihood of failure following setbacks, it may be just as important for smokers to move away from horizontal representations that support or justify continued smoking. Understanding the conditions under which horizontal conflict representations provide insight rather than license to misbehave is an important question we are currently beginning to investigate (see also Myrseth & Fishbach, 2009). This argument bears some conceptual similarity to Tetlock and colleagues’ research on taboo trade-offs (Tetlock, Kristel, Elson, Green, & Lerner, 2000; Tetlock, McGraw, & Kristel, 2004). These authors show that trade-offs between sacred and secular values (e.g., human life and money), seen as morally reprehensible, can be reformulated as (arguably horizontal) trade-offs between sacred values or between secular values (e.g., Give example). Often, such reformulation is used to justify decisions that are considered abhorrent in a vertical, taboo trade-off.

However, if one takes seriously the idea that at times, a temptation can be legitimately represented as another goal, one must also acknowledge the need to move away from the notion that there are always normatively good and bad options in a self-control conflict. While often acknowledged in passing, this complex reality is not often embraced in empirical study. Yet what is good versus bad in a single case is much less clear than what is good or bad in a sequence or pattern of behavior. When we consider the self-control conflict in the hierarchy, we may think

again about what it means to make a bad choice. Some earlier discussions of this issue have highlighted situations in which a “good” decision to delay versus leap is relatively clear (Mischel et al., 1996). For example, in the marshmallow test, most would agree that delaying for a large reward (assuming a stable world and an honest experimenter) is the better self-regulatory choice. In contrast, in another developmental psychology paradigm called the gift delay paradigm, children are given a gift to open in which there is no increased reward for waiting. In this case, delay is often considered maladaptive, a sign of over-control (Mischel et al., 1996; Mischel, Shoda, & Peake, 1988).

In the complexities of everyday life, it is not always clear under what conditions we are operating. As important as it is to study effective exert self-control, it may be just as important to understand people’s ability to flexibly switch between delaying and leaping, between recognizing when the whisper in our ear is the devil and when the whisper comes from another important goal. Part of truly effective self-regulation may be knowing which conflict representation is appropriate, understanding that sometimes choices are failures and sometimes choices are choices.

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