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Abstract

Self-regulation failure is often explained as being overwhelmed by impulse. The present article proposes a novel pathway, presenting a theoretical framework and empirical review of a justification-based account of self-regulation failure. With justification we refer to making excuses for one's discrepant behavior, so that when experiencing a self-regulation dilemma between immediate impulses and long-term intentions, people resolve the conflict by developing and employing justifications that allow violations of the goal they endorse. Accordingly, rather than inhibiting motivations from the impulsive system, the reflective system can also facilitate them, leading to self-regulation failure. We bring together empirical evidence from various domains demonstrating that justifications can instigate self-regulation failure and rule out alternative accounts. Having established that justification processes contribute to self-regulation failure, we then propose several mechanisms that may fuel the effect. Finally, routes for future research and the conceptual and practical implications of these novel insights for self-regulation are discussed.

Keywords

self-regulation, justification processes, self-regulation failure, self-licensing

Meet Sally, Mark, and Marcy. They are at a wedding party. The newly wed couple is about to cut the cake after which best man Mark will propose a toast and the real celebrations can begin. Sally is mesmerized by the wedding cake, but is in doubt as she is on a weight-loss diet that does not allow such tasty but unhealthy delicacies. Mark is getting increasingly nervous about the speech he is about to give, not sure whether his jokes are indeed funny. The nerves make him crave nicotine, but a cigarette is off-limits since he quit smoking 6 weeks ago. Marcy has been sipping soda water all night. While she sees her friends enjoying their drinks, she regrets her offer to be the designated driver.

When the cake is cut, Sally decides that she will have a piece: It is a celebratory occasion after all. Mark also finally caves in and asks his friend for a cigarette, telling himself that he is allowed to have cigarettes in emergencies and, according to Mark, this is one. Finally, when everybody raises their glass for the toast, Marcy also falls of the bandwagon and has a glass of champagne, reasoning that having just one glass will not interfere with her ability to drive.

Most contemporary self-regulation theories would explain failure to act in accordance with one's long-term goals as the result of our impulses taking precedence over reflective

considerations, rendering us unable to resist the lure of immediate temptations. However, the above examples suggest that an impulsive breakdown of the self-control system is not the only route to self-regulation failure. Despite having the self-regulation capacity to avert indulgence, Marcy, Sally, and Mark abandoned their long-term goals by relying on a justification. These examples illustrate that sometimes people actively relent their self-regulation efforts, rather than lose self-control, by relying on justifications to permit themselves an otherwise forbidden pleasure.

While this notion has a familiar appeal to many of us, surprisingly, the role of justifications has been afforded hardly any attention as an explanation for self-regulation failure. Instead, research on self-regulation failure has, to date, mainly focused on the relative strength of impulses for the gratification of immediate desires as an explanation for abandoning long-term goals. While we acknowledge the

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power of impulses in impairing our self-control capacities, we contend that the implicit assumption that the impulsive system is solely responsible for failing to carry through long-term goals is incomplete. People often fail to follow through on their long-term goals not merely because of lack of will-power or being overwhelmed by impulse, but rather because they generate reasons for giving in to temptations. Therefore, we postulate that reflective processes, in addition to impulsive forces, can play a substantial role in self-regulation failure by relying on justification processes. With justification, we refer to the strategic employment of reasons for self-regulation failure before actual enactment so that the failure is made acceptable to oneself. Thus far, this route to self-regulation failure has been neglected in both the self-regulation literature and in dual-process theories.

In the present article, we present a theoretical analysis and empirical review of justification processes in self-regulation failure, exploring deeper the observation that failure is not solely the consequence of impulsive factors, but that reflective processes can contribute as well. We will first give a short overview of the conventional frameworks of self-regulation and specify the role of reflective processes in them. In the following section, we review the empirical evidence for justification processes in self-regulation and kindred phenomena, followed by an analysis of potential mechanisms that fuel the effect. Finally, we will discuss important issues raised by this novel perspective and sketch directions for future research.

Self-Regulation as We Know It

At the heart of self-regulation lies the ability to transcend immediate temptations in the service of long-term goals. As such, self-regulation dilemmas typically involve a conflict between incompatible motivations, where on one hand hedonic attraction pulls toward indulgence, while on the other hand rational norms concerning the conflicting long-term goal dictate to resist the hedonic urge (e.g., Fujita, 2011; Hofmann, Friese, & Strack, 2009). That people often fail at this is reflected by the increasing prevalence of societal problems such as obesity (Flegal, Carroll, Ogden, & Johnson, 2002), credit card debt (Bird, Hagstrom, & Wild, 1999), binge drinking (Wechsler, Lee, Nelson, & Kuo, 2002), and the like. To explain why people so frequently seem unable to act as they intend, many models of self-regulation have adopted the dual-process view that has gained prominence in explaining all types of psychological processes (e.g., Chaiken & Trope, 1999; Epstein, 1994; Smith & DeCoster, 2000). Although each dual-process model has its own unique contentions, they share the postulation that self-regulation is determined by two fundamentally different processes that compete for control over behavior. These differing processes have been described using a variety of terms, such as reflexive versus reflective (Lieberman, 2007), hot versus cool (Metcalf & Mischel, 1999), and impulsive versus reflective

(Strack & Deutsch, 2004). These labels characterize the processes underlying self-regulatory success or failure in terms of a deliberate, slow, and rational system and an impulsive, fast, and emotional system.

To illustrate, the hot/cool systems theory (Metcalf & Mischel, 1999) proposes that self-regulatory behavior is determined by the interplay of a “hot” system and a “cool” system. The hot system is activated in response to hedonically appealing stimuli, and, unless counteracted by the cool system, will stimulate indulgence. When the cool system is active, long-term considerations will have room to facilitate resistance of temptations. Along the same lines, the reflective-impulsive model of behavior (Strack & Deutsch, 2004; Strack, Werth, & Deutsch, 2006) distinguishes a rational and an impulsive route that interact to determine behavior; when cognitive resources are limited, behavior will be predominantly guided by the impulsive system which relies on implicit automatic preferences. However, when cognitive resources are available, the reflective system will take over, allowing for rational choices and explicit intentions.

Although these models do not have explicit predictions for the outcome of the processes in terms of self-regulatory success or failure, and thus leave open the possibility of a reflective pathway to self-regulation failure, this has hardly been followed up in the literature. Instead, the contention that the impulsive system hosts automatic affective reactions, whereas the reflective system holds a person’s explicit attitudes and standards, has led to the interpretation that the impulsive system is mainly responsible for self-regulation failure while the reflective system mainly guides behavior in line with one’s long-term goals (e.g., Bechara, 2005; Heatherton & Wagner, 2011; Hofmann et al., 2009; Hofmann, Friese, & Wiers, 2008). Accordingly, the reflective system would lead Marcy at the wedding party to choose the soda water (following her intention) over the champagne (what she longs for at that moment). The impulsive system on the other hand would leave Mark unable to control his cigarette craving before his speech (his impulse), losing sight of his intention to quit smoking. As such, self-regulation failure is commonly conceptualized as resulting from an inability of the reflective system to modulate the effects of impulsive processes. Consequently, the extensive literature on self-regulation failure now consists predominantly of determinants of failure stemming either from an overactive impulsive system (e.g., emotional and visceral influences, reward saliency, habitualness), or of indicators of a deficient reflective system (e.g., after alcohol consumption or under high cognitive load).

For example, the limited resource model (Muraven & Baumeister, 2000) postulates that our self-control resources are limited and when those resources are depleted, the impulsive system takes over leaving us unable to control our impulses, a state termed ego-depletion. Conversely, for the reflective system to successfully divert the detrimental influence of impulses, effort and control are needed. As a result,

the reflective system can only operate when sufficient resources are available, an idea that is supported by findings demonstrating that higher working memory capacity (Grenard et al., 2008; Hofmann, Gschwendner, Friese, Wiers, & Schmitt, 2008), and interference control capacity (Houben & Wiers, 2009; Wiers, Beckers, Houben, & Hofmann, 2009) weaken the impact of impulsive processes and thus strengthen self-control (see Hofmann, Schmeichel, & Baddeley, 2012, for an overview). To describe this delicate interplay between impulsive and reflective processes the metaphor of a horse and rider is often used to describe self-regulation, where the horse symbolizes the impulsive system that has to be reigned in by a reflective rider.

However, the distinction generally inferred from dual-process models between the impulsive system being mainly responsible for bad behavior and the reflective system being the producer of good behavior, is increasingly being challenged. Recent theorizing suggests that impulsive behavior can sometimes be adaptive to the same extent that reflective behavior may produce bad outcomes. For example, counteractive control theory (Fishbach, Friedman, & Kruglanski, 2003) argues that resistance of temptations can be the result of automatic processes, demonstrating that confrontation with a temptation does not impulsively lead to self-regulation failure but instead can boost self-regulation by automatically activating long-term goals. Likewise, Rawn and Vohs (2011) recently argued that some actions commonly labeled as self-regulation failure such as smoking and drinking alcohol may be carried out as a strategic means of reaching a goal. For instance, a teenager may have to exert self-control to overcome the initial aversive effects of nicotine in order to belong to his peers, in which case smoking can be defined as an act of self-regulation. In other words, whereas dual-process models of self-regulation mostly focus on a reflective route toward effective self-regulation and an impulsive route to failure, alternative routes are possible. In this article, we will focus on the role of the reflective system in facilitating long-term goal defying behavior more closely. Specifically, we posit that by relying on justifications to set aside long-term goals, reflective processes can play a substantial role in self-regulation failure. Together with the already established routes to self-regulation failure, justifications processes could contribute to a more comprehensive picture of the various ways people fail to act as they intend.

The observation that the reflective system can contribute to self-regulation failure is in fact not surprising when the limitations of our reasoning capacities are taken into account. Not only is our rationality bounded (Simon, 1982) but reasoning can even lead to suboptimal outcomes or outcomes not in line with our self-interests (e.g., Wilson & Schooler, 1991). Moreover, our reasoning processes are often guided by our motivations and desires (Hsee, 1995; Kunda, 1990). As such, reflective processes can also contribute to “irrational” choices (Mercier & Sperber, 2011; Shafir, Simonson, & Tversky, 1993; Simon, 1990, 1992).

Acknowledging the limits of reason puts the assumption that reflective processes would lead to the enactment of our explicit goals in another perspective. Although this notion has been recognized in some dual-process models of self-regulation (cf. Strack & Deutsch, 2004), it has not been systematically incorporated into models of self-regulation or reflected in the self-regulation literature (see Kivetz & Zheng, 2006, for an exception). In this article, we will consider the evidence for this additional route to self-regulation failure, in recognition of the idea that rather than reigning in the horse, the rider sometimes encourages it to steer us away from our long-term goals.

Introducing a Justification-Based Mechanism of Self-Regulation Failure

More than ever, people in Western industrialized society are confronted with conflicting motivational pressures. People hold goals to be thin, athletic, productive or successful but are continuously faced with temptations threatening these goals. Sally for example experiences a conflict between what she wants at that moment (the wedding cake) and what she should do to reach her long-term aims (skip the cake and go for the crudités instead). She could resolve this conflict by attempting to resist her urge to indulge in the cake, an effortful process that leads to effective self-regulation. Alternatively, she could resolve the motivational conflict by creating or activating justifications that allow her to indulge in the chocolate cake. As such, justification processes that by their slow, analytical and strategic nature would be considered a product of the reflective system in the traditional dual-process model distinction, can contribute to self-regulation failure.

With justification, we refer to the act of making excuses for one’s discrepant behavior before actual enactment, such that the prospective failure is made acceptable for oneself. In other words, when experiencing a self-regulation dilemma between immediate impulses and long-term intentions, people resolve the conflict by developing and employing justifications that allow violations of the goal they endorse. After all, wanting to do something is a prerequisite but not sufficient for action; “one must also feel licensed to do it” (Miller & Effron, 2010, p. 115). As such, in self-regulation conflicts where one’s desire to act on one’s impulses is in conflict with one’s desire to achieve a long-term goal, justifications can trigger action by liberating people to act on their short-term motivations (Miller & Effron, 2010).

Please note that in the present account, the involvement of a self-regulation dilemma is crucial to trigger justification processes. Without motivations arising from our impulsive system that interfere with our long-term goals, justification processes are unnecessary. After all, if Sally would dislike chocolate, she is unlikely to be tempted by the chocolate-decorated wedding cake, removing the need for justifications. Likewise, if Sally would not have a long-term weight-loss goal, she has no reason to try to resist the urge

elicited by the prospect of tasting the delicious looking wedding cake, making the need for justifications obsolete. Therefore, a justification-based pathway of self-regulation failure, like other accounts of self-regulation failure, is assumed to be the result of an interplay between impulsive and reflective processes. However, while hitherto the role of the reflective system was limited to protecting one's long-term goals from our impulses, the current account proposes that the reflective system, by seeking and constructing justifications for one's impulsive inclinations, can also actively contribute to failure.

Consequently, a justification is not a fixed belief that leads people to indulge. In the absence of a motivational conflict, justifications are not needed to foster indulgence and may not even arise. Instead, a justification seems to rely on the criteria of that person in that moment to allow oneself to relent self-control and resolve the self-control dilemma that is experienced. As a result, justifications are most likely to be idiosyncratically determined and may vary according to the self-regulation dilemma a person is experiencing. In that sense, anything can count as a justification and the number of justifications can be infinite, as long as it is generated during a self-regulation dilemma and as long as it forms an allowance to violate one's long-term goal.

To date, the use of justifications for discordant behavior has mainly been studied in the context of cognitive dissonance (e.g., Festinger, 1957). However, because of the post hoc etiology, cognitive dissonance is not useful in accounting for how people rely on justifications to rationalize *prospective* deviances of goal-directed behavior. In this review, we focus on situations in which justifications are the cause rather than the consequence of goal transgressions. To illustrate, whereas a cognitive dissonance account would predict that when Marcy, after joining everybody in the toast out of habit and is enjoying her glass of champagne realizes that she has inadvertently violated her own norms, will feel uncomfortable. To get rid of this uncomfortable state, she justifies her *past* behavior by reasoning that, for example, one glass won't interfere with her ability to drive anyway. As such, transgressive behaviors can fuel justification processes. In the present account, however, Marcy may have anticipated the upcoming toast and her desire to join in while realizing that she is the designated driver. To resolve this predecisional conflict, she generates arguments beforehand that allow her to act on her wish to join her friends, telling herself that one glass of champagne won't hurt. As such, the generation of justifications leads her to violate her own norms and triggers self-regulation failure. Thus, while in both cases Marcy was motivated to have a glass of champagne and the justifications she used were similar, in cognitive dissonance, the dissonant behavior, which was elicited by some other factor, generated the justifications, whereas in the current account the justifications generate transgressive behavior.

Evidence for justifications as a facilitator of behavior originates in the judgment and decision-making literature, indicating that people are more likely to choose the option that they can justify (Shafir et al., 1993). As the need to choose often creates conflict, decision makers seek and construct reasons in order to resolve the conflict and justify their choice (e.g., Kivetz, 1999; Shafir et al., 1993; Simonson, 1989). As the typical self-regulation dilemma of gratifying immediate desires versus the pursuit of long-term benefits by definition entails a conflict between opposing goals, justification processes seem particularly relevant for understanding self-regulation failure. Applying these principles to the context of self-regulation, one would assume that a justification-based mechanism will favor behavior in line with our intentions simply because corresponding with our long-term goals should be a compelling justification. However, as noted by Shafir et al. (1993), having a reason seems to be more important than the quality of the reason. That is, decisions are based on the mere availability of reasons, the nature and the quality of the reason tend to be disregarded: People appear to prefer "shallow but nice sounding" justifications (Simonson, 1989, p. 170). Moreover, people seem to focus on justifications that are consistent with their initial attitude to justify how they feel, constructing reasons for their present feelings (e.g., Mercier & Sperber, 2011; Nisbett & Wilson, 1977). As such, a justification-based mechanism would predict that when confronted with a self-regulation dilemma where people might be more inclined to pursue the hedonic option (cf. Elliot, 2006), people will seek or construct justifications that will allow them to justify it. This implies that when people find themselves in a situation where they are tempted by something they know they really should not do, they might be successful in constraining themselves, unless they find a reason, any reason, to give in. As such our capacity to reason can become a liability when it comes to self-regulation failure.

While the focus of this article is on the role of justification processes in self-regulation failure, this is not to suggest that reasoned processes cannot be very beneficial to self-regulation as well. In fact, most dual-process models of self-regulation assume that the reflective system is responsible for effective goal striving because of its reliance on rule-based reasoning (cf. Epstein, 1994). However, the role of reasoned processes may be less explicit or novel in successful self-regulation. After all, acting in line with one's intentions does not require reasoned explanations as much as breaching one's intentions: The fact that a certain choice or behavior is in line with our intention is already a valid reason in itself and consequently one does not need to rely on other justifications. Therefore, while acknowledging the importance of reasoned processes in successful self-regulation, the focus in this article is on the lesser known role of justifications in explaining self-regulation failure.

Isolated illustrations of justifications facilitating behavior that is not in line with one's explicit standards come from a

variety of fields, such as health behavior, moral behavior and consumer choice. Yet, these various empirical demonstrations have never been assembled to substantiate a justification-based account of self-regulation failure. In the following section, we aggregate evidence for a justification-based mechanism. This includes work that was not explicitly conducted within this framework but that nevertheless seems to capture the phenomenon that we sometimes rely on justifications to allow oneself a forbidden pleasure.

To be included as evidence supporting a justification-based account the studies had to establish the causal influence of justifications on behavior, including decision making, by (a) manipulating the availability of a justification before self-regulatory behavior was measured in order to rule out post hoc justification processes; (b) including a control group that was not provided with a justification before the outcome measure to establish whether the availability of a justification systematically influenced subsequent behavior; (c) entailing a self-control dilemma, such that one's immediate impulses interfere with one's long-term intentions, as in the absence of a motivational conflict, justifications are not needed to foster indulgence and consequently are unlikely to affect behavior and; (d) having ruled out most prominent alternative explanations for the observed findings.

Empirical Evidence for Justification Processes in Self-Regulation Failure

The role of justifications was first studied in the context of moral behavior where justifications could lead one to violate one's moral principles such as exhibiting prejudiced, sexist, or selfish behavior (see Merritt, Effron, & Monin, 2010, for a review). For example, Monin and Miller (2001) showed that choosing an African American—who was the most qualified applicant—for a hypothetical job, increased the likelihood that participants would describe a subsequent job as better suited for White applicants compared with participants who, based on similar descriptions, initially chose a White applicant as best suited for the job. This and similar findings were attributed to the fact that people whose past behavior (e.g., acting in a non-prejudiced way) provided them with some kind of “moral credentials” that licensed them to subsequently behave in a way that violated these principles (e.g., voicing prejudiced opinions; Effron, Cameron, & Monin, 2009). To describe this phenomenon, Monin and Miller employed the term moral self-licensing.

Further evidence for a justification-based mechanism underlying behavior discrepant with one's long-term goals comes from studies on consumer choice. As many purchasing decisions are tinged with a conflict between hedonic and functional considerations, such as spending on luxuries versus saving up or spending on necessary items, they often encompass a typical self-regulation dilemma between immediate gratifications and long-term considerations. As in

general, the purchase or consumption of such luxury goods is harder to justify than the consumption of utilitarian products, having a justification should increase the likelihood of indulging in luxury consumption. Indeed, a justification-based mechanism appears to be the backbone of the popular consumer loyalty programs. Kivetz and Simonson (2002) demonstrated that participants preferred a luxury award over a utilitarian reward of equal value when the program requirements (e.g., frequency of purchase) were high (vs. low). The greater effort presumably served as a justification for the purchase of luxuries. A justification-based mechanism is also thought to underlie charity incentives where people can contribute to charity by purchasing luxuries. Strahilevitz and Myers (1998) demonstrated that such charity incentives are more effective in promoting luxury than utilitarian consumption. The donation to charity that the luxury consumption encompasses is thought to reduce the guilt normally associated with the purchase of luxury items.

Other studies further demonstrated the facilitating role of justifications on consumer indulgence. Typically, participants in these studies were presented with a justification after which, allegedly in the context of another study, they could choose between a utilitarian and a luxury item. These studies consistently demonstrated that providing participants with a justification (e.g., effort, excellence feedback, contributing to charity or volunteering) increased choice of a luxury product (e.g., designer jeans, Khan & Dhar, 2006; indulgent chocolate cake, Kivetz & Zheng, 2006) over a utilitarian product (e.g., vacuum cleaner, Khan & Dhar, 2006; healthy fruit salad, Kivetz & Zheng, 2006) compared with participants not provided with a justification. Having a justification not only increases preference for hedonic over functional choice but also increases hedonic consumption, such as eating unhealthy snacks (De Witt Huberts, Evers, & De Ridder, 2012a; De Witt Huberts, Evers, & De Ridder, 2012c; Werle, Wansink, & Payne, 2011), suggesting that justification processes also play an important role in self-regulatory processes that are under the influence of visceral drives (e.g., hunger) and that involve actively regulating one's desires rather than choosing.

As outlined above, having a justification can facilitate behavior that counteracts one's explicit intentions, norms, and values, with empirical evidence demonstrating that justifications play a substantial role in the self-regulation context of gratifying immediate needs versus pursuing long-term goals.

Having established that justifications play a role in self-regulation failure, the question rises what kind of justifications people rely on to allow themselves an otherwise forbidden pleasure. A review of the empirical evidence reveals the following list of common justifications. We would like to note that the categorizations are ours, and limited only to the justifications that have actually been studied. As the justifications people rely on may be idiosyncratically determined and influenced by situational factors, the list of

justifications may be more exhaustive in reality. Nevertheless, focus group studies and the recent evidence for self-generated justifications indicate that the justifications that participants came up with were mostly related to one of the categories outlined below (De Witt Huberts, Evers, & De Ridder, 2012d; Mick & Demoss, 1990; Xu & Schwarz, 2009).

Altruistic and Laudable Acts

In a series of studies by Khan and Dhar (2006), imagining oneself having contributed to a charitable cause, such as teaching children in a homeless center or improving the environment, increased choice of a luxury product (designer jeans) over a utilitarian product (vacuum cleaner) compared to people who did not have to think of benevolent deeds (Study 1). In the same line of studies, participants who imagined having donated a part of their tax refunds to a charity were more likely to subsequently choose a pair of luxurious expensive sunglasses over a pair of practical, less expensive sunglasses (Study 2). Likewise, when participants were asked to indicate their willingness to help a foreign student with understanding a lecture, they were less likely to donate the money they earned by participating to a local charity and preferred to keep it for themselves, as compared to participants in the control condition, who did an unrelated task before being asked to donate money to charity (Study 3). In another study by Mukhopadhyay and Johar (2009), it was found that if participants thought they contributed to charity by buying a chocolate bar, they preferred chocolate cake over fruit salad in a subsequent choice task (Study 3). These examples indicate that good behavior can be used to justify indulgent behavior regardless if the laudable behavior entails investing time and effort or indulging. What is particularly notable is that in most studies in this context participants did not actually have to perform the behavior. Even imagining laudable behavior in a vignette study or intending to help produced these results (Khan & Dhar, 2006).

Effort and Achievement

In a review on the role of justifications in self-control failure, Kivetz and Zheng (2006) concluded that the most common justifications entailed either hard work or excellence feedback, suggesting that effort and achievement can serve as a justification to allow oneself a forbidden pleasure. This phenomenon can presumably be traced back to the puritanical idea that one is entitled to the good life only after hard work (Weber, 1958), which is also reflected in findings from qualitative studies where people indicate to only allow themselves a pleasure when they feel they earned it (Mick & Demoss, 1990; Xu & Schwarz, 2009).

Empirical evidence for this notion comes from a line of studies demonstrating that justifications such as having exerted (relatively) more effort in an unrelated task or

receiving excellence feedback on an unrelated performance task steered participants' preference toward the more indulgent options in subsequent choices, favoring low-brow over high-brow movies (Study 1b); indulgent chocolate cake over healthy fresh fruit salad (Study 1c); an entertainment magazine over a political magazine (Study 2); and increased the likelihood of subsequent participation in a fun study with no delayed benefits rather than in a painful self-assessment study with long-term benefits (Study 1a) compared with participants who did not dispose of these justifications (Kivetz & Zheng, 2006). Similar results were obtained in a study from our lab that demonstrated that not actual effort but perceived effort increased hedonic consumption in a subsequent indulgent taste test (De Witt Huberts et al., 2012c). Participants had to complete a non-involving task on the computer. In the effort condition, participants were told half-way that they had to do the task again (thus doing the task for 2×5 min); in the control condition, participants received no such instruction (and thus completed the task as if it were a single task of 10 min), thereby manipulating perceived effort while keeping actual effort constant. Participants who were led to believe that they had completed two tasks consumed on average 130 calories more in a time span of 10 min than participants who actually performed the same task but thought they had only completed a single task.

In a recent study, it was demonstrated that actually exerting effort is not necessary to induce similar effects: Simply reading about a 30-min walk as an exercise activity increased consumption of indulgent snacks compared to participants who were instructed to think of that same 30-min walk as a leisurely activity or a control group who had read about a non-exercise related activity (Werle et al., 2011).

Prior Restraint

Prior restraint can also justify subsequent indulgent choice. Mukhopadhyay and Johar (2009) asked participants to remember an instance where they had seen a product on sale that they had not intended to buy and either ended up buying it or had resisted buying it. Those who had to remind themselves of a prior instance where they had exercised restraint by not buying an attractive product, tended to prefer the chocolate cake over the healthier fruit salad in a subsequent choice task, their prior restraint presumably serving as a justification for their indulgent choice. Along the same lines, Mukhopadhyay, Sengupta, and Ramanathan (2008) asked participants to recall an instance of past behavior where they either had succumbed to or had resisted a food-related temptation. Participants who were instructed to think of prior resistance, ate more cookies in a subsequent taste test than participants who recalled having succumbed. Similarly, dieters who were instructed to reflect on prior foregone indulgence expressed weaker intentions to pursue their weight-loss goals and a week later indicated to have actually done less and intended to do less to pursue their weight-loss goals

compared to dieters who did not reflect on prior restraint (Study 1; Effron, Monin, & Miller, 2013). Similar mechanisms have been observed in the context of moral behavior, with recent evidence demonstrating that thoughts of foregone misdeeds by thinking of bad deeds that one could have performed but did not, increased subsequent immoral behavior compared with participants whose foregone misdeeds had not been made salient (Effron, Miller, & Monin, 2012).

Prior Success or Failure

A justification related to prior restraint is perceived goal progress. As many self-regulation dilemmas often involve trade-off between two opposing goals (e.g., Fishbach & Dhar, 2005; Stroebe, Papies, & Aarts, 2008), progress toward one goal often implies moving away from the other goal. A series of studies in the context of the goal progress model (Fishbach & Dhar, 2005; Louro, Pieters, & Zeelenberg, 2007) demonstrated that actual or perceived goal progress in one domain led to more indulgence in the opposing domain (e.g., losing weight vs. choosing a hedonic snack; studying vs. going out with friends).

Conversely, although not explicitly studied in a justification context, having failed to attain one's goal could also serve as a justification to even further abandon one's goal. Notorious in this regard is the "what the hell effect" in restrained eaters. Numerous studies demonstrated that restrained eaters, people who have the goal of restricting food intake to reach a certain weight, do not show a physiologically normal compensation effect after consuming a preload (cf. Herman & Mack, 1975). Whereas normal eaters decrease their food intake after a preload milkshake, listening to their normal bodily signals, restrained eaters *increased* their food intake after having the milkshake. Having broken their diet by consuming a milkshake apparently serves as a reason to completely abandon their diet for the day. This abstinence violation effect, as it is also known by, has been found within other self-regulation domains as well, such as in abstinent alcoholics, smokers, and illicit drug users (e.g., Collins & Lapp, 1991; Shiffman et al., 1996; Stephens & Curtin, 1994).

Future Choices and Intentions

Another type of frequently studied justifications are future choices and intentions. For example, in a study by Khan and Dhar (2007) participants had to choose between a relatively healthy or indulgent snack. Whereas the choice was framed as a single choice opportunity for half of the participants, the other half of the participants were informed that they would have the possibility to choose between the two snacks again in the following week. Participants believing that they could choose again next week were more likely to favor the indulgent option in the present choice. Merely knowing that one would have the option to choose again at

a later time presumably justified people to act indulgently, as the possibility to act in line with one's intentions in the future served as a justification to break their rules in the present.

A related demonstration of how future plans and choices can endanger current self-regulation is the evidence that forming particular justifications about undoing the negative effect of the indulgent behavior, can bring about such indulgent behavior (also see Rabiau, Knäuper, & Miquelon, 2006). In other words, when confronted with the wedding cake, Sally may form compensatory intentions such as "I will go exercising tomorrow" or "I will eat less tomorrow," which will allow her to violate her dieting rules now and indulge in the cake. Indeed, a study by Kronick and Knäuper (2010) revealed that participants who were instructed to make plans to exercise later that day consumed more M&Ms in a subsequent taste test than participants who had not been asked to make concrete plans for physical activity. Another compelling example of the detrimental effect of future intentions on current self-regulation that could be explained by a justification-based account is the finding that restrained eaters who plan to start a weight-loss diet will use that future intention as justification to indulge in the soon-to-be forbidden food while they still can (Urbszat, Herman, & Polivy, 2002).

Negative Emotional Events

That negative emotional events and the ensuing negative affect can also serve as justification to temporarily abandon self-regulatory goals was demonstrated in our lab (De Witt Huberts et al., 2012a). In three studies, a negative affective state was induced in participants by showing them aversive pictures. The duration of exposure to the negative pictures was manipulated such that one group was highly aware of having seen the pictures whereas the other group was only minimally aware. Only participants who were highly aware of having seen the negative pictures, and thus could use the negative affective triggers as justification, consumed more hedonic snack foods in a subsequent taste test. Importantly, the increase in hedonic consumption could not be attributed to differences in negative affect as both groups reported feeling equally negative.

Similar findings have been observed in the context of emotional moral events, demonstrating that feeling wronged leads to more selfish behavior (Zitek, Jordan, Monin, & Leach, 2010). Participants who were instructed to recall an occasion in which they were treated unfair were more likely to refuse to help the experimenter with a supplementary task than participants who had to recall a time when they were bored (Study 1; Zitek et al., 2010). Likewise, when participants lost a computer game due to an unfair reason (a glitch in the program), they requested a more unfair money allocation in a future task than did participants who lost the game for a fair reason (Study 3; Zitek et al., 2010).

Conclusion

The most intriguing observation that emerges from the overview of empirically studied justifications is the ease by which justification can propel self-regulation failure. Merely reading about a potential justification in vignette studies, imagining a laudable act or effort, both goal achievement and failure, and considering or intending to pursue the long-term goal again later on can make people digress from their long-term goal. Moreover justifications can be related to the goal that they violate and in a sense constitute “rational” or logical justifications, such as justifications about undoing the negative effects of the indulgent behavior or perceived goal progress, but justifications can also be unrelated to the behavior that is being justified, and thereby appear to be rather arbitrary. What the various justifications that have been studied to date have in common, however, is that they seem to entail some kind of entitlement (cf. Kivetz & Zheng, 2006). It can be concluded that people do not seem to be very critical of the reasons they apply to violate their intentions. This apparent susceptibility of people to rely on justifications indicates how easily justification processes can become maladaptive, underlining their importance as an explanation for self-regulation failure.

It seems that, although under different names, in the past decade quite some evidence has been gathered that points toward a facilitative role of justifications on norm-violating behavior, luxury choice and indulgent behavior, suggesting that a justification-based mechanism should be taken into account when explaining self-regulatory failure across various behavioral domains. However, the findings attributed to justification processes share many similarities with other mechanisms of self-regulation failure. To establish whether justification processes contribute to self-regulatory failure, alternative mechanisms for the presented findings need to be ruled out.

Establishing Justification Processes as Independent Determinant of Self-Regulation Failure: Alternative Theories and Explanations

Examining the evidence reviewed above suggests that the justifications that have been found to interfere with long-term goal striving share many similarities with other antecedents to self-regulation failure. In this section, we will review alternative accounts to establish whether justifications can be accounted for by these similar mechanisms or whether justification processes are indeed an additional mechanism contributing to self-regulation failure.

Goal Progress Model

An account that a justification-based mechanism shares many similarities with is the goal progress model, which

views self-regulation failure as a trade-off between two competing goals (Dhar & Simonson, 1999; Fishbach & Dhar, 2005; Louro et al., 2007). Typically self-regulation dilemmas involve two opposing goals that people intend to pursue, where pursuing one goal means inhibiting the progress toward the other goal. The goal progress model proposes that when a person believes sufficient progress toward one goal has been made (e.g., by skipping the starter at diner, progressing to the goal of a slim figure), he then pursues the opposing goal of enjoying culinary delights (by choosing a tasty dessert). To illustrate, Fishbach and Dhar (2005) asked female dieters to indicate how far off they were from their ideal weight on a scale that either had –5 lbs. (narrow scale) or –25 lbs. (wide scale) as its end-point. The wide scale would lead dieters to believe they had made sufficient progress since the same discrepancy from one’s ideal weight would appear small on the wide scale but wider on the narrow scale. Significantly more participants in the wide scale condition chose a chocolate bar over an apple as a parting gift.

However, as the reviewed justifications indicate, the effects of a justification-based mechanism are not limited to justifications that are within the same domain as the behavior that is being justified as posited by the goal progress model. That is, for Sally to indulge in the wedding cake, it is not necessary that her justification is related to successful dieting attempts. Instead, according to a justification-based mechanism, any justification is valid to license gratification, so that Sally could justify her indulgence on the virtue of the celebratory occasion. Indeed, in the majority of studies that demonstrated a justification-based mechanism, justifications such as effort or excellence feedback on cognitive tasks or laudable acts, licensed indulgent behavior in an unrelated domain (eating, shopping behavior, luxury choice), ostensibly as part of another study (De Witt Huberts et al., 2012c; Khan & Dhar, 2006; Kivetz & Zheng, 2006).

From consumer research comes a related alternative explanatory account for the observed effects based on the notion of balancing among choices (Dhar & Simonson, 1999; Novemsky & Dhar, 2005), which extends to a more abstract level than the goal progress model in that people attempt to achieve balance between indulgence and restraint in general rather than within a specific domain. According to this account, within a sequence of multiple choices people prefer to alternate outcomes which allows them to pursue both utilitarian as well as hedonic goals. That is, preferences among alternatives can be affected systematically by consumers’ prior actions such that an initial hedonic choice would lead to a preference for a more restrained option and vice versa. That the findings attributed to a justification-based mechanism cannot be accounted for by such a balancing mechanism among choices was convincingly demonstrated in a study by Mukhopadhyay and Johar (2009). In line with the balancing account, they found that when people had just bought chocolates as part of the experiment,

they were more likely to subsequently choose fruit salad over chocolate cake, achieving a balance between healthy and indulgent choices. Crucially, however, this preference for fruit salad over chocolate cake was reversed when people were led to believe they had donated to charity by buying chocolates. That is, rather than stimulating a healthier choice in the subsequent self-regulation situation as predicted by a balancing mechanism, the indulgent purchase stimulated further hedonic consumption. Presumably donating to charity by hedonic consumption justified the subsequent choice of a hedonic snack, thereby supporting the notion that justification processes were involved.

Resource Depletion

Justifications such as effort (e.g., De Witt Huberts et al., 2012c; Kivetz & Zheng, 2006) and prior restraint (e.g., Mukhopadhyay & Johar, 2009) reminisce of another important theoretical framework to explain self-regulation failure: the limited resources model (e.g., Baumeister, Bratslavsky, Muraven, & Tice, 1998; Hagger, Wood, Stiff, & Chatzisarantis, 2010; Muraven & Baumeister, 2000). In this model, self-control is regarded as a limited resource that is depleted by exerting self-control, thereby limiting the ability to restrain subsequent behavior. Failures of self-regulation incited by justifications such as prior restraint or prior effort, which deplete self-control resources, could thus also be attributed to a loss of self-control instead of justification processes. However, the findings that merely being reminded of or imagining a prior act of restraint instead of actually exerting restraint, or manipulating relative rather than absolute effort, cast doubt on this alternative account as explanation for a justification mechanism. Although these studies suggest that self-regulation failure occurs without actually exerting self-control, resource depletion could not be ruled out indefinitely as an explanation for the observed effects. For instance, Ackerman, Goldstein, Shapiro, and Bargh (2009) found evidence for vicarious resource depletion: imagining another person exerting self-control depleted self-control resources despite not actually engaging in an effortful task. It could be possible that having the impression of having exerted effort or restraining oneself produces similar results. A more direct test to rule out this rival account was therefore needed to establish whether justification cues such as effort or restraint worked through a justification-based mechanism. Therefore, two studies tested whether the justification cues commonly used in justification-based accounts required self-control resources (De Witt Huberts et al., 2012c). Results indicated that participants thinking they had exerted relatively more effort by completing two tasks of 5 min consumed more snacks in a subsequent taste test compared to participants who thought they had completed a single task of 10 min while self-control resources, measured by a Stroop task, did not differ among participants. These findings confirm that justifications can instigate self-regulation failure whilst the

resources to regulate this behavior remain intact, thereby ruling out resource depletion as an alternative account for the finding that prior restraint and effort can justify subsequent goal violations. These findings imply that although people may still have the self-regulation capacity to avert indulgence, they may not always do so if they have the opportunity to justify it.

Negative Affect

That negative affect is often related to self-regulation failure is reflected in terms such as “emotional eating” or “retail therapy.” Negative affective states are considered to be a prototypical “hot” factor in self-regulation models (e.g., Metcalfe & Mischel, 1999) that impulsively lead to self-regulation failure (Heatherton & Wagner, 2011; Loewenstein, 1996; Loewenstein, Weber, Hsee, & Welch, 2001), and therefore can provide an alternative account for the observation that negative emotional events can serve as a justification for self-regulation failure. Findings from our lab, however, reveal that negative emotional events can also exert their detrimental influence on self-regulation via a justification-based pathway. In three studies, the use of emotions as a justification was investigated while ruling out the direct effects of negative emotions on self-regulation failure by varying the exposure to aversive stimuli (De Witt Huberts et al., 2012a). In the low-awareness condition, participants were exposed very briefly to negative stimuli, whereas in the high-awareness condition participants were exposed long enough to fully apprehend the negative stimuli. In a third, neutral, control condition, participants were exposed to neutral stimuli only. While after the priming procedure participants in both negative conditions indicated reported equal levels of negative affect only participants who were more aware of being exposed to the negative stimuli consumed more in a subsequent, ostensibly unrelated, taste test. Participants in the low-awareness condition, despite being in a negative affective state, did not increase their hedonic intake compared to the neutral control group. In support of a justification-based mechanism, it appeared that despite feeling equally negative, only participants who were highly aware of being confronted with an emotional event could use their emotional experience as a justification to indulge, a justification not available to participants who were minimally aware of the emotional stimuli. Importantly, participants in the high-awareness condition only consumed more of forbidden snacks but not of equally palatable but healthy snacks, supporting the notion that awareness of the negative event served as a justification to allow oneself a forbidden pleasure rather than an attempt to ameliorate one’s negative state (cf. Tice, Bratslavsky, & Baumeister, 2001). In the latter case, one would predict that in order to alleviate one’s negative affect, no differences would have been observed between the consumption of healthy and unhealthy snacks as they were rated equally palatable. From that point

of view, eating more of the healthy option would produce equal mood-lifting effects as eating from the unhealthy option. In fact, one would expect even stronger mood-lifting effects because feelings of guilt after indulgence could be avoided. However, the data revealed that participants who were provided with a justification only ate more of the snacks that needed to be justified. Likewise, as both negative conditions were equally negative, it can be assumed that participants in both negative conditions would be equally motivated to ameliorate their current emotional state, ruling out the possibility that the findings could be attributed to a difference in motivation to improve one's affective state as predicted by the alternative interpretation. This is further corroborated by the finding that the participants in both negative conditions did not differ in their expectations of the mood-lifting effects of eating.

Presumably, the widespread idea that emotions render one powerless over one's behavior is a compelling justification to behave more indulgently than one would otherwise allow oneself to behave. It has indeed been found that transgressions of one's moral standards are evaluated less harshly when they occur in an emotional state compared to similar moral transgression in a neutral state (Pizarro, Uhlmann, & Salovey, 2003). Similar results were found for violations of one's dieting intentions: participants who imagined eating a whole package of cookies despite being on a diet while feeling sad, indicated to feel less responsibility, less guilt, and less blame for their diet-breaking behavior compared with participants who read the same description without any references to their emotional state (De Witt Huberts et al., 2012a, Study 1).

Conclusion

Comparing the evidence for a justification-based mechanism with other accounts of self-regulation failure suggests that while a justification-based explanation may share many similarities with other established mechanisms, it seems to be a distinct mechanism, which, in addition to those other mechanisms, contributes to self-regulation failure. Interestingly, the comparison further reveals that instigators of self-regulation failure normally attributed to impulsive mechanisms, such as resource depletion or negative emotions, can also be accounted for by a justification-based mechanism. We would like to explicitly note, however, that the observation that justification processes can sometimes explain findings that have been attributed to other mechanisms does not negate or minimize the importance and usefulness of these other mechanisms in explaining self-regulation failure. Instead, justification processes are seen as an additional explanation of self-regulation failure that co-exists with these other mechanisms. Future research should investigate under what conditions and circumstances self-regulation failure is the result of these established mechanisms and when it is instigated by justification processes.

Having established justification processes as an independent account for explaining self-regulation failures that cannot be explained by other existing models of self-regulation failure, the questions rises what the underlying mechanism of this phenomenon is. In the following section, we will explore several possibilities and review the evidence for it.

Underlying Mechanisms of Justification-Based Self-Regulation Failure

In this section, we will review several potential mechanisms by which justifications undermine self-regulation. Besides several studies investigating the mediating effect of a reinforced self-concept in justification-based self-regulation failure (Khan & Dhar, 2006; Mukhopadhyay & Johar, 2009), to our knowledge there are hardly any other studies that have directly tested the underlying mechanism. Therefore, in addition to the evidence for a reinforced self-concept, we propose several other potential underlying processes borrowing from major psychological theories explaining human motivation, including cognitive dissonance, anticipated affect, and motivated reasoning.

Prefactual Cognitive Dissonance

Marcy's decision to have a glass of champagne despite her strong intentions and full awareness of the possible negative consequences is, despite seemingly mundane, actually more counterintuitive than one might expect. After all, behaving in ways that run counter to one's wishes, intentions, or principles, violates a fundamental human need for seeing oneself as a rational and consistent person. Yet, one of the most consistent findings within psychological research is that personal inconsistency is uncomfortable and threatening (Festinger, 1957). Cognitive dissonance in its purest sense cannot account for the findings reviewed above, as the outlined evidence concerned the use of justifications before an actual transgression happens, while cognitive dissonance is concerned with the justifications that people may use to rationalize self-gratification ex-post facto (Festinger, 1957). However, a justification-based mechanism does seem to fit with the broader set of psychological theories that focus on the need for cognitive consistency and its implications (e.g., Festinger, 1957; Heider, 1958). We suggest that analogous to the reliance on justifications to resolve cognitive dissonance caused by behavior in the past, it is possible that justifications might help people to resolve a conflict evoked by prospective behavior.

Human beings have the unique ability to imagine the consequences of their behavior in advance. This prefactual thinking allows people to investigate the different consequences, and potentially experience dissonance between one's cognitions and the (future) behavior that one is

contemplating. From this point of view, it could be argued that the conflict Sally experiences when she is tempted by the instant pleasure of the cake while being fully aware of how guilt ridden and self-deprecating she might feel by eating it is similar to the cognitive dissonance she might experience after actually having succumbed to the cake.

It should be noted, however, that our attempt to fit the principles of a justification-based account of self-regulation failure into the framework of cognitive dissonance research remains speculative, as Festinger (1957) himself contended that cognitive dissonance could only be evoked by prior behavior, while others did consider prefactual cognitive dissonance to be a possibility (see Brownstein, 2003, for a review). Thus, while the discomfort induced by a self-regulation dilemma beforehand, and actual cognitive dissonance experienced afterwards, might be phenomenally different and not count as cognitive dissonance in the classical sense, the processes remain similar in that both accounts imply that the person must experience some kind of conflict and that this conflict is resolved by means of a justification. In the case of justification-induced self-regulation failure this process occurs beforehand and thereby the justification is responsible for generating the behavior, whereas in the classical cognitive dissonance paradigm the conflict takes place after the transgression has become a reality, and justifications are generated by the transgressive behavior.

Anticipated Affect

Closely related to, and potentially overlapping with, the prefactual cognitive dissonance account as an explanation for justification-induced self-regulation failure is the literature on anticipated affect. Regret and guilt are powerful forces in motivating and giving direction to behavior, because people are motivated to prevent regret and guilt from happening (Simonson, 1992; Tangney & Dearing, 2002; Zeelenberg & Pieters, 2007). Much of the conflict experienced in self-regulation dilemmas stem from the concern about the anticipated negative consequences of a choice: Mark would not experience discord if he did not anticipate that having a cigarette would make him feel guilty afterwards. That avoiding these negative consequences is a powerful motivator of human behavior is evidenced by the finding that anticipated regret plays a substantial role in self-regulation, preventing people from abandoning their good intentions (Abraham & Sheeran, 2003; Sandberg & Conner, 2008). Similarly, work by Giner-Sorolla (2001) indicates that self-conscious emotions such as guilt and regret can boost self-regulation in self-regulatory dilemmas. For Mark, knowing that he will feel like failure after smoking is presumably the main motivator to refrain from smoking. As such many, if not most, self-regulation conflicts involve a form of anticipated regret or guilt. This anticipated negative affect, and thereby potentially its reinforcing effect on effective self-regulation, might be countered by means of justifications.

Research has shown that justifiable decisions lead to less regret than unjustifiable decisions (Connolly & Reb, 2005; Connolly & Zeelenberg, 2002). If anticipated regret leads people to engage in thoughtful decision making, using a justification, even though faulty, could give people the impression having made a careful decision, thereby alleviating regret or guilt about one's behavior (e.g., Reb & Connolly, 2010. Also see Janis & Mann, 1977). As such, the anticipated regret and guilt evoked by self-regulation conflicts stimulates the seeking and construction of justifications to avoid these anticipated negative feelings.

The effect of anticipated guilt was investigated in a study by Khan and Dhar (2007; Study 3). After half of the participants were provided with a justification (future choice), all participants had to indicate the degree of guilt they would feel after eating the healthy option (yoghurt) and the unhealthy option (cookie), before actually choosing between these products. Participants who had a justification anticipated less guilt in choosing the vice than participants who did not have a justification. The reduced anticipated affect mediated the effect of justifications on indulgent choice. Thus, having a justification before a choice decreased the anticipated guilt related to the indulgent choice, thereby stimulating the indulgent choice.

Related evidence in support of this assumption comes from the line of studies conducted by Kivetz and Zheng (2006). They found that the effect of justifications was particularly strong in people who were dispositionally more prone to feelings of guilt (Studies 3-5). Moreover, in a subsequent study, guilt was experimentally manipulated by asking participants to remember either two or eight occasions in the past week where they had failed to resist temptation. It was assumed that remembering two instances of self-regulation failure would be relatively easy, thereby conveying the impression that they often failed at self-regulation attempts and inducing relatively high levels of guilt. Having to remember eight examples of self-regulation failure within the last week was assumed to be difficult for participants, conveying the impression that they were relatively successful in sticking to their intentions, and leading to lower levels of guilt. Results indeed indicated that participants experiencing high levels of guilt were more likely to rely on a justification to allow oneself a subsequent indulgence than participants who experienced low levels of guilt. This finding is not in line with the common finding that people who experience guilt are more likely to exert self-control (Giner-Sorolla, 2001). It thus seems that justifications may undo the protective role of self-conscious emotions such as guilt and regret.

In further support of this notion, the literature on hedonic consumption indicates that it is a widely held belief that indulging without a justification will evoke feelings of guilt and regret and that having a justification mitigates the psychological pain of violating one's intentions (Kivetz & Simonson, 2002; Kivetz & Zheng, 2006; Lascu, 1991;

Mick & Demoss, 1990; Okada, 2005; Xu & Schwarz, 2009). However, while universally accepted, a recent study suggests that these expectations may be incorrect. Xu and Schwarz (2009) investigated whether consumers indeed experienced more guilt when they consumed hedonic products without a valid reason. Their findings indicated that although participants expected less enjoyment when they would indulge without good reason than when they indulged with a reason (such as a reward for high effort), their reported affect during and after the indulgence episode did not demonstrate any difference in enjoyment between indulging with or without a justification. It thus seems that people's expectancies are not in line with their actual experiences, a finding that fits with the broader literature indicating that people's predictions of future feelings tend to be off the mark (e.g., Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998).

Yet, although participants may not actually experience more guilt when they indulge without good reason, the belief seems to be quite persistent: It was found that participants, despite the disconfirming experience, still retained their belief that one needs a justification to indulge, even if they did not experience an actual increase in guilt when their gratification was without reason. According to Xu and Schwarz (2009) the persistent nature of this belief can be explained by two factors. First, the expected guilt and regret may prevent them from indulging without a justification in the first place, thereby preventing them from having disconfirming experiences. Second, when asked how they usually feel when indulging with versus without a reason, their global memories are based on their basic semantic knowledge and expectancies, thus that one needs a reason to indulge, rather than their actual experiences.

Although it seems that people may hold erroneous beliefs about how they will feel when they indulge with or without a good reason, the very belief, while inaccurate, may underlie the seeking and construction of justifications to alleviate the anticipated guilt and regret induced by the self-regulation conflict. As such, affect and the anticipation thereof may fuel and maintain justification-induced self-regulation failure.

Motivated Reasoning

While rationality was long assumed to be the end-product of our capacity to reason, and thus would lead to actions that are in favor of our own best (long-term) interest, it has been acknowledged for some time now that purely rational modes of reasoning can lead to suboptimal outcomes. For example, emotions are crucial for effective decision making (cf. Damasio, 1994) and unconscious thought has proved to be superior to conscious reasoning processes in certain circumstances (cf. Dijksterhuis & Nordgren, 2006). In fact, research has demonstrated that reason itself is not completely rational. That is, the truly objective reasoner does not exist. Instead our reasoning is biased by our motivations.

According to Kunda's (1990) account of motivated reasoning, people construct seemingly rational justifications for their desired beliefs. Consequently, the information search is biased in favor of information that is consistent with the desired conclusions (Hsee, 1995; Kruglanski, 1980; Kunda, 1987, Sanitioso, Kunda, & Fong, 1990). This allows people to draw a conclusion they desire while maintaining an illusion of objectivity.

The notion that people attempt to construct justifications for beliefs they are motivated to hold can account for several phenomena. For instance, the motivation to see oneself as an extravert or introvert leads people to selectively access those memories that can justify the desired view. Similarly the self-serving bias (cf. Heider, 1958) is believed to be a product of people's motivation to maintain one's self-esteem, and a motivational bias lies at the root of unrealistic optimism (e.g., Weinstein, 1980).

Taking up a motivated reasoning account in the context of self-regulation failure would predict that when confronted with a tempting option, people will be naturally motivated to choose the hedonic alternative (Elliot, 2006; Okada, 2005), and are consequently motivated to find reasons that justify such a choice. Thus, when Sally is tempted by the forbidden cake she justifies her feelings by coming up with arguments in favor of having the cake (e.g., "This is an exceptional occasion, so I am not really breaking my diet"). As such, the reliance on justifications in self-regulation failure seems to be a classic example of motivated reasoning where justifications are tinged by desire rather than objective rational formulations. After all, if the reasoning process were to be truly objective, Sally would be able to apply equally, if not more, compelling justifications for not eating the cake as they fit with her intentions and beliefs (e.g., "It is bad for my weight-loss regime"; "It is only a momentary pleasure"; "I will regret doing it") and would thereby be in fact the more justifiable option from a rational perspective. Consistent with a motivated reasoning account, it seems that when people are motivated to arrive at a certain conclusion, such as having the cake, then even trivial and irrational reasons can increase the justifiability of a decision, even when these justifications are not compelling on their own. Thus, ironically, the evidence for motivationally constructed justifications suggests that in our attempts to appear rational we become irrational.

While a motivated reasoning account to explain a justification-based pathway to self-regulation failure is promising, it has never been experimentally tested in the context of self-regulation. However, findings from our lab do provide initial support for a motivated reasoning account by demonstrating that the justifiability of a forbidden pleasure is determined by its temptational strength (De Witt Huberts et al., 2012d). Ostensibly as part of the market introduction of a new snack, participants were asked to rate how tempted they were by a new type of chocolate bar. Afterwards in a thought listing procedure, supposedly to determine the marketing strategy of the product, participants had to indicate the reasons that

would allow them to indulge in that particular food temptation. Participants could choose as many reasons as applied to them out of a list of 30 reasons. Results indicated that the degree of temptation (cf. how attractive yet forbidden the product was; Kroese, Evers, & De Ridder, 2011) determined the number of reasons participants applied to allow themselves the forbidden treat. In a subsequent study, it was found that the motivational conflict elicited by the hedonic product also influenced active reasoning processes. Again participants were exposed to a tasty but unhealthy food temptation and this time were asked to generate reasons that would apply to them to indulge in that product. As in the first study, the degree to which participants were tempted by the product determined the number of reasons they construed to allow themselves the forbidden pleasure. In both studies, the justifications referring to visceral factors that may be used as a reason to consume the product, such as appetite and hunger, were not included, thus purely measuring justifications rather than a biological necessity to consume the hedonic product. Although the degree of temptation was not manipulated, instead relying on idiosyncratically determined temptation, these results do fit the concept of motivated reasoning. Experimental evidence comes from a recent study by Effron et al. (2013) that revealed that participants exaggerated prior dietary restraint, thereby creating a justification, when they expected to eat cookies but not when they expected to merely see the cookies. These findings suggest that the extent to which one feels tempted by a product, presumably by guiding reasoning processes, determines the amount of reasons one applies and construes in order to justify its consumption. While motivated reasoning is not rational in itself, it does seem to allow us to behave irrationally while maintaining a rational self-concept. Although this may in fact be an illusion as the reasons we rely on are trivial or irrational in themselves, the goal we may aim to achieve by means of applying justifications—retaining a self-concept as a reasonable person—may be achieved successfully by such a process. Several researchers have proposed that a justification-based pathway to self-regulation failure in fact relies on the boost in self-concept the prior justification gives.

Reinforced Self-Concept

In extension of the idea that justifications are construed to maintain an illusion of rationality, it has been argued that justifications exert their influence by counteracting the detrimental consequences of self-regulation failure to our self-concept. This premise is considered to be the underlying mechanism of moral licensing for which Monin and Miller (2001) introduced the concept of moral credentials. Monin and Miller maintained that licensing effects in stereotyping behavior arise because a prior act protected the individual's self-perception. That is, once people viewed themselves as non-sexist or non-racist individuals by a prior statement or endorsement, they felt free to act in a more stereotypically

consistent manner. Relating this notion to self-regulation, a justification, which mostly involves something laudable about the self such as effort or a charitable deed, functions as some kind of credential that then serves as a license to choose an option that would otherwise create negative attributions for the self, such as acting against one's intentions. Indirect evidence for such a mechanism comes from studies by Mukhopadhyay and Johar (2007) and Ramanathan and Williams (2007) demonstrating that resisting temptation causes positive self-conscious emotions such as pride. Likewise, Mick and Faure (1998) demonstrated that pride and deservingness mediated the effects of achievement in self-gifting.

Evidence for this pathway was directly tested in the context of consumer research. As the purchase of luxuries is difficult to justify and induces greater guilt (Dahl, Honea, & Manchanda, 2003; Okada, 2005), they are considered to produce negative self-attributions. Having chosen a virtuous option beforehand can help establish credentials which in turn can serve as a justification to choose an option that otherwise would harm one's self-concept. Khan and Dhar (2006) directly tested whether an initial benevolent choice boosted self-concept that buffered against negative attributions associated with the second, indulgent, choice. After providing half the participants with a justification (signing up for community service), participants had to give self-assessments on four positive personality traits ("compassionate"; "warm"; "helpful"; "sympathetic"). As expected, participants who had committed to an altruistic act rated themselves significantly more positive on the four attributes than participants without such a justification (Studies 1, 3, and 5). This boost in self-concept mediated the effect of the justification on willingness to choose an indulgent item (Study 5). However, providing participants with an external reason to perform the community service (for instance, having to do community service for having committed a driving violation) attenuated the facilitating effect on indulgent choice. Presumably doing community service as punishment reversed the positive impact on self-concept.

A reinforced self-concept might explain the results from studies where one did not actually need to perform a benevolent act for a justification effect to occur. If merely thinking about, intending or planning a charitable act can lead to a more positive self-concept, then there is no need to execute one's optimistic plans to reap the benefits that enable one to indulge without the negative consequences.

However, findings from another line of studies by Mukhopadhyay and Johar (2009) suggest that a boost in self-concept is not necessary for prior laudable acts or decisions to bring about indulgent behavior. In their line of studies self-esteem was measured directly after the initial decision that was supposed to act as a justification (refraining from or giving in to an impulsive purchase). In contrast to the findings by Khan and Dhar (2006), no difference in self-esteem was found between participants that did exercise restraint in

the prior decision and the participants that had failed to exercise restraint. They did find, however, that participants who had exercised shopping restraint in the first decision were more likely to choose the indulgent option afterwards, demonstrating the justification effect. Interestingly, however, reminding participants of their self-esteem before the second choice also increased indulgence afterwards, even in participants without a justification. These findings thus suggest that both reminding one of one's self-concept without prior restraint, and thus without a justification, and restraining oneself without actually boosting self-esteem, could produce justification effects. The authors therefore concluded that a boost in self-concept is sufficient, but not necessary, to instigate indulgent choice (Mukhopadhyay & Johar, 2009).

While these findings may at first sight not be in line with the findings by Khan and Dhar (2006), they do not necessarily contradict each other. The justifications used in the studies by Khan and Dhar involved commitment to an altruistic act, which could have generated a stronger boost in self-concept than refraining from an indulgent purchase, as used by Mukhopadhyay and Johar (2009). While more research is needed to directly test the effect of the specific justifications on self-concept and the role of self-concept in self-regulation failure, the above findings suggest that there may be multiple pathways for justifications to instigate self-regulation failure.

Conclusion

In this paragraph, we discussed several potential mechanisms that could explain a justification-based route to self-regulation failure. We would like to note that this list is by no means exhaustive. Other factors not reviewed here could possibly account for the effect that justifications have on self-regulation failure. Moreover, as studies directly investigating the underlying mechanisms remain scarce, leaving only indirect evidence for the proposed mechanisms, the review highlights the need for more future research into the underlying mechanisms of justification-induced self-regulation failure.

What's more, the many similarities and overlap between the various explanations suggest that a justification-based route to self-regulation failure is more likely to be determined in multiple ways. Which of these mechanisms ultimately determines the effect on self-regulation failure may to a great deal be determined by the circumstances. For example, a strengthened self-concept is more likely to explain the underlying mechanism when the justification involves some altruistic deed, which touches a key aspect of the self, rather than an ephemeral justification such as not buying something. In addition, it is likely that for motivated reasoning processes to be instigated, one must feel a strong desire for a certain option, and thus already have been exposed to a temptation. Finally, individual differences such as guilt-proneness could affect whether a justification-based route is

determined by anticipated or experienced affect. It thus appears that there are multiple routes from justification to self-regulation failure, and that the route is determined by various factors and conditions.

Conclusion and Implications

Notwithstanding the many questions that remain about the factors and mechanisms determining a justification-based pathway, the findings reviewed and analyzed in the present article reveal that justification processes have been underappreciated as an explanation for self-regulation failure. The reviewed findings not only demonstrate that a justification-based pathway is an important and common route to self-regulation failure in many behavioral domains but also reveal how easily inclined people are to rely on justifications. Therefore, to capture the full scope of processes underlying self-regulation failure, it is crucial to put such a reflective route to goal-derailment on the map.

Acknowledging a justification-based account as an explanation for self-regulation failure has important conceptual implications for self-regulation. First, the novel route outlined in this article suggests that self-regulation failure is not by default the result of the impulsive system taking precedence over the reflective system as has often been inferred. Instead, the reviewed evidence indicates that even when people have the resources and capacity to act in accordance with long-term goals, they may not always act upon them when there is a justification to do so. Second, by suggesting that reflective processes in themselves are a potential liability for self-regulation, a justification-based account questions the general assumption of self-regulation models that the reflective system serves to correct mistakes in the impulsive system. We will discuss the implications of each these insights for classic models of self-regulation, for self-regulation in general and for future research on self-regulation.

Implications for Classic Models of Self-Regulation

A first implication of a justification-based account for classic interpretations of self-regulation failure is that self-defeating behavior is not necessarily always the result of a breakdown in personal control. Initial evidence suggests that even failures of self-regulation generally labeled as impulsive, such as negative affect, may not only impact behavior directly but also exert their influence via a justification-based route. In fact, states that are typically classified as impulsive may be particularly suitable for justifying behavior that otherwise would be off-limits. As the accountability for behavior is typically discounted when it is perceived to be under the influence of strong impulses (Pizarro et al., 2003), "impulsive" reasons, such as being in an emotional state or feeling depleted after prior self-control efforts, may be particularly plausible and thereby functional justifications that reduce judgments of responsibility for that behavior. As a result,

such “impulsive” reasons may offer an ideal compromise that allows us to indulge in a forbidden treat without bearing the negative consequences that this behavior could engender (e.g., guilt or a damaged self-image). As such, these “impulsive” reasons can facilitate self-regulation failure not only due to impulsive processes but can also generate self-regulation failure in a more deliberate manner by serving as justifications.

This new understanding also has implications for the interpretation of past findings. For example, to date self-regulation failure after prior effort or restraint has been attributed to the depletion of limited self-control resources (e.g., Muraven & Baumeister, 2000). However, in light of the present findings, failure in these cases may not always be the consequence of resource depletion, but can also be accounted for by justification processes. Therefore, beyond actual effort or restraint, it is relevant to take people’s perceptions of prior effort and restraint into consideration, as the latter may make people feel entitled to indulge, leading to self-regulation failure through justification rather than depletion. Taking it one step further, it could even be speculated that justification processes moderate the impact of resource depletion on behavior, so that feelings of entitlement determine when previous efforts at self-control undermine subsequent attempts at self-control. This speculation is supported by other recent findings that suggest that top-down processes, such as perceived resource depletion (Clarkson, Hirt, Jia, & Alexander, 2010) or lay theories about willpower as a limited resource (Job, Dweck, & Walton, 2010), modulate the effect of resource depletion. Recently, it has also been suggested that resource depletion could be explained by a justification mechanism (Inzlicht & Schmeichel, 2012). Therefore, it is important to acknowledge that, in addition to ego-depletion as proposed by the limited resource model, self-regulation failure after initial self-control attempts can be also accounted for by other processes. Along the same lines, other conventionally impulsive determinants of self-regulation failure may operate via a justification-based mechanism. For example, self-regulation failure under emotional distress may not always be the result of emotional forces rendering us powerless over our behavior. Instead, the emotional experience may be strategically employed as a justification to indulge. With these insights, a justification-based account provides a valuable addition to the emphasis on impulsive processes in the literature on self-regulation failure, indicating that to improve our understanding of self-regulation failure and to develop effective interventions, it is crucial to acknowledge that similar cues may lead to similar outcomes via different pathways.

Second, by demonstrating that reasoning processes can contribute to self-regulation failure, the justification-based account has implications for many models of self-regulation that are geared toward promoting goal-directed behavior, as they are based on the assumption that reasoning is solely guided by abstract principles. For example, most expectancy

value theories and models of goal striving such as the theory of reasoned action (Fishbein & Ajzen, 1975), its derivative the theory of planned behavior (Ajzen, 1991) and the protection motivation theory (Rogers, 1975) assume that an individual’s behavior is the result of a logical and rational reasoning process where people systematically weigh the options and outcomes. These models fail to consider, however, that reasoning does not happen in a vacuum. As the present findings make clear, reasoning does not yield stable norms or standards that transcend our impulses, but is in itself vulnerable to more immediate motivations, thereby turning our reasoning faculties into a potential liability for effective self-regulation. In this light, it could be speculated that in contrast to what is generally assumed—for example, the advice to think before you act, or that the conditions required for effective goal striving in classic models of self-regulation, such as sufficient cognitive capacity (e.g., Hofmann, Friese et al., 2008)—may not always be beneficial for self-regulation. Instead, the current account suggests that leaving room for consideration and elaboration could allow for maladaptive justification processes to occur, leading to self-regulatory failure.

By showing two fundamental assumptions of self-regulation models under a different light, the evidence for a justification-based pathway of self-regulation suggests that classic models of self-regulation may have painted an incomplete picture of self-regulation, putting too much emphasis on impulsive explanations for self-regulation failure and on reflective processes to overcome temptation. The present findings make clear, that alternative routes are possible. In addition to the outlined reflective pathway to self-regulation failure this notion is further supported by recent findings demonstrating that, conversely, automatic processes can contribute to self-regulatory success. As has been mentioned before, studies in the context of counteractive control theory (Fishbach et al., 2003), for instance, show that an encounter with a temptation can automatically activate one’s long-term goal, thereby facilitating effective self-regulation (Fishbach et al., 2003; Kroese et al., 2011; Kroese, Evers, & De Ridder, 2009). As such, the mounting evidence that both success and failure can be explained by processes in both systems, suggests that it may be fruitful to take up a more comprehensive conceptualization of self-regulation that takes into account multiple routes to self-regulatory success and failure. Despite already having been theoretically assumed by most dual-process models of self-regulation, it is only recently that a broader trend has started to emerge in the self-regulation literature that supports a more holistic view of self-regulation. For example, established assumptions regarding self-control resource theory (Muraven & Baumeister, 2000) are also increasingly being challenged, with evidence indicating that sometimes self-control is required for “bad” behavior, such as overcoming the initially aversive taste of alcohol or nicotine (Rawn & Vohs, 2011), and that states of resource depletion can sometimes generate adaptive behavior (Salmon, Fennis, De Ridder, Adriaanse, & De Vet, in press).

Implications for Self-Regulation

The substantiation of a justification-based account also has implications for self-regulation on a broader level. The finding that the reflective system sometimes actively contributes to rather than prevents indulgence goes against the common conception that impulses are unwanted forces that are passively experienced. Instead, we seem to actively deal with our impulses, sometimes accommodating them—leading to self-regulation failure—and sometimes resisting them, resulting in self-regulatory success.

This is not to suggest that justification-induced self-regulation failure is exclusively the result of top-down processes. In other words, relying on reasons to indulge is unlikely to be a premeditated act of deliberate self-sabotage. Speaking against such a purely rational top-down process for example is the recent finding that a justification in itself—possessing a reason that would theoretically allow one to behave against one's intentions—does not influence self-regulatory processes, unless a self-regulation conflict is salient (De Witt Huberts, Evers, & De Ridder, 2012b). Two studies demonstrated that after being exposed to a justification in a priming task, restrained eaters, relative to unrestrained eaters, reacted faster to words designating indulgence and exposed an attentional bias toward hedonic products. Crucially such a sensitization for hedonic cues after exposure to justifications was only observed in restrained eaters. Presumably the internalized conflict between wanting to, but not being allowed to, indulge (e.g., Stroebe, Mensink, Aarts, Schut, & Kruglanski, 2008) makes restrained eaters particularly reactive to justifications as they allow them to temporarily reconcile their conflicting motivations. Unrestrained eaters on the other hand, do not experience a self-regulation dilemma when wanting to eat tasty but unhealthy treats and thus do not need to rely on justifications for such indulgent behavior. As such, in the absence of temptation and thus of a self-regulation conflict, purely rational norms or rules are unlikely to lead to goal violations. Instead, competing motivations are required before justification processes come into play.

The requisite involvement of an active self-regulation dilemma also differentiates justification processes from *a priori* rules and decisions that allow one to indulge. If anything, establishing rules or reasons before one feels the push and pull of conflicting motivational forces may prevent a self-regulation dilemma from arising in the first place. Therefore, if Sally had told herself before going to the wedding that the wedding party would be an allowable exception and that she could to eat whatever she wanted, being offered the chocolate cake would not invoke a self-regulation dilemma. Thus, whereas *a priori* deliberated reasons may be a proactive mechanism to deal with self-regulation dilemma's in the future, for example by preventing self-regulation dilemma's from arising (see also Myrseth & Fishbach, 2009), the justification processes described in the current account are used to resolve self-regulation conflicts in the heat of the moment and thereby constitute a form of conflict resolution.

In this sense, the involvement of an active self, even in self-regulation failure, provides a more complete outlook on human self-regulation abilities than the view currently endorsed in models of self-regulation. Whereas the latter suggests that at some point, for example, after initial acts of self-control or in an emotional state—all of which are part and parcel of daily life—self-regulation abilities are limited, a justification-based pathway suggests that we still have the capacity to self-regulate. A reflective pathway to self-regulation failure may thereby be more amenable to change, and therefore creates opportunities for interventions that target self-regulation failure.

Taken one step further, it could even be argued that relying on justifications to indulge, albeit responsible for self-regulation failure in the short-term, may be adaptive in the long-term. After all, in a world filled with temptations, people cannot resist all the time. Relying on justifications to indulge may be the most constructive way to deal with the ubiquitous temptation that surrounds people, as it would allow them to satisfy their hedonic needs once in a while, while retaining a sense of control. As such, indulging through reason may give them a vital sense of self-efficacy which enables them to resist subsequent temptations. Or, in other words, rather than being at the mercy of fixed unchangeable processes, justifications allow people to feel in charge of their behavior, which also enables them to take responsibility for their behavior.

Future Directions

As this is among the first attempts to integrate the findings from various disciplines to substantiate a justification-based account of self-regulation failure, it gives rise to many new questions. First of all, the present findings warrant empirical attention toward the understanding of justification processes. Of main concern in this regard is to gain insight into the mechanism(s) that drive a justification-based process of self-regulation failure. Several possibilities, including motivated reasoning, prefactual cognitive dissonance, anticipated affect, and a reinforced self-concept, have already been discussed. What most of these potential mechanisms have in common is that they seemingly allow a person to cross their own lines while minimizing the psychological harm normally associated with such discrepant behavior. Whether this is indeed the driving principle behind justification processes, and whether this has the speculated beneficial effect, remains to be explored. Besides the underlying process, the specific terms and conditions required for justifications processes need to be investigated. For example, research is needed to verify whether and how much cognitive resources are required for justification processes. Likewise, more information is needed whether certain types of cognitive processes foster justifications, such that for example systematic (vs. heuristic) processing would promote failure via justification processes. Another issue that needs clarification concerns the intentionality of the justification process, that is, to what extent people

deliberately use justifications to move away from their long-term goals. Furthermore, it should be investigated whether some people are more inclined than others to rely on justification processes and thereby are more likely to fail at self-regulation via a reflective pathway. It could be that certain personality traits, such as a need for cognition (e.g., Cacioppo & Petty, 1982) or desire for control (e.g., Burger & Cooper, 1979), could feed the need to rationalize one's irrational behavior.

The presented evidence for the involvement of reflective processes in self-regulation failure also opens up various new research directions that are crucial for advancing our understanding of self-regulation. First, as insight into the underlying mechanism is essential to effectively intervene in the process, an investigation of the factors that determine which of the various potential routes is taken when self-regulation fails, is warranted by these novel insights. A second important research avenue put forward by the presented findings is to elucidate when the reflective system is mobilized to resist, and when to indulge in a temptation. Presumably, the strength of the temptation-goal conflict to a great deal determines whether the reflective system helps or hurts self-regulation. It could be speculated that weak conflicts, for example, in cases with a weak temptation and a strong long-term goal, will lead the reflective system to resist rather than justify indulgence. That is, when one is very committed to a long-term goal, one can easily justify acting in line with that goal. However, when the conflict of competing temptations and long-term goals is greater, one might be more likely to revert to justification processes than trying to resist the tempting treat. Future studies should investigate the relative importance of temptation strength (e.g., Kroese et al., 2009, 2011) and goal importance in guiding the reflective system toward self-regulatory success or failure.

Finally, from a methodological perspective, this new conceptualization of self-regulation failure calls for new measures that can determine the various underlying processes of self-regulation success and failure. After all, the new findings no longer allow equating the result with the process, such that the underlying process (impulsive vs. reflective) can no longer be inferred by the outcome (failure vs. success). Or in other words, the involvement of reflective processes in self-regulation failure, in addition to the involvement of impulsive processes in self-regulatory success (e.g., Kroese et al., 2009), suggests that research on self-regulation should now endeavor to uncover distinguishing hallmarks of the underlying process. This is especially needed considering the evidence that similar cues (e.g., negative emotions, prior restraint) can elicit self-control failure via different pathways. As such, prior effort or negative emotional events, could lead to failure via both reflective (justification) and impulsive (e.g., ego-depletion) routes.

It appears that explanations for the self-defeating behavior of Mark, Marcy, and Sally may have concentrated too much on the impulsive system being responsible for self-regulatory failure and the reflective system producing

success. The present analysis shows that moving beyond this dualistic explanation may provide a better understanding of why they failed to act in line with their intentions. Thereby, a more comprehensive view of self-regulation could contribute to interventions that target such maladaptive behavior more effectively.

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