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Research Article

The benefits of behaving badly on occasion: Successful regulation by planned hedonic deviations ☆

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Abstract

This research tests the idea that goal-pursuit that requires extended inhibition of desires, such as weight loss and financial saving, can benefit from including planned hedonic deviations in the goal-striving plan. Two controlled experiments (simulated and real dieting) demonstrate that including planned goal deviations during extended goal striving, compared with following a straight and rigid goal striving process, (1) helps regain self-regulatory resources, (2) helps maintain consumers' motivation to pursue with regulatory tasks, and (3) has a positive impact on affect experienced, which all contribute to facilitate long-term goal-adherence. A third study, conducted with current goal-strivers provides further evidence of the benefits of planned hedonic deviations for goal pursuit across a variety of goals. This reveals that it may be beneficial for long-term goal-success to occasionally be bad, as long it is planned.

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Keywords: Goal-pursuit; Goal-striving; Hedonic goal-deviation behaviors

Introduction

Is it smart to have a chocolate cake when you are on a diet to lose weight? Is it a good idea to spend money on something feeble today when you are trying hard to save money for a larger purchase next month? Most people would answer these questions negatively, thinking they should systematically and consistently try to control the desires that conflict with

an important current goal (Dholakia, Gopinath, Bagozzi, & Natarajan, 2006). The Overeaters Anonymous Organization (1995), for example, also stresses the importance of sustained commitment to abstinence for goal attainment, and several diet plans identify “bad foods” that should be avoided at all times (e.g., Atkins diet, south beach diet). The belief that hedonic deviations from the focal goal should be avoided since they are detrimental to goal attainment appears to be general (Fishbach & Shah, 2006).

In contrast to the general belief that consumers should categorically resist goal deviations, we propose that including *planned hedonic* goal-deviation activities a priori in the initial goal implementation plans may actually be beneficial for long term goal attainment, such as by occasionally having a chocolate cake when on a diet. These planned goal deviations can help consumers' motivation to persist in goal-striving, improve emotional experience, and help consumers regain self-regulatory resources, which altogether may ultimately reduce the likelihood of goal desistance. Support for this idea

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would reveal that it may be good in the long run to behave “badly” on occasion, when it is planned.

Despite the prevalence of long-term goal striving activities among consumers, and frequent failures to attain the final goals, and notwithstanding a burgeoning literature on these important topics, few studies have explored *how* goal striving can be managed over time to maximize consumers’ goal-adherence and final goal attainment. Much extant research has focused on identifying factors that promote initiation of goal striving and factors that lead to failure (Baumeister & Heatherton, 1996; Louro, Pieters, & Zeelenberg, 2007; Mukhopadhyay & Johar, 2005; Vohs & Heatherton, 2000). But as pointed out by Higgins and Scholer (2009, p. 100) “it is important to consider not only the outcomes of goal pursuit but also the process and, especially, *strength of engagement in the goal pursuit activity itself*.” In line with this, the present research investigates a specific strategy that consumers can follow during goal pursuit to enhance the likelihood of final goal attainment: including *planned* hedonic deviations during goal pursuit.

Benefits of planned hedonic goal deviations

When consumers share the belief that any deviation from current goal striving represents a failure, they may end up overemphasizing any initial lapse, such that even small misalignments result in total abandonment of the goal (Baumeister & Heatherton, 1996). For example, as mentioned by Wansink and Chandon (2014) when referring to dieting rules, these can be easily disrupted by any dietary violations such as succumbing to a “forbidden” hedonic food. So, it is not just a matter of understanding how to overcome the initial reluctance to initiate the proper behavior, because many goals require people to keep striving for long periods of time (Gollwitzer & Sheeran, 2009). And for this to happen, people may need specific (and perhaps even counterintuitive) strategies to cope with the challenges during goal striving.

We propose that goals that involve sustained inhibition of behavior—such as dieting—may actually benefit from *planned* hedonic deviations from current goal pursuit. Of course, it is obvious to “take five” after having worked long hours, but that is not what we mean here. We argue that planned goal deviations may be needed when trying to persist in the long-run and to not quit from current goal pursuit. This can be spending money on occasion when the long-term goal is to save, or sometimes consuming high caloric foods when the long-term goal is to lose weight. Importantly, because a conflict may arise between what consumers believe to be the advantageous course of action and what their inner resources need in order to allow successful goal pursuit, these beliefs to abstain completely, so-called zero-tolerance beliefs, may end up increasing the likelihood of final goal failure. This is relevant because without engagement, persistence, and adherence to the goals, these will not be strived for overtime (Higgins & Scholer, 2009).

We know that beliefs about the instrumentality of particular actions (Boonzaier, McClure, & Sutton, 2005) can affect the way that consumers act and plan actions to attain their goals (Martijn, Tenbült, Merckelbach, Dreezens, & De Vries, 2002).

For instance, beliefs about the malleability and limited nature of self-regulatory resources have been shown to influence consumers’ goal-directed behavior independently of the actual resources available (Mukhopadhyay & Johar, 2005). Also consumers’ erroneous beliefs about the benefits of adding healthy options to a meal, led to an underestimation of the calorie content of meals containing both healthy and unhealthy items, which led to weight gain rather than loss (Chernev, 2011). When consumers try to behave according to zero-tolerance beliefs, resources are drained and motivation to sustain striving wanes (Heatherton & Vohs, 1998). If consumers are emotionally strained or feel that goal-related actions are effortful, as when trying to diet or save money, their motivation to reach the end goal is likely to decrease (Touré-Tillery & Fishbach, 2011). Moreover, people tend to increase the value of objects or options that are eliminated from their choice set (Brehm, 1966; Carmon, Wertenbroch, & Zeelenberg, 2003). As a case in point, including warning labels about the fat content of products *increased* rather than *decreased* the interest to taste a supposedly “bad” product (Bushman, 2006; Higgins & Scholer, 2009). Thus, we reason that when consumers are not given the possibility to engage occasionally in “forbidden fruit” activities and when they believe that any goal-deviation will result in a goal-failure, they might actually give up goal striving altogether. Thus, it seems important to include in the initial plan the possibility of occasional hedonic goal deviations. This will likely reduce the value attributed to the activities/products being inhibited, as also the possible engagement on occasion on some of those activities will not be attributed to any internal failure of lack of self-regulation but instead as a mean to reach an end. Indirect support for this idea comes from Poynor and Haws (2009) who found that creating broader categories of goal-consistent actions can help consumers to stick to their goals. We speculate that three factors contribute to the effectiveness of planned goal deviations.

First, planned goal deviations are likely to help consumers retain or regain self-regulatory resources. People are more likely to succumb to various flawed decision strategies when lacking self-regulatory resources (Baumeister, Sparks, Stillman, & Vohs, 2008). For instance, although dieters can resist temptations in the short term, they tend to fail on subsequent tasks to resist temptations, because of the reduced resources for self-regulation (Vohs & Heatherton, 2000). If that is the case, strategies are needed that help dieters to persist (Wansink & Chandon, 2014). For example, exertion of self-control in tasks of varied nature has been shown to reduce blood glucose levels and that restoring the level of glucose to a sufficient level typically improves self-control (Gailliot & Baumeister, 2007). Thus, it seems even counterintuitive to ask millions of people every day to start dieting for long periods of time without giving them the possibility of restoring their ability to exert self-control during the long goal-striving periods typically involved in dieting.

Temporal deviations from goal pursuit, because of the hedonic value of these activities, may then help consumers to regain self-regulatory resources and allow them to proceed with goal-oriented activities, avoiding goal desistance. It is however crucial that the hedonic goal deviations *are planned* because unplanned goal deviations might easily be interpreted as

failures, which may reduce consumers' mood, and may lead to a "what-the-hell" effect (Cochran & Tesser, 1996) with goal pursuit being stopped altogether. *Planned* goal-deviations lead then to a pattern of "intermittent goal pursuit" rather than straight or prematurely ended goal pursuit. We propose then the following hypothesis:

H1. As compared to straight goal pursuit, including goal deviations in the plan helps consumers to regain or even improve self-regulatory resources along the goal-pursuit process and thus enhance the likelihood that the final goal is attained.

Second, when deviations are planned, consumers will perceive this as a means to reach the main goal, minimizing the overall negative experience of constantly having to restrain themselves. The feeling of pursuing a goal with the proper means may already strengthen consumers' engagement in the tasks at hand (Higgins & Scholer, 2009). Additionally, because goal deviations are hedonic in nature we propose that the mere anticipation of upcoming planned goal deviations may contribute to consumers' optimistic expectations about future goal pursuit, motivating them to persist with goal-striving processes (Touré-Tillery & Fishbach, 2011). Expectations about positive outcomes may thus increase the likelihood of successful achievement (Diener, Suh, Lucas, & Smith, 1999). Including goal deviations in the plan should then positively contribute to consumers' motivation to sustain the goal at hand. This leads to the following hypothesis:

H2. As compared to straight goal pursuit, including goal deviations in the plan helps consumers to maintain or even increase motivation to proceed with goal-pursuit and thus enhances the likelihood that the final goal is attained.

Third, we propose that goal deviations will be positively appraised during the process of goal pursuit, increasing positive affect and reducing negative affect (MacLeod & Conway, 2005). This reduces emotional distress, which can also enhance consumers' self-regulatory ability (Tice, Baumeister, Shmueli, & Muraven, 2007). Additionally, since it is likely that during moments of goal deviation consumers opt for products or experiences of hedonic value, and because consumers have multiple concurrent goals (Kruglanski et al., 2002), engaging in goal planned deviations can positively impact consumers' subjective well-being, by means of a spillover to other goal pursuits (Zhong & Mitchell, 2010). Gardner, Wansink, Kim, and Park (2014) observed a positive impact of positive mood on cuing consumers' abstract construal, enhancing the importance of long-term goals such as health. Therefore, the positive affect from anticipating goal deviations may have an immediate as well as a long-term positive effect on goal striving. Additionally, since consumers need to restrain their behavior before engaging in goal deviations, these can act as small rewards for success (Mukhopadhyay & Johar, 2009) rather than as failures, which may also contribute to final goal attainment.

H3. As compared to straight goal pursuit, including goal deviations in the plan helps consumers to maintain or even boost the experience of positive affect throughout goal-pursuit process and thus enhances the likelihood that the final goal is attained.

Obviously, a plan that comprises only goal deviations is a bad plan. Yet, planning for short moments of "being bad" in the context of a larger sequence of "being good" we believe to be advantageous for goal attainment. It can help to replenish self-regulatory resources, that otherwise would be diminished by consecutive acts of self-control. It can also help to maintain or even to enhance consumers' motivation to proceed towards the goal, and it is likely to prompt positive affect.

As outlined by Mela (2001), consumers that adopt flexible vs rigid dieting approaches tend to accept that transgressions can occur and deal with them appropriately. More generally, flexibility in dieting may lead to less eating disorder symptoms and better BMI maintenance (Smith, Williamson, Bray, & Ryan, 1999; Stewart, Williamson, & White, 2002). We build on this and propose that the intermittent goal-pursuit plans will contribute to maintenance of desired behavioral outcomes (e.g., weight loss in case of dieting or money saved in case of savings).

H4. As compared to straight goal pursuit, including goal deviations in the plan helps consumers to manage in a more flexible way their goal-striving process, not negatively influencing the attainment of desired behavioral outcomes.

We conducted two controlled experiments (studies 1 and 2) on weight loss to test for our predictions. The weight loss context was chosen because "eating is one of the most commonplace, yet least well understood, self-regulation domains" (Vohs & Baumeister, 2004, p. 7), and because dieters tend to interrupt their weight loss goals many times (Heatherton & Baumeister, 1991). Study 1 used a role-playing task where participants simulated a dieting experience by making food choices for seven consecutive days. Study 2 searched for extra evidence, but this time participants actually followed different diet-plans, over a period of two weeks. Study 3, run with a sample of current goal-strivers, aimed to provide evidence of the benefits of flexibility on goal-pursuit across a variety of goals and domains, and not exclusively for the weight loss context.

Study 1: intermittent vs. straight goal striving

This study investigates consumers' perceptions of the overall impact that including planned goal deviations has on goal pursuit. It measured the estimated effect of these deviations on self-regulatory resources and on the affect experienced. In addition, we used a behavioral measure as a proxy for participants' goal-attainment ability, namely the ability to generate multiple strategies to overcome temptations. If consumers have multiple means to attain the focal goal, the likelihood of success will be higher, because means can be substituted in case an initial means fails (Kruglanski et al., 2002). A crucial determinant of long-term goal attainment is thus people's ability to generate strategies to cope with daily temptations faced.

Method

The experiment was run on personal computers, using Authorware 6.0 (Macromedia, 2001). 59 paid students (34

females and 25 males, $M_{age} = 21.80$) were randomly assigned to the intermittent-striving ($n = 30$) or straight-striving ($n = 29$) condition. In this study participants were asked to engage in a role playing scenario that simulated a 7-day diet. Initial instructions to participants were “Suppose that you just heard from your doctor that you need to lose 9 k during the next two months. Your doctor gave you a booklet with diet instructions and with a list of everything you are allowed to eat.” Participants in the *straight-striving* condition read next “You quickly go through the booklet and realize that you can only consume 1500 cal per day” (40% less calories than the average number of calories that an adult needs to maintain weight, whereas participants in the intermittent-striving condition were informed that they could only consume up to 1300 cal per day and that after each 6 days of dieting they would have a whole day where they could choose what to eat up to 2700 cal). In both conditions participants were asked to imagine performing diets that summed up to exactly the same number of calories per week (10,500 cal), with participants in the intermittent condition having to pursue a harder striving task in order to benefit from the “break day”. Before participants were asked to initiate the dieting task, they completed the State Self-Control Capacity Scale (10 items, Muraven, Twenge, & Tice, 2005; e.g., “I feel drained”) indicating how they would feel the moment they initiated the diet. Participants were then asked to imagine to start the diet and to choose from the list of food options that appeared on the left side of the screen what they would choose to eat at each meal in diet-day 1. Participants chose what to eat for the three main meals of the day (breakfast, lunch and dinner) plus a snack. Next, participants were presented with their complete chosen menu of day 1, and asked to approve it before moving on to the next diet-day. This task was repeated for diet-day 2 to 6, with the purpose of simulating in a lab environment the type of decisions consumers will face on a daily basis, in case they were indeed following the diet. Similar hypothetical procedures have been successfully used in previous research (Walsh, 2014; Wiebenga & Fennis, 2014) to assess motivations to continue with goal pursuit.

For each meal, participants chose among three options, all with detailed information about the ingredients and caloric value. These options changed each day, assuring that participants would have access to a high variety of choices, just like they would do in a real dieting experience. Most meals were taken from healthy eating and dieting sites (e.g., www.slimfast.com).

After choosing the daily menus for the first six diet-days, participants were asked to indicate how they imagined they would be feeling at that time during the actual diet on 12 emotions (day 6: 6 positive and 6 negative emotions, see below for details), all related with consumption. After completing this measure, participants in the intermittent-striving condition were told that “As indicated in your diet-booklet given by your doctor, today you can choose what to eat as long as you do not exceed 2700 cal. You have the possibility to choose some non-diet food usually desired by people that are on a diet. Please indicate your choices in each meal box.” Participants were then presented with a menu that included non-diet meals (e.g., salmon with spinach pasta) and that all summed up to 2700 cal, simulating the diet “break day”.

Participants in the straight condition were simply asked to repeat same meal-choices as for the first six days of diet and were presented with the same number of options as participants in the intermittent striving conditions. After completing the seventh diet-day, participants were asked to imagine initiating the eighth diet-day and to complete again the State Self-Control Scale (moment 1), plus some more variables related to the process of dieting as control measures. Only upon completion of these measures participants were informed that the diet-simulation was over. This is important because it rules out the explanation that the break day could be perceived as “ending the diet earlier”. In fact, all participants were convinced that the simulated diet would continue.

After concluding this simulated diet, we assessed the behavioral measure that was used as a proxy of participants’ goal-attainment ability. Participants in both conditions read “Now please continue imagining yourself following the diet that your doctor just provided. After a long day at the university you are tired and go home to prepare dinner. First, you go to the supermarket to buy some groceries. On your way to the cashier you pass through the snacks corridor and you really feel tempted to buy some and eat them on your way home. Here on the table, next to the computer, you have a box with some of the snacks you would encounter in the supermarket.”

Participants were then asked to open the box with snacks that was next to their computer, and to leave it open while completing the task. Each box contained an assortment of chocolate candies and bars (e.g., Twix, Snickers, and M&Ms). After being presented with an example response “I close my eyes and leave that corridor as fast as possible,” participants were asked to indicate as much strategies as possible to deal with the tempting situation during the next 3 min (each strategy was written in a separate box on the screen).

Dependent measures

Dependent variables were assessed on several moments during the study. Participants’ self-regulatory ability was assessed at the beginning of the dieting task (moment 0) and also at the end of the dieting task (moment 1). Participants’ emotions were assessed *before* the start of the seventh diet-day (day 6), followed by a set of other control measures assessed *after* the entire simulated diet week. Lastly, the behavioral measure that was used as a proxy of participants’ goal-attainment ability was assessed after the dieting task.

As *control measures* we assessed to what extent participants were able to imagine themselves being on a diet, how easy it was to imagine pursuing the diet and to imagine having to lose 9 k in two months (1 = not easy at all, 7 = very easy to imagine). To measure if the seventh diet-day was perceived as an hedonic goal-deviation period (*manipulation check*), participants were asked to indicate how much they enjoyed the seventh diet-day (1 = not at all, 7 = very much).

To assess expected *self-regulatory ability*, we used the State Self-Control Capacity Scale (10 items, Muraven et al., 2005). This measure was assessed before the start of the dieting task ($\alpha = .86$) and also after completion of the seventh diet day ($\alpha = .87$).

Goal attainment ability was assessed by the number of different strategies elicited by each participant after reading the temptation scenario and opening the box located next to the computer that contained an assortment of chocolate candies. Presenting problems that need an immediate solution is a common procedure used in creativity research to assess consumers' ability to generate problem-focused coping (Burroughs & Mick, 2004). Two independent coders, blind to the hypotheses, assessed the number of distinct strategies listed by each participant, resolving inconsistencies by discussion.

Nine items from Richins (1997) consumption emotions set (e.g., contented and enthusiastic) and three items from the PANAS (e.g., upset and distressed, Watson, Clark, & Tellegen, 1988) formed the affect measure. The emotions were chosen from the total emotions provided by these two scales as the ones that could most easily be affected by the target consumption episodes. The measure comprised by six positive emotions ($\alpha = .90$) and six negative emotions ($\alpha = .91$) was assessed immediately after participants completed the menu choice of the sixth diet-day (day 6). Participants were asked to indicate how much they would experience each emotion (1 = not at all, 7 = very much). An affect index was calculated by subtracting the average of the negative emotions from the average of the positive emotions (Yeung & Wyer, 2004).

Results and discussion

Participants in the intermittent-striving condition indeed expected to enjoy the seventh diet-day more than participants in the other condition did ($M_{\text{intermittent}} = 5.93$, $M_{\text{straight}} = 3.69$, $F(1, 57) = 50.33$, $p < .001$, $\eta^2 = .47$). Importantly, analysis of the control measures revealed that it was equally easy for participants in both conditions to imagine themselves pursuing the diet ($M_{\text{intermittent}} = 4.07$, $M_{\text{straight}} = 3.82$, $F(1, 57) = .25$, $p = .62$, $\eta^2 = .004$), and to imagine themselves having to lose 9 k during the upcoming two months ($M_{\text{intermittent}} = 3.47$, $M_{\text{straight}} = 2.69$, $F(1, 57) = 2.86$, $p = .10$, $\eta^2 = .05$), ruling out the possibility that results could be due to differences in participants' ability to behave according to instructions given by the scenarios vignettes.

The findings provide initial support for the hypotheses. Participants in the intermittent-striving condition showed higher expected self-regulatory ability, as assessed by the State Self-Control Capacity Scale, than participants in the straight-striving condition did. Whereas before initiating the diet participants showed no differences in terms of self-regulatory ability (SSCS in moment 0, $M_{\text{intermittent}} = 4.78$, $M_{\text{straight}} = 4.44$, $F(1, 57) = 1.80$, $p = .19$, $\eta^2 = .03$), there is a marginal difference on self-regulatory ability in moment 1 (after completion of the dieting task: $M_{\text{intermittent}} = 4.04$, $M_{\text{straight}} = 3.59$, $F(1, 57) = 2.88$, $p = .095$, $\eta^2 = .05$). A repeated measures ANOVA, which takes into consideration the self-regulatory ability evolution of moment 0 to moment 1 likewise indicated a marginal influence on the type of dieting plan ($F(1, 57) = 2.94$, $p = .09$, $\eta^2 = .05$).

In support of H3, an ANOVA analysis on the affect index revealed that participants in the intermittent-striving condition expected to experience more positive affect than participants in

the straight-striving condition did ($M_{\text{intermittent}} = 2.59$, $M_{\text{straight}} = 1.55$, $F(1, 57) = 5.21$, $p < .05$, $\eta^2 = .08$), which seems to be mostly driven by experiencing positive emotions ($M_{\text{intermittent}} = 5.09$, $M_{\text{straight}} = 4.33$, $F(1, 57) = 8.20$, $p < .01$, $\eta^2 = .13$).

Crucially, participants in the intermittent goal-striving condition generated more different strategies to overcome temptations than participants in the straight-striving condition did ($M_{\text{intermittent}} = 6.48$, $M_{\text{straight}} = 5.21$, $F(1, 57) = 6.00$, $p < .05$, $\eta^2 = .10$), supporting H4. This indicates that the former participants would be better able to attain the final goal due to their improved ability to generate temptation beating strategies (Baumeister, 2002). Although the study used a scenario setting, participants were exposed to a consecutive number of food choices to resemble as much as possible the type of decisions they would be facing in if they were indeed on a dieting-pursuit goal, going beyond simple imagination of an hypothetical scenario (see Walsh, 2014; Wiebenga & Fennis, 2014, for similar procedures).

Study 2: planned goal deviations in self-reported dieting

This study extends study 1 and tests for the robustness of the findings in a behavioral rather than scenario context, with real dieters pursuing specific diet plans. This experiment used a 14-day period daily-diary design, followed by the assessment of specific measures four weeks later. Thirty-six participants, who had previously indicated to have weight concerns, participated in the study in exchange for €30 and were assigned to one of two conditions (intermittent vs straight condition).

Method

An online survey was first sent to students and university staff who had already indicated willingness to participate in a dieting study, to assess their eligibility to be part of the main self-report study. Eligible participants were sampled based on their reported body mass index (BMI) and motivation towards dieting. Some of them did not show-up or dropped out the study in the first days of dieting, ending up with a final sample of 36 participants (29 females; $M_{\text{Age}} = 24.00$, $SD = 7.44$ $M_{\text{BMI}} = 24.99$, $SD = 2.53$; $M_{\text{weight}} = 70.28$ k, $SD = 10.66$).

Participants were asked to individually come to the lab for the first session of the study. Upon arrival each participant was weighed and their BMI calculated. Similar to the procedure used by Coelho do Vale, Pieters, and Zeelenberg (2008), a body-sized mirror was placed in front of the scale, in order to enhance body self-awareness and to motivate participants to follow the diet-plan they were about to initiate. Participants were then told that the study aimed to test for a new diet plan and that they would be asked to strictly follow a dieting-plan during 14 days, reporting daily measures. Each participant was then given a booklet that contained a detailed explanation about the dieting plan to follow.

This booklet provided participants with general instructions about the diet-plan (intermittent vs straight, between-subjects design), as well as general rules about dieting (e.g., drink much water, do not spend more than 3 h without eating, always carry

a snack with you). It included detailed instructions for each of the 14-day dieting period. In each day, participants were presented with 3 options for each meal (breakfast, lunch, afternoon snack, and dinner) and asked to tick on option chosen. Participants took the booklet home.

The experimental procedure was very similar to the one of study 1. Participants in both conditions were informed that they should not exceed the consumption of 10,500 cal per week. Participants in the *straight striving* condition were told that the diet plan comprised a set of meals that would total 1500 daily calories and that they should strictly follow the diet. Participants in the *intermittent striving* condition were told that they would be consuming 1300 cal daily, and that at the end of each week (days 7 and 14, both on a Sunday) were allowed to eat any kind of food, up to a total amount of 2700 cal (goal-deviation activity). For each diet day, participants were given a set of three alternatives for each meal that varied during the week. For the two dieting days that included goal-deviation activities (day 7 and day 14: intermittent striving condition), the booklet also included some examples of possible meals and its calories, and a hyperlink where participants could calculate with their smartphone the total amount of calories of any other meal they would like to consume that day. Then, participants agreed on completing on a daily basis an online questionnaire, during the 14 days of dieting, as also agreed on returning twice to the lab (middle of the diet-after one week- and at end of the diet) to be weighed and to answer a couple of questions related with the diet plan.

Diary-daily measures

For each daily measure we collected 14 observations: day 1 to day 14. Participants' *goal-pursuit motivation* was assessed by asking participants to indicate on a daily basis how motivated they were to continue with the diet-plan in the next day (1 = not at all motivated–7 = very motivated). The *difficulty* experienced with the diet-plan was assessed by asking participants to indicate to what extent it had been difficult to follow the diet-plan that day (1 = not at all difficult–7 = very difficult). Participants *daily depletion* was assessed at the end of each day by asking participants to complete a three-item scale (e.g., How much effort did you have to apply to follow today's diet plan?, 1 = no effort at all–7 = very much effort; how drained are you?, 1 = not drained at all–7 = totally drained; and how much is your desire of consuming more caloric food?, 1 = no desire at all–7 = strong desire; $\alpha = .78$). The *affect* experienced by participants on each day was also assessed, by asking participants to indicate to what extent they were experiencing a set of three positive vs negative emotions (adapted from Richins, 1997; positive: I feel happy/satisfied/ humorous, $\alpha = .94$; negative: I feel irritable/grumpy/nervous, $\alpha = .84$; 1 = totally disagree–7 = totally agree). Positive and negative emotions were combined into a single affect index: the difference between positive emotions and negative emotions experienced. *Diet plan deviation* was assessed by asking participants to indicate, at the end of each day, to what extent they considered to have deviated from the initial plan (1 = not at all–7 = very much), writing down all the ingested food that was not included in the diet-plan. Since deviation from the diet could be positive (e.g., to have consumed less than the

plan) or negative (e.g., to have consumed more than the plan), content analysis was later performed by two independent judges (research assistants), coding the deviations reported by participants, in accordance with a coding scheme (3 = the participant deviated from the diet plan by substituting all the meals for more caloric meals, overall exceeding largely the total amount calories, –3 = the participant deviated from the diet plan by substituting all the meals for less caloric meals, overall significantly reducing the total amount calories). Each judge was instructed, based on the diet plan that participants were following, to evaluate to what extent they had deviated from the diet-plan. A third judge resolved inconsistencies.

Weekly measures

In addition to these daily measures, we also collected some data every time participants came to the lab to be weighed (middle of diet, end of diet): *self-regulatory ability* was assessed by asking participants to complete the State Self-Control Capacity Scale (Muraven et al., 2005; 10 items, e.g., "I need something pleasant to make me feel better", 1 = totally disagree–7 = totally agree; $\alpha_0 = .83$ $\alpha_1 = .72$, $\alpha_2 = .77$); participants' *perceived diet-plan efficacy* was assessed by asking them to indicate "to what extent do you think this diet-plan will help you lose weight?" (1 = it will not help at all; 7 = it will help very much); participants experienced *affect* was assessed by asking participants to complete the same emotions assessed on a daily basis (three positive and three negative emotions); participants' *motivation* to follow the given diet-plan was assessed by asking participants "How motivated are you to strictly follow this diet-plan?" (1 = not motivated at all; 7 = very much motivated).

Follow-up measures

For the follow-up measurement exactly one month after participants had completed the two weeks diet-plan, we assessed participants' willingness to repeat the diet plan given as also asked participants to indicate their body weight (in the morning, before having eaten).

Control measures

During the selection process, participants completed a measure of dispositional self-control (Ein-Gar & Steinhart, 2011; 17 items, e.g., "I usually succeed in overcoming temptations") and a measure of concern for dieting (Drive for Thinness, Garner, Olmstead, & Polivy, 1983; 7 items, e.g., "I eat sweets and carbohydrates without feeling nervous"), that were used as control variables.

Results and discussion

Daily-diary data analysis

We estimated multilevel regression models for the daily-diary data, as proposed by Bolger et al. (2003). Multilevel regression analysis takes into account the hierarchical structure of the data, when data is nested in multiple groups (in our case the daily data are nested in 36 participants). Two separate multilevel regression analyses were performed (using the "mixed" command in STATA 13.0, by condition) with respectively participants' expressed motivation to continue

with diet-pursuit in the intermittent condition ($GPmot_int_{it}$) and in the straight condition ($GPmot_str_{it}$) of individual i on the diet day t as the dependent variables. As explanatory variables we included all the daily-diary measures assessed: (1) difficulty experienced each day in following the diet-plan ($Diff_{it}$), (2) depletion experienced during the diet-day ($Depl_{it}$), (3) affect index of emotions experienced each diet-day ($Affect_{it}$), (4) level of deviations from the diet-plan ($Dietdev_{it}$), and (5) all the variables assessed at individual level to control for participant characteristics (gender, age, BMI, frequency of weight fluctuations ($Freweight_i$), dispositional self-control (DSC_i), and drive for thinness scale (DFT_i)), and finally an error term for each participant's daily deviation from the overall average (u_i) and an error term for each participant's daily deviation from their own mean level of motivation (e_{it}). The following two models were estimated (the two dependent variables separated by a comma):

$$GPmot_int_{it}, GPmot_str_{it} = \beta_0 + \beta_1 Diff_{it} + \beta_2 Depl_{it} + \beta_3 Affect_{it} + \beta_4 Dietdev_{it} + \beta_5 Age_i + \beta_6 Gender_i + \beta_7 BMI_i + \beta_8 Freweight_i + \beta_9 DSC_i + \beta_{10} DFT_i + u_i + e_{it}.$$

The two multilevel regressions establish, in each condition, the impact of each diary-daily variable on participants' daily goal pursuit motivation, taking into consideration the specific characteristics of the individuals. Table 1 summarizes the results.

Depending on the diet-plan participants were asked to follow, different variables influence consumers' motivation to pursue goal pursuit. While in the *straight condition* the goal pursuit motivation is influenced negatively by daily-dieting deviations ($\beta = -.246, p < .006$), positively influenced by consumers' affect experienced ($\beta = .138, p < .01$), and negatively influenced by the level of depletion experienced ($\beta = -.333, p < .001$), results obtained in the *intermittent condition* indicate that only the level of depletion experienced ($\beta = -.330, p < .001$) influenced participants motivation to continue with the goal pursuit. These results suggest that when controlling for participants' individual characteristics, as per the multilevel regression model, the only factor that influenced participants' motivation to continue with goal pursuit in the intermittent condition was the level of depletion experienced during the day. This may be related to the flexibility inherent to this goal-pursuit plan, making people less reactive to any variations that they may have engaged in that day, perceiving that these can be compensated later in the plan. Findings suggest that participants exposed to a stricter plan, like those in the straight condition, apparently ended up being negatively influenced by deviations occurring in the plan that day, while participants in the intermittent condition do not. This supports the underlying idea that including flexibility is critical in goal-pursuits that involve the repeated inhibition of behavior over time.

Weekly-data analysis

We used data collected when participants came to the lab to be weighed to test the hypotheses. To test hypothesis 1, which specifies that planned breaks would help consumers regain or even

Table 1

Multilevel regression results: predicting motivation to pursue with goal-pursuit from depletion, affect, difficulty, and diet-deviation daily experiences (study 2).

	Motivation to pursue with goal-pursuit next day:			
	Straight goal-pursuit plan ($n = 240$)		Intermittent goal-pursuit plan ($n = 231$)	
	b	SE	B	SE
<i>Predictors</i>				
Intercept	7.503***	1.152	-.936	1.516
Difficulty ($Diff_{it}$)	-.033	.070	.027	.052
Depletion ($Depl_{it}$)	-.333***	.092	-.330***	.069
Affect ($Affect_{it}$)	.138**	.050	.004	.044
Diet-deviations ($Dietdev_{it}$)	-.246**	.076	.011	.064
<i>Individual variables</i>				
Age (Age_i)	-.045***	.010	.058*	.030
Gender ($Gender_i$)	.832**	.291	2.360***	.319
BMI (BMI_i)	-.072	.037	.135***	.037
Frequency weight fluctuations ($Freweight_i$)	-.225**	.070	.054	.102
Dispositional self-control (DSC_i)	.232*	.108	-.166	.143
Drive for thinness (DFT_i)	-.087	.073	-.255**	.090

Significance of regression coefficients: * $p < .05$, ** $p < .01$, *** $p < .001$.

improve self-regulatory resources, we compared participants' self-regulatory ability using the State Self-Control Capacity Scale (Muraven et al., 2005). Data was analyzed taking into consideration the interdependence between data along the two weeks period. Since the pretest and posttest scores are correlated, paired samples t -tests were used. Participants in the *straight striving* condition significantly decreased their self-regulatory ability before and after the diet period ($M_{btd} = 5.64, M_{Week2} = 5.33, t(16) = 2.12, p = .05, d = .41$), as opposed to participants in the *intermittent striving* condition who maintained their self-regulatory resources ($M_{btd} = 5.71, M_{Week2} = 5.73, t(15) = -.04, n.s., d = .01$). This provides support to our hypothesis 1.

Additionally, weekly measures assessing participants' motivation to follow the given diet plan were also analyzed. Results indicate a decrease in motivation experienced by participants in the straight striving condition ($M_{week 1} = 5.65, M_{week 2} = 4.94, t(16) = 1.90, p = .076, d = .54$) but not in the intermittent striving condition where, as predicted, participants were able to maintain their motivation levels ($M_{week 1} = 5.75, M_{week 2} = 5.38, t(15) = .371, n.s., d = .25$), providing support to our H2.

In addition, and consistent with study 1, there was an increase in the positive affect experienced from week 1 to week 2 for participants in the *intermittent striving* condition ($M_{week 1} = 5.63, M_{week 2} = 6.06, t(15) = -2.66, p < .05, d = .39$) but not for participants in the *straight-striving* condition ($M_{week 1} = 5.53, M_{week 2} = 6.54, t(14) = -.04, n.s.$). No significant differences were found for negative emotions in both conditions (*all* $p > .56$). These results support our hypothesis 2 that the breaks included in the intermittent condition can help maintain or even improve positive affect. Interestingly, analysis of the perceived diet-plan efficacy measure indicated a significant decrease in the straight condition from the beginning of the diet to the end of the first week ($M_{btd} = 5.78, M_{week 1} = 4.94, t(17) = 2.64, p < .05, d =$

.66), while the perceived diet-plan efficacy did not change in the intermittent condition ($M_{\text{btd}} = 4.94$, $M_{\text{week1}} = 4.71$, $t(16) = 1.17$, *n.s.*, $d = .15$). This shows the importance of flexibility in goal-pursuits that involve the repetition of behavior overtime. No significant differences were found from week 1 to week 2, see Fig. 1.

Follow up-data analysis

In the follow-up data collection — one month after the 14 diet-period had ended (28 people remaining: intermittent = 13, straight = 15), participants indicated a marginally higher likelihood of repeating the diet plan when in the intermittent than in the straight condition ($M_{\text{intermittent}} = 6.00$, $M_{\text{straight}} = 5.13$, $F(1,26) = 2.97$, $p = .09$, $\eta^2 = .10$).

Interestingly, in terms of weight loss, including the break day did not have any negative influence, counter to what would have happened if any goal deviation were counterproductive, in line with our H4. We compared participants' body mass index (BMI), because it takes both weight and height into account. Paired sample *t*-tests indicated that participants in the intermittent condition lost a similar amount of weight as those in the straight condition from the start to the end of the diet (intermittent: $M_{\text{BMI, week 0}} = 25.26$, $M_{\text{BMI, week 2}} = 24.97$, $t(15) = 2.45$, $p < .05$, $d = .10$; straight: $M_{\text{BMI, week 0}} = 25.02$, $M_{\text{BMI, week 2}} = 24.53$, $t(15) = 3.14$, $p < .01$, $d = .23$). Similar results were found when BMI assessed in week 0 was compared with BMI at the time of the follow-up study (paired-sample *t*-tests; intermittent: $M_{\text{BMI, week 0}} = 25.50$, $M_{\text{BMI, follow-up}} = 24.48$, $t(12) = 3.92$, $p < .01$, $d = .34$; straight: $M_{\text{BMI, week 0}} = 25.20$, $M_{\text{BMI, follow-up}} = 24.15$, $t(14) = 3.81$,

Study 2: Weekly measures

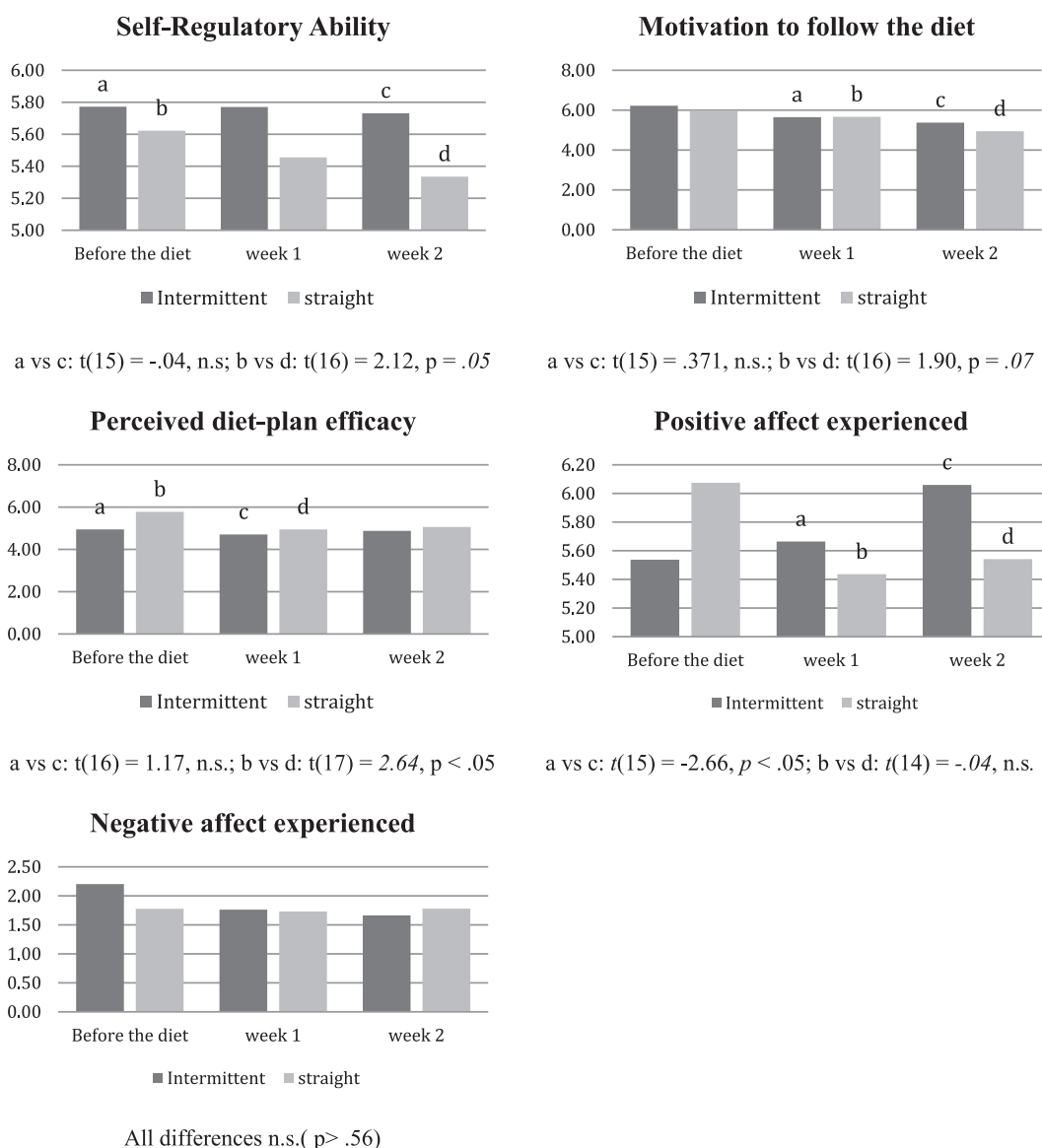


Fig. 1. Study 2: weekly measures.

$p < .01$, $d = .50$). A repeated measures analysis supported these results, with no significant differences found between conditions ($F(1,31) = 0.15$, *n.s.*).

Study 3: impact of planned deviations across different goal pursuits

Study 3 explored the generalizability of the results across a broader range of goals that involve repeated and persistent inhibition of behaviors over time, across different domains. The study was done with a sample of current goal-strivers, who are properly able to estimate the level of effort that needs to be allocated to pursue the goal at hand.

Method

An online survey on current goal pursuits was sent to about 300 faculty members and administrative personnel of a European university. Only those who indicated to be currently striving for a goal that involved the repeated inhibition of activities were considered for participation in the main study ($N = 64$, females = 86.9%; $M_{\text{age}} = 41.1$, range from 23 to 68). This was a between-subjects two-group design (intermittent = 34, striving = 30). First, participants wrote down a short description of their current goal, answering to a set of questions about it (e.g., “how frequently do you need to inhibit your behavior throughout the day?” and “how difficult is it to do those inhibitions?”). They then wrote down an activity that they would like to engage in, if they were given the option to have a break from goal pursuit. After concluding this part of the study, participants were presented to one of the goal-pursuit scenarios. Those in the *intermittent goal-striving* scenario then read “Imagine that one of your best friends (who is aware of your personal goal) tells you about an innovative program to attain these types of goals. This program implies that after a period of time during which you engage in the inhibitory behaviors, you are allowed to temporarily engage in goal-deviation activities like the ones described by you before as desirable. After this temporary moment of pause in your goal, you need to reinstate your behavior of restraining inhibitory activities, strictly following the plan until a next period in which you can again temporarily engage in the non inhibitory activities. For example, you may strictly follow your restricting plan for 6 days followed by one day of different activities in which you can engage in those actions you described as desirable.”

Participants in the *straight goal-striving plan* ($n = 30$) read a similar scenario, which only differed in the content of the program description. They read: “This program implies the identification of behaviors that need to be inhibited and to just initiate activities aligned with your personal goal without ever, irrespective of the circumstances, engaging in other types of activities”. Each participant was then asked to evaluate the goal-striving plan on a set of questions (e.g., “How interested would you be in obtaining more detail and information about this plan?”).

The goals indicated by participants were classified and coded. Three main categories of goals emerged from this

survey: *savings* (43.8%; e.g., “to save money avoiding spending money on superfluous things”), *dieting* (32.8%; e.g., “to lose 3 kg”), and *healthy habits* (12.5%; e.g., “to improve well-being by making exercise at least four times a week”). Goals in the two striving plans were very similar in difficulty ($M_{\text{intermittent}} = 4.09$, $M_{\text{straight}} = 3.94$, *ns*), time spent on pursuing the goal ($M_{\text{intermittent}} = 4.27$, $M_{\text{straight}} = 3.88$, *ns*), difficulty with current goal-pursuit ($M_{\text{intermittent}} = 4.27$, $M_{\text{straight}} = 4.21$, *ns*), and level of motivation to achieve the goal ($M_{\text{intermittent}} = 5.40$, $M_{\text{straight}} = 5.59$ *ns*), all F s < 1.5 , making it unlikely that any differences found between scenarios were due to differences in the type of goal-plan that participants were engaging in.

In line with the previous results, participants in the intermittent-striving goal plan indicated higher levels of motivation to proceed with goal-striving processes ($M_{\text{straight}} = 4.41$, $M_{\text{intermittent}} = 5.22$, $F(1,62) = 5.14$, $p < .05$, $\eta^2 = .08$), and indicated the intermittent-striving plan as more helpful to final goal-attainment ($M_{\text{straight}} = 4.0$, $M_{\text{intermittent}} = 4.75$, $F(1,62) = 4.25$, $p < .05$, $\eta^2 = .06$), independently of the type of goal participants indicated to be pursuing. These findings concern people’s beliefs about goal pursuit activity. They offer some evidence that across multiple goals and different domains, people who are in the process of goal-pursuit believe intermittent goal-striving plans to be more helpful to attain the overarching goal. This adds to the findings of studies 1 and 2. Table 2 provides a summary.

General discussion

Many of the important goals that consumers pursue, such as saving money and losing weight, require sustained behaviors over longer periods of time. Despite the common idea that hedonic goal deviation activities – those incompatible with overarching goals – should be avoided at all times, such behaviors may actually be conducive to goal persistence and ultimately to goal attainment, when being a priori included in the goal-striving plan.

Goal pursuit theory has typically assumed that activities not aligned with the focal goal should be avoided. Muraven and Slessareva (2003), for example, mention that in order to successfully exert self-control, individuals need to inhibit automatic, habitual, or innate behaviors, urges, emotions, or desires that would interfere with goal-directed behavior. Likewise, Fishbach and Shah (2006, p. 821) stress the importance that “individuals develop an implicit disposition towards approaching goals and avoiding temptations,” and Achtziger, Gollwitzer, and Sheeran (2008) emphasize the importance of developing strategies that suppress non-relevant responses. From such a perspective, goal-break activities express a lack of self-control and thus are failures that detract from attaining the goal. In this present research we proposed instead that goal deviation activities may have a positive effect on the likelihood of goal attainment, as long as these activities are *planned* for and a priori incorporated in goal-pursuit expectations. As pointed out by Gollwitzer and Sheeran (2009) including a priori some “if-then” implementation intentions can help people close the gap between setting goals and actually attaining them. If consumers include in their actions repertoire the

Table 2
Hypotheses and summary of main results obtained in studies 1–3.

	Study 1 simulated diet-study	Study 2 self-reported diet	Study 3 online survey, varied goal pursuits
H1: As compared to straight goal pursuit, including planned goal deviations in the plan help consumers to regain or even improve self-regulatory resources along the goal-pursuit process and thus enhance the likelihood that final goal is attained.	Partially supported: participants in both conditions decreased their self-regulatory ability. However, participants in the intermittent condition reported higher self-regulatory ability at the end of the simulated diet-period.	Supported: participants in the intermittent condition retained initial self-regulatory ability levels, while participants in straight condition decreased their self-regulatory ability.	–
H2: As compared to straight goal pursuit, including planned goal deviations in the plan help consumers to maintain or even increase motivation to proceed with goal-pursuit overtime and thus enhance the likelihood that final goal is attained.	–	Supported: participants in the intermittent condition retained motivation to pursue with the diet from week 1 to week 2, while participants in straight condition decreased their motivation to pursue with diet.	Supported: participants in the intermittent condition showed higher levels of motivation to pursue with goal-striving processes than participants in the straight condition.
H3: As compared to straight goal pursuit, including planned goal deviations in the plans help consumers to maintain or even boost the experience of positive affect throughout goal-pursuit process and thus enhance the likelihood that final goal is attained.	Supported: participants in the intermittent condition experienced higher positive affect at the end of simulated diet than participants in straight condition.	Supported: participants in the intermittent condition boosted the positive affect experienced from week 1 to week 2, while participants in straight condition kept the same level of positive affect experienced.	–
H4: As compared to straight goal pursuit, including planned goal deviations in the plan help consumers to manage in a more flexible way their goal-striving process, not negatively influencing the attainment of desired behavioral outcomes.	Supported: participants in the intermittent goal-striving condition generated more different strategies to overcome temptations than participants in the straight-striving condition.	Supported: participants in the intermittent condition lost similar body mass to those in the straight condition.	Some evidence: participants in the intermittent condition indicated the plan as more helpful to final goal-attainment, independently of the type of goal they were pursuing.

possibility of engaging in goal-breaks as a way to reach a sub-goal (e.g., not decreasing motivation), these may help them to pursue with the goal-striving task.

We proposed and found support across two experiments and an online study that when goal-deviation behaviors are part of the long-term plan, they help consumers to regain self-regulatory ability, to maintain or even increase motivation to persist in the goal-pursuit, and to contribute to the experience of positive emotions, which altogether is likely to positively influence goal adherence and thus the likelihood of final goal attainment. Moreover, results in terms of behavioral outcomes assessed in both study 1 and study 2 indicate that including flexibility in goal-pursuit plans does not affect negatively consumers' ability to attain these since consumers seem to find way of compensating for goal-deviations. This reveals the importance of flexibility in goal pursuit, and that it can be good in the long-run to behave badly in the short-run, when this is part of the plan. We found evidence for the benefits of this “hedonic planned goal deviation” in a dieting context, across student and non-student samples, but also on a variety of other goals (in the online study). Our findings gain special relevance in a time in which there is a recognized need for consumer researchers to focus on understanding the phenomenon of excessive food consumption that is contributing

to a massive epidemic of obesity worldwide (Pham, 2014; Wansink & Chandon, 2014).

The current findings contribute to the goal pursuit and striving literature. First, previous goal pursuit research has focused on strategies to keep behaviors chronically congruent with current overarching goals (e.g., Mischel, 1996). Our results extend this by demonstrating that engaging in hedonic planned-deviation activities enhances several contributing factors for goal attainment. This is new, and it points to the importance of flexibility in goal pursuit. Unplanned goal deviations may feel as failures and thus set a “failure cascade” in motion, with a “what-the-hell” effect as result, such that goals are completely abandoned. Quite the contrary happens when hedonic goal deviations are planned. Then, they may contribute positively to strengthen several factors that have been shown to aid goal-attainment. Of course, goal deviations should be minor and temporary, else becoming the norm rather than the exception to it. But the goal deviations can still be substantial; in fact they constituted almost 15% of the activity, one-day of the week, in one of our experiments.

Second, the findings highlight the importance of persistence versus flexibility in goal-striving. Clearly, continuous

abstinence and inhibition of certain behaviors or products frequently leads to “irresistible urges” and cravings that are difficult to restrain. This may lead to the breakdown of self-regulation and a snowballing to complete loss of control. The present findings indicate a straightforward and new technique for effective self-management. They show that it is important to plan hedonic moments in goal pursuit when it is “good to be bad,” and that this enhances the likelihood of goal attainment.

Our findings may also help people to attain their goals, and may inform public policy makers that aim to enable this. That is, rather than engaging in straight, persistent goal-striving which is often recommended in the applied, self-help literature, and some academic goal literature, our experiments indicate that consumers may be better off, when planning for moments of indulgence. Intermittent goal striving appears to be a powerful strategy to increase goal-persistence. Our results are consistent with findings obtained in different domains of study. For example, also Danziger, Levav, and Avnaim-Pesso (2011), found evidence in a judicial decisions context, for the importance of inclusion of breaks. According to these authors, when judges make repeated rulings, they tend to show an increased tendency to rule in favor of the status quo. This tendency is overcome when a break takes place, highlighting the positive impact of a current-goal deviation on mental resource replenishment and goal-pursuit.

As always, more research is needed to understand patterns of goal-failure, identifying other factors that improve flexible resource management and goal pursuit, beyond planned goal deviations. Surprisingly little is known about how consumers can increase their self-control ability and current well-being in order to cope with temptations, and to increase long-term goal attainment. The present research sheds some new light on this issue, stressing that sometimes it can be good in the long run to be temporarily bad in the short run.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.jcps.2015.05.001>.

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