

# Torn between want and should: An experience-sampling study on motivational conflict, well-being, self-control, and mindfulness

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**Abstract** We assumed that situations of motivational want conflict (i.e., feeling that one wants to do something else) and should conflict (i.e., thinking that one should do something else) show differential relationships to different components of well-being because more affective or more cognitive motivational aspects are ignored, respectively. Moreover, we assumed that these differences contribute to the understanding of different self-regulatory styles. Using an experience-sampling approach, 58 university students indicated their current affect, the underlying form of motivation, and whether they experienced a want or a should conflict regarding their daily activities ( $N = 2376$ ). Furthermore, we assessed participants' self-control and mindfulness before and life satisfaction after the experience-sampling period. As expected, want conflicts came along with lower affective well-being, but were unrelated to cognitive life satisfaction. Although should conflicts also yielded a small, negative association with some aspects of affective well-being, overall, their negative relation with life satisfaction was more pronounced. Positive paths of self-control on affective well-being were mediated via less want and should conflicts, whereas positive paths of both mindfulness and self-control on life satisfaction were mediated via less should conflicts. The relative importance of want and should conflicts in daily self-regulation and well-being is discussed.

**Keywords** Autonomy · Mindfulness · Motivational conflict · Self-control · Well-being

## Introduction

Martha is frustrated sitting at her desk. For hours now, she has been trying to focus on her assignments concerning an upcoming class. Nevertheless, she cannot ignore her desire to be together with her friends, whom she knows are having an awful lot of fun right now. This situation is not entirely new to her. She often has a hard time staying on task and dismissing potential alternative pleasures.

Tim feels uneasy about chatting with his friend. For many weeks, he has tried to free up some time to meet together. However, he cannot ignore his guilty conscience, reminding him of all the unfinished business waiting for him on his desk. This situation is not entirely new to him. He often finds himself in similar situations, having a hard time cherishing the moment and forgetting about other important duties.

Both cases describe everyday self-regulatory challenges that involve feeling torn between competing action tendencies. In the present study, we were interested in the specificity of both conflict phenomena regarding their relation to different aspects of subjective well-being, as well as their personal preconditions. Specifically, we distinguish between *want* and *should* conflicts, that is, either having the feeling that one wants to do something else or that one should be doing something else despite the current activity (cf. Riediger and Freund 2008). We propose that both types of intrapersonal conflict are ubiquitous and that both are important to consider because they relate to an individual's well-being—but differentially. Depending on which motivational facet is disregarded in a specific conflict situation, we assume differential associations with more affectively or more cognitively oriented indicators of well-being. Furthermore, we assume that these conflict-specific associations exist independently from different activity

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contexts and from the underlying form of motivation that energizes current action. Finally, we propose that both conflict experiences contribute to the understanding of more general self-regulatory styles—self-control and mindfulness—placing either greater emphasis on one’s cognitive goal representations or one’s inner affective needs.

### Motivational conflict in everyday life

In every situation where multiple action tendencies are perceived to be interfering with each other, intrapsychic conflict is likely (Emmons and King 1988). According to Riediger and Freund (2008), depending on the decision in situations of motivational conflict, either the feeling that one wants to do something else or that one should do something else despite the current activity may arise. Basically, what occurs to people in such post-decisional want and should conflicts can be described as motivational interference (Fries and Dietz 2007; Fries et al. 2008; Grund and Fries 2012). That is, motivational characteristics of competing action tendencies impair ongoing experience and performance. For example, in specific study–leisure conflicts, it has been demonstrated that incentives attached to dismissed leisure alternatives explained self-regulatory difficulties during studying above and beyond incentives attached to the focal studying activity (Fries et al. 2008; Grund et al. 2014). Interestingly, this was also the case in the opposite conflict constellation (i.e., decision for leisure time and against studying).

Past research has shown that specific life domains go along with specific conflict experiences. Want conflicts mainly occurred during routine, study, or work-related activities, whereas should conflicts much more often emerged during leisure time (Riediger and Freund 2008). It seems plausible that these patterns are due to specific forms of motivation that typically predominate specific action contexts. For example, Grund et al. (2014) found daily activities from the studying compared to the leisure context to be mainly energized by more extrinsic forms of motivation, such as external and avoidance incentives, whereas the leisure context provided much more intrinsic incentives. In line with this reasoning, researchers have found more self-determined forms of motivation for studying and leisure time to be negatively linked to conflicts between these two domains (Grund 2013; Ratelle et al. 2005) and between the work and family domain (Senécal et al. 2001).

A closer look at the phenomena of want and should conflict experiences raises several questions: Why would we act against our preferences? If there is something that we would like more or we feel we rather should do, why do we not do it? We assume that two broad motivational perspectives are at conflict here, which are commonly

contrasted as *motivation as a drive* and *motivation as directed by goals* (e.g., Covington 2000; Metcalfe and Mischel 1999). Typically, drives are seen as “affectively based dispositions that energize behavior,” whereas goals are seen as “cognitive representations that serve a directional function for behavior” (Elliot et al. 2002, p. 373). Interestingly, both aspects of motivation may not always be in harmony with each other (e.g., Brunstein et al. 1998).

Take Martha’s case again. Obviously, good grades are important for her in order to find a good job. Having fun with her friends interferes with this goal, and hence could be considered a *temptation* (Hofmann et al. 2013) or an *inner voice* (Tangney et al. 2004) that needs to be ignored. In this case, the self-regulatory challenge is best framed in terms of (a lack of) self-control, where long-term cognitive goal representations are more or less successfully shielded against more short-term affect-driven action tendencies (Baumeister et al. 1994). Consequently, experiencing want conflicts can be characterized as affective conflicts in the sense that affect-loaded desires are currently frustrated.

Tim’s case is different from this interpretation. He cannot satisfy his inner need for relatedness due to conflicting motivational tendencies from the work domain. Inner distance to external affordances seems to be the self-regulatory challenge in this case. Therefore, should conflicts can be characterized as cognitive conflicts in the sense that cognitive-based goal representations are currently frustrated. Theoretical perspectives that fit this interpretation are self-determination theory (e.g., Deci and Ryan 2000) and the concept of mindfulness (e.g., Brown and Ryan 2003).

What we could learn from these cases is that both motivational mechanisms—*affective drives* and *cognitive goals*—under certain circumstances, may lead to suboptimal decisions in terms of self-concordance (Sheldon and Elliot 1998; Sheldon and Kasser 1995). On the one hand, untamed affective impulses may impair the attainment of personal goals. On the other hand, unreflective goal representations may impair satisfaction of inner needs. This is especially likely if affective impulses and goal representations are not in line with central core values and aspects of the self, but rather the product of internal and external pressures.

### Motivational conflict and impairments in well-being

Having argued for the prevalence and variety of motivational conflicts in everyday life, what do we know about their relevance for current and long-term self-regulation? Although some findings have demonstrated impairments on the performance level due to conflicting motivational tendencies (e.g., Fries and Dietz 2007; Locke et al. 1994), most research has concentrated on their relation to well-

being (e.g., Emmons and King 1988; Palys and Little 1983; Ratelle et al. 2005; Riediger 2007; Senécal et al. 2001; Steinmetz et al. 2008; Wiese and Salmela-Aro 2008). Overall, findings are quite consistent that motivational conflict, regardless of its specific measurement (e.g., idiographic goal conflict matrices, overall conflict ratings, day-to-day conflict experiences), goes along with impairments in well-being, which is distinguished typically in an affective and a cognitive facet. According to Diener et al. (1999), affective well-being covers people's positive and negative experiences as they unfold in their daily lives, whereas cognitive well-being regards more general evaluations of people's life satisfaction.

A common explanation for why motivational conflict is associated with losses in well-being is a teleological one (Brunstein 1993; Brunstein et al. 1999). Goal content (e.g., Kasser and Ryan 1993, 1996), goal progress (e.g., Sheldon and Kasser 1998; Wiese and Freund 2005), and goal attainment (e.g., Emmons 1986) promote well-being, whereas goal interference hampers goal pursuit (Riediger and Freund 2004). Thus, people are happy and satisfied if they can pursue their personal goals; and if they experience setbacks, as in the case of motivational conflicts, their well-being is compromised. This relationship should hold for both current and more global assessments of well-being because the former component is typically seen as a source of the later (e.g., Kim-Prieto et al. 2005).

Although the negative link between motivational conflict and well-being has been repeatedly demonstrated, still, little is known about specific trajectories. Here again, the distinction of want and should conflicts may be especially informative. As we described above, in both conflict situations, different kinds of motivational qualities are assumed to be affected that, in turn, may be differentially related to the components of well-being. Hence, beyond the general assumption that motivational conflict hampers well-being because goal attainment is impaired (e.g., Emmons and King 1988; Riediger and Freund 2004), we assume more specific pathways. In the case of a want conflict, in order to meet more cognitively steered future goal representations, such as study or work obligations, more affectively loaded desires and needs are immediately frustrated. Hence, in this case, momentary impairments in well-being should be especially relevant with regard to affective aspects, whereas cognitive aspects of well-being should be rather unaffected because goal pursuit is at least partially maintained. On the contrary, in the case of a should conflict, more cognitively steered motivational construals are neglected at the expense of more affectively driven inner needs and desires. In this case, momentary affect must not be seriously impaired. At least one should experience some satisfaction from doing what one wants. However, in hindsight, the behavior may be judged as

improper with regard to more explicit, normative standards of a virtuous life, obfuscating the rather cognitive evaluation of one's satisfaction with life.

In line with this reasoning, Riediger and Freund (2008) found that day-to-day instances of want conflicts reliably predicted momentary affect, whereas should conflicts showed a considerably smaller or even no significant effect. However, the authors did not incorporate cognitive measures of well-being in order to investigate whether should conflicts are more relevant with regard to these well-being components. In this regard, supporting evidence comes from recent research on study–leisure conflicts. Grund and Fries (2014) found that students who often felt interfered during leisure time because of study duties (i.e., frequent should conflicts) also reported lower life satisfaction and higher burnout scores. These relationships persisted when experiences of study interference by leisure time (i.e., frequent want conflicts) were controlled.

#### Personal preconditions of motivational conflict: self-control and mindfulness

It seems likely that instances of want and should conflicts are also a matter of personal characteristics. Considering the specific phenomenology of both kinds of motivational conflict as described above, a person's ability to exhibit self-control and to approach situations mindfully should determine the kind and strength of conflict experience.

Self-control is typically referred to a person's "ability to override or change one's inner responses, as well as to interrupt undesired behavioral tendencies and refrain from acting on them" (Tangney et al. 2004, p. 275). As such, it is especially important to master so-called vice-virtue conflicts (e.g., Hofmann et al. 2014), where current short-term desires have to be inhibited or frustrated because they conflict with long-term goals. Hence, intense want conflicts during a focal goal pursuit should be less typical for self-controlled people. More precisely, highly self-controlled people seem to be good at avoiding situations of momentary temptation rather than being able to resist an upcoming temptation (Hofmann et al. 2012). In addition, if one acts according to a virtuous life, there is little reason to think that one should be doing something else, which may also reduce the occurrence of should conflicts.

Mindfulness, on the contrary, concerns "the receptive attention to and awareness of present events and experience" (Brown et al. 2007, p. 212). This includes being attentive to one's inner affective states (i.e., rather than ignoring them), as well as being "in the moment" in order to pursue reflectively considered goals. Failing in doing so "tends to foster habitual, overlearned, or automatized reactions rather than responses that are self-endorsed and situationally appropriate" (Brown et al. 2007, p. 216).

Therefore, a mindful lifestyle should be expressed in lower conflict experiences, too. If one is at peace with the world and oneself, there is little reason to feel that one wants to do something else and that one should be doing something else.

Interestingly, both concepts, although they seem to suggest quite different standards of successful self-regulation (i.e., taming the self vs. embracing the self), have been found to be positively linked to quite similar outcomes of mental health and well-being (e.g., Brown and Ryan 2003; Brown et al. 2007; de Ridder et al. 2012; Hofmann et al. 2014; Tangney et al. 2004). That is, both high self-control and high mindfulness seem to make people happy and satisfied. We propose that this comes via different paths of resistance to specific motivational conflicts.

The present study

We identified post-decisional want and should conflicts as distinctive motivational conflicts, depending on whether the decision results in a neglect of either more affective- or more cognitive-loaded aspects of motivation. This specificity should involve personal preconditions as well as different aspects of well-being. In the present study, we assumed the following relationships for the situational and personal level, integrating experience-sampling data and personality measures.

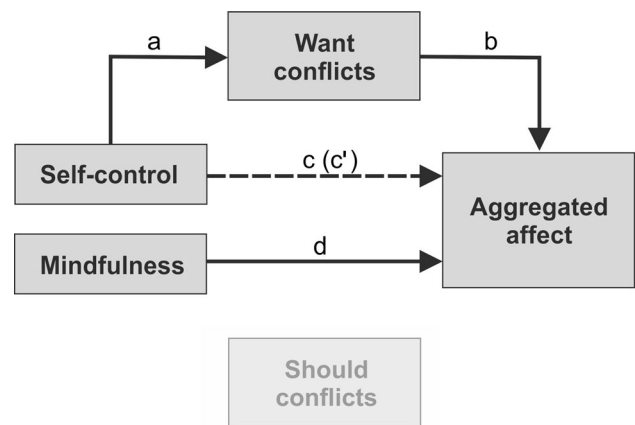
On the situational level, we assumed that daily want and should conflict experiences show differential associations with momentary affect. Given their assumed need and affect-based nature, want conflicts should yield especially strong relationships, whereas should conflicts, given their assumed cognitive nature, should not be as relevant for current affective setbacks. Moreover, given the close overlap of want and should conflicts with specific life domains (Grund et al. 2014; Riediger and Freund 2008), we wanted to demonstrate that this pattern exists independently from such context effects. Similarly, we wanted to demonstrate that the assumed pattern exists independently from the underlying form of motivation that energizes specific day-to-day activities. For example, from a self-determination perspective (e.g., Deci and Ryan 2000), one might argue that the degree of autonomy experienced during engagement affects both the experience of motivational conflicts and momentary affect, thereby accounting for the relationship between the latter two variables.

Exploratory, we wanted to investigate whether both conflict experiences would show differential patterns with regard to several aspects of momentary affect, namely positive and negative activation, as well as valence (Schallberger 2005, see also “Methods” section), acknowledging the assumed differential functions of these affective components in a behavioral approach-avoidance

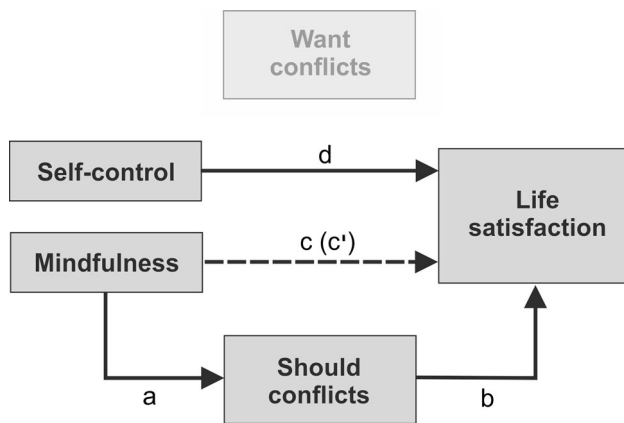
system (e.g., Carver and White 1994; Gable et al. 2003; Watson et al. 1999). Previous experience-sampling studies on motivational conflict reported either on a composite score of positive and negative activation (Riediger and Freund 2008), or used a single item affect measure (Hofmann et al. 2014, Study 2).

On the personal level, we proposed specific mediation processes between self-control and mindfulness as somewhat antithetic approaches to self-regulation as predictors, aggregated want and should conflict experiences as mediators, and affective and cognitive aspects of well-being as separate criteria. First, regarding aggregated affect (Fig. 1), we proposed a substantial direct effect of mindfulness because both constructs involve a rather direct access to one’s inner affective needs and desires. In addition, we proposed an indirect effect of self-control on affective well-being via less motivational want conflicts. Highly self-controlled people should be less prone to want conflict experiences in everyday life; in turn, those conflicts are assumed to be negatively related to one’s affective well-being. Given their assumed cognitive nature, should conflicts should yield no additional effect and, hence, should not serve as an incremental mediator between self-control and affective-well-being.

Second, regarding life satisfaction (Fig. 2), we proposed a substantial direct effect of self-control because both constructs involve rather cognitive, explicit evaluations of one’s self-regulatory processes. In addition, we proposed an indirect effect of mindfulness on life satisfaction via less should conflicts. Mindful people should be less prone to should conflict experiences; in turn, those conflicts are



**Fig. 1** Mediation model describing expected relationships between self-control, mindfulness, want and should conflicts, and aggregated affect on the personal level. *a\*b* Indirect effect of self-control on aggregated affect via want conflicts. *c* Total effect of self-control on aggregated affect. *c'* Reduced direct effect of self-control on aggregated affect controlling for want conflicts. *d* Direct effect of mindfulness on aggregated affect. Grey shaded no effect on aggregated affect



**Fig. 2** Mediation model describing expected relationships between self-control, mindfulness, want and should conflicts, and life satisfaction on the personal level. *a*\**b* Indirect effect of mindfulness on life satisfaction via should conflicts. *c* Total effect of mindfulness on life satisfaction. *c'* Reduced direct effect of mindfulness on life satisfaction controlling for should conflicts. *d* Direct effect of self-control on life satisfaction. *Grey shaded* no effect on life satisfaction

assumed to be negatively related to one's life satisfaction. Given their assumed affective nature, want conflicts should yield no additional effect and, hence, should not serve as an incremental mediator between mindfulness and life satisfaction.

## Methods

### Participants

A total of 59 university students ( $M_{\text{age}} = 24.1$ ,  $SD_{\text{age}} = 3.2$ , range from 20 to 32 years; 69 % female) participated in the study in return for either course credit or 20 Euros (~25 US dollars). Participants who showed high compliance (i.e., answering more than 90 % of the daily signals) took part in an additional lottery for book vouchers totaling 100 Euros (~125 US dollars). One participant was dropped from the analysis because she did not follow the instructions explicitly. Recruitment took place via information on the notice boards of several faculties of a middle-sized German university.

### Procedure

The study consisted of three parts and took place between the last 3 weeks of the semester and the first 2 weeks of the semester break. First, in an introductory meeting, we familiarized the participants with the experience-sampling data collection via smartphones in small groups (up to six people). Then, we assessed the personal variables conceptualized as predictors of motivational conflict and well-

being (i.e., self-control and mindfulness), besides other measures not of interest in the present study. Participants could either use their own smartphones or a smartphone equipped with mobile cards was provided (HTC Touch Diamond 2), of which 19 (32.8 %) of the participants made use of. During the introduction session, all participants pretested the experience-sampling form (see below) and could ask any questions regarding it. Then, each participant individually started his or her experience-sampling period of 7 days within 1 or 2 days after the introductory meeting. Participants indicated that their respective experience-sampling period "rather typically" represented their ordinary study life ( $M = 2.79$ ,  $SD = 0.89$ , 1 = *not at all typical*, 4 = *very typical*).

In the experience-sampling period, participants provided information on their daily activities and affective well-being over the course of 7 days, following individualized signals. We distributed the signals via email using the software SMS Scheduler. Each message contained a link to the web-based experience-sampling form (EFS Survey software, Unipark) that the students directly answered in the smartphones' browser. Following the recommendations of Hektner et al. (2007), each participant received six random signals per day between 9 a.m. and 9 p.m., within 2-h periods. Minimal time span between two signals was 20 min. If the participants did not answer a signal (i.e., more than 20 min after the signal has been sent), an additional signal was sent after the initial 7 day period. On average, 5.33 extra signals were sent, indicating a high compliance (i.e., 87.31 % prompt answers to the initial signals, on average). In total, participants provided answers to 40.97 signals on average.

After the experience-sampling period, participants again visited the lab and provided information on their general life satisfaction together with other measures that were not part of the present study. We thanked and paid the participants, and they had the possibility to indicate whether they wanted to be informed of the study's rationale and results after the study had been finished. Overall, the assessment took between 9 and 12 days for each participant, depending on their private schedules.

### Measures

#### *Experience-sampling measures (situational, within-person level)*

**Time to signal** Participants were instructed to answer the experience-sampling forms as soon as possible after having received a signal. Therefore, each assessment started by asking *how long it took them to start the form* (1 = *less than one minute* to 5 = *up to 20 min*). Participants indicated that a great majority (87.6 %) of the total signals

( $N = 2376$ ) was answered within 10 min (46.8 % <1 min; 30.6 % <5 min, 10.5 % <10 min), assuring real-time assessment of daily experience.

**Momentary affective well-being** Then, participants indicated *how they felt directly before the signal* using the Short Scale of Positive and Negative Activation and Valence (PANAVA, Schallberger 2005). The PANAVA is based on the affect model of Watson and Tellegen (1985). In a more recent evolution of this model (Tellegen et al. 1999), positive activation (PA) and negative activation (NA) are seen as two relatively independent bipolar dimensions that underlay a higher-order bipolar happiness–unhappiness (valence) dimension. The PANAVA has been explicitly designed to capture momentary PA and NA in experience-sampling contexts and has proven convergent and divergent validity with the Positive and Negative Affect Schedule (PANAS, Watson et al. 1988; Schallberger 2005). Importantly, compared to the 20 item PANAS, the 10 item PANAVA is much more economical. Moreover, it explicitly assesses valence (VA) as a third affect component besides PA and NA, which we deemed important for ensuring the face validity of the affect measurement. Finally, in line with the underlying bipolar affect model, the PANAVA uses a seven-point bipolar scaling from  $-3$  to  $3$ , with  $0$  labeled as “undecided” (PA, four items: (2) *shiftless/energetic*, (4) *tired/wide awake*, (7) *listless/highly motivated*, (9) *bored/excited*; NA, four items: (3) *relaxed/stressed*, (4) *peaceful/angry*, (8) *calm/nervous*, (10) *carefree/worried*; VA, two items: (1) *discontent/satisfied*, (6) *unhappy/happy*; the items 1, 2, 3, 9, and 10 are presented in reversed order),<sup>1</sup> whereas the PANAS uses a unipolar scaling to assess only high-end markers of PA and NA. The bipolar scaling is also intended to avoid asymmetric distributions, especially for NA. To prevent biases, we measured momentary affect prior to all other constructs.

**Activity context** Next, participants indicated *what they were currently doing*, and sorted these focal activities to the five categories *leisure time*, *studies*, *job*, *daily routines and duties*, and *others*. The categories *leisure time*, *studies*, and *daily routines and obligations* consisted of further fine-grained categories not relevant to the present study.

**Relative autonomy** To measure the degree of self-determination underlying their engagement, we then asked the students *why they were doing the activity*. Following Reis et al. (2000; see also Levelsque and Brown 2007), four items were applied in order to assess intrinsic (“... because

I enjoy doing it”), identified (“... because I want to do it”), introjected (“... because I should do it”), and external reasons (“... because I must do it”) on a six-point scale (1 = *doesn't fit at all* to 6 = *does fit perfectly*). Above the four items, a joint autonomy score was created for each activity using the following weights: intrinsic (+2), identified (+1), introjected (−1), and external (−2).

**Motivational conflicts** Finally, experiences of want and should conflicts were assessed, following Riediger and Freund (2008). We asked how intensely the participants had the feeling that *they wanted to do something else* during the focal activity (1 = *not at all* to 5 = *very strong*). Then, we asked how intensely they had the feeling that *they should do something else* (1 = *not at all* to 5 = *very strong*). If they indicated neither a want nor a should conflict (= 1), the form closed after asking some questions that are not of focus in the present study. If they had experienced at least some kind of want or should conflict (>1), they indicated the content of this *desire* or *obligation*, using the same taxonomy as for the focal activity.

#### Personal variables (between-person level)

**Self-control** We assessed participants' ability for self-control by using the German version (Bertrams and Dickhäuser 2009) of the 13-item Self-Control Scale (Tangney et al. 2004). The scale asks for typicality of displaying self-controlled action (e.g., “I am good at resisting temptation”) on a five-point scale (1 = *not at all* to 5 = *very much*). Cronbachs  $\alpha$  in the present sample was .77. Higher scores reflect higher self-control.

**Mindfulness** By using the German version (Michalak et al. 2008) of the 15-item Mindful Attention Awareness Scale (Brown and Ryan 2003), we measured participants' ability to act mindful. The participants indicated how often *mindless* acting occurs to them (e.g., “I find myself doing things without paying attention”) on a six-point scale (1 = *almost always* to 6 = *almost never*). Cronbachs  $\alpha$  in the present sample was .78. We recoded the scale so that higher scores reflect higher mindfulness.

**Cognitive well-being** We assessed cognitive well-being using a German version (Trautwein 2004) of the Satisfaction with Life Scale (Diener et al. 1999). The scale consists of four items asking for current life satisfaction (e.g., “In most ways my life is close to my ideal”) on a four-point scale (1 = *strongly disagree* to 4 = *strongly agree*). Cronbachs  $\alpha$  in the present sample was .87. Higher scores reflect higher cognitive well-being.

<sup>1</sup> Please notice that the presented items have been translated from German for publication purposes.

## Results

### Descriptive statistics

What did the participants do and what were their experiences when beeped? In most occasions ( $n = 871$ , 36.7 %), they were engaged in leisure-related activities, followed by studies ( $n = 672$ , 28.3 %), daily routines and duties ( $n = 636$ , 26.8 %), job ( $n = 120$ , 5.1 %), and others ( $n = 77$ , 3.2 %). In Table 1, the descriptive findings for our experience-sampling measures are summarized on the basis of average within-person tendencies (Level 2). Where feasible, we also present the situation-level variances (Level 1). All participants provided answers with respect to at least one leisure, study, and routine situation. Over the course of experience sampling, participants acted rather self-determined, as signified by the positive mean autonomy score. Not surprisingly, the variability in autonomy was larger on the situation-compared to the person-level. Overall, want conflict experiences dominated in 641 (27.0 %) occasions, and should conflict experiences dominated in 576 (24.2 %) occasions. In 143 (6.0 %) occasions, the participants reported want and should conflicts of equal strength. In 1,016 (42.8 %) occasions, no conflict was experienced at all. Overall, participants mean want conflict intensity was slightly higher than their mean should conflict intensity. Again, conflict variability was larger between situations compared to between persons.

Regarding their momentary affect, overall participants reported a positive activation slightly above the scale midpoint, a rather low negative activation, and a rather high valance in their daily experiences. In line with the other measures, affect variability on the person-level was

considerably lower compared to the situation-level. Across activities, PA correlated significantly with NA ( $r = -.37$ ) and VA ( $r = .57$ ), and NA correlated strongly with VA ( $r = -.77$ ), mirroring previous findings (e.g., Tellegen et al. 1999). Internal consistency (average Cronbachs  $\alpha$  per person over all situations) was .79 ( $SD = .09$ ) for positive affect, .78 ( $SD = .14$ ) for negative affect, and .77 ( $SD = .13$ ) for valance.

With regard to the personal measures, mean self-control was 3.04 ( $SD = 0.55$ , five-point scale), mean mindfulness was 3.99 ( $SD = 0.58$ , six-point scale), and mean life satisfaction was 3.03 ( $SD = 0.67$ , four-point scale).

### Analysis on the situational level

#### Data analysis

To acknowledge the multilevel data structure of the experience-sampling measures, that is, observations ( $N = 2376$ , Level 1) nested within persons ( $N = 58$ , Level 2), we conducted multilevel analysis using IBM SPSS 21 in order to account for intra-individual and inter-individual variances (Hox 2010; Raudenbush and Bryk 2002). In all analyses, we used maximum likelihood parameter estimates, and we estimated residuals at Level 1 accounting for the autocorrelation of the different time points (Bolger and Laurenceau 2013).

#### Motivational conflicts and momentary affect

We hypothesized that, in particular, experiences of want conflicts negatively predict momentary affective experiences, whereas should conflicts should yield no, or at least

**Table 1** Descriptive statistics for the experience-sampling measures

Variable	Scale	Person-level (level 2)				Situation-level (level 1) SD
		Min	Max	M	SD	
Activity frequency						
Leisure time		5	25	15.02	4.74	
Studying		1	24	11.59	5.40	
Job		0	16	2.07	3.04	
Routines & duties		3	20	10.97	3.69	
Others		0	7	1.33	1.73	
Relative autonomy	−15 to 15	−2.05	6.83	1.77	2.20	7.38
Conflict intensity	1–5					
Want conflict		1.12	3.54	1.99	0.47	1.40
Should conflict		1.00	3.80	1.88	0.59	1.34
Momentary affect	−3 to 3					
Positive activation (PA)		−1.40	1.60	0.30	0.59	1.14
Negative activation (NA)		−2.59	1.52	−0.81	0.86	1.30
Valance (VA)		−1.29	2.52	0.91	0.79	1.33

substantially lower, effects. Furthermore, we assumed that this pattern persists while controlling for the given activity context and the underlying form of motivation that energizes the current activity. Finally, we searched for differential correlational patterns with respect to the different components of affective well-being, namely positive activation, negative activation, and valence. Therefore, in the following, we report on the combined direct effects of both conflict experiences, activity context, and autonomy on the separate facets of affective well-being. Want and should conflict experiences, as well as autonomy scores, were first z-standardized and then person-mean centered. We did so because we were mainly interested in effects on the situational level, controlling for inter-individual differences (Enders and Tofghi 2007), and because we wanted to compare the respective effect sizes. Therefore, the 95 % confidence interval for each effect was calculated. With regard to activity context, we contrast-coded each observation as 1 = *leisure*, -1 = *study*, and 0 = *all others*, directly comparing leisure and study occasions (cf. Cohen et al. 2003). We did so because here we expected a maximum difference in autonomy and affect (cf. Goetz et al. 2010) and because the participants located themselves most often within these two contexts. Measures of momentary affect were left in their original metric (-3, 0, 3) because they served as criteria and their scale midpoint is easy to interpret as neutral affect. Intercepts and slopes were allowed to vary across persons for all Level 1 predictors.

**Positive activation (PA)** Regarding the fixed effects (see upper part of the left columns in Table 2), we found a significant negative effect for activity context and a positive effect for autonomy. That is, studying compared to leisure time was associated with higher PA. Moreover, more self-determined action came along with higher PA. As expected, want conflict experiences yielded a substantial negative effect, whereas should conflict experiences yielded no additional effect. That is, the more intense participants felt that they wanted to do something else besides the current activity, the lower their PA.

Regarding the random effects (lower part of Table 2), in addition to a significant effect for the residual, we also found a significant effect for autocorrelation. That is, PA was more similar the closer two measurement points were (e.g., PA measured twice in 1 day compared to two measures on different days). Furthermore, at Level 2, the intercept yielded significant variance, indicating substantial variability across individuals regarding their average level of PA. Finally, the slope of want conflicts showed significant variance, indicating slight differences in strength of the relationship between want conflicts and PA across individuals. The same was true for autonomy.

**Negative activation (NA)** Regarding the fixed effects, want and should conflict experiences positively predicted NA, whereas relative autonomy yielded a negative effect.

**Table 2** Multilevel regression of momentary affect on activity context, autonomy, and want and should conflicts

	Positive activation			Negative activation			Valence			
	Estimate	SE	95 % CI	Estimate	SE	95 % CI	Estimate	SE	95 % CI	
<b>Fixed effects (b)</b>										
Intercept	0.30***	.08	0.15, 0.46	-0.82***	.11	-1.04, -0.60	0.91***	.10	0.71, 1.12	
Activity context	-0.12**	.04	-0.19, -0.05	-0.05	.04	-0.11, 0.03	0.04	.04	-0.04, 0.12	
Autonomy	0.15***	.04	0.08, 0.23	-0.20***	.03	-0.26, -0.14	0.21***	.03	0.15, 0.27	
Want conflict	-0.21***	.03	-0.28, -0.15	0.25***	.03	0.19, 0.30	-0.30***	.03	-0.36, -0.24	
Should conflict	-0.04	.03	-0.09, 0.01	0.14***	.03	0.08, 0.21	-0.16***	.03	-0.22, -0.10	
<b>Random effects</b>										
<b>Level 1 (variances)</b>										
Residual ( $\epsilon_{ij}$ )	0.88***	.03	0.83, 0.94	0.79***	.03	0.74, 0.84	0.96***	.03	0.90, 1.03	
Autocorrelation ( $\rho$ )	0.24***	.02	0.20, 0.28	0.24***	.02	0.20, 0.29	0.23***	.02	0.19, 0.27	
<b>Level 2 (variances)</b>										
Intercept ( $u_{0j}$ )	0.31***	.06	0.21, 0.47	0.68***	.13	0.46, 0.99	0.57***	.11	0.38, 0.84	
Slopes activity context ( $u_{1j}$ )	0.02	.01	0.01, 0.05	0.02*	.01	0.01, 0.06	0.03*	.01	0.01, 0.07	
Slopes autonomy ( $u_{2j}$ )	0.02*	.01	0.01, 0.05	0.01	.01	0.00, 0.05	0.00	.01	0.00, 0.02	
Slopes want conflict ( $u_{3j}$ )	0.02*	.01	0.01, 0.05	0.01	.01	0.00, 0.04	0.01	.01	0.01, 0.04	
Slopes should conflict ( $u_{4j}$ )	0.00	.01	0.00, 0.02	0.03*	.01	0.01, 0.06	0.01	.01	0.00, 0.05	

Activity context = contrast-coded as 1 = leisure, -1 = study, and 0 = all others. Autonomy as well as want and should conflict are z-standardized and person-mean centered

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$



Activity context yielded no additional effect. That is, the more intense participants felt that they either wanted to or should do something else besides the current activity, the higher their NA. Descriptively, want conflicts yielded a larger effect compared to should conflicts. However, given the small overlap of the respective 95 % confidence intervals, this difference slightly missed significance. Additionally, higher autonomy came along with lower NA. Regarding the random effects, we again found substantial autocorrelation and substantial variability across individuals regarding their overall level of NA. In addition, the relationship between should conflicts and NA and between activity context and NA differed slightly in strength across individuals.

*Valence (VA)* All fixed effects despite activity context were significant. As before, want conflicts yielded a larger negative effect compared to should conflicts, this time yielding significance. Also, autonomy was accompanied by higher valence. In the case of random effects, we again found substantial autocorrelation and variability across individuals regarding their overall level of VA. In addition, only the relationship between activity context and VA differed slightly in strength across individuals.

Hence, experiences of motivational conflict related to all components of momentary affect. Overall, want compared to should conflicts served as a more consistent and stronger predictor for impairments in affective well-being, and this pattern persisted while controlling for whether an activity was located in the leisure or study context and whether current self-determination was high or low.

#### Analysis on the personal level

We were also interested in whether instances of want and should conflicts would serve as differential paths via which the positive effects of self-control and mindfulness on different aspects of affective and cognitive well-being are mediated. However, a multilevel mediation analysis was not possible in this case because our measure of cognitive well-being (i.e., life satisfaction) was only measured once on the personal level (Level 2). We therefore aggregated all relevant Level 1 measures (experiences of want and should conflicts, momentary affect) into composite scores. In the case of conflict experiences, we calculated the mean intensity of want and should conflicts over all observations. Furthermore, in order to be able to easily contrast cognitive and affective well-being we used a composite measure of aggregated affect.<sup>2</sup> We then z-standardized all aggregated

variables and conducted the analyses using the SPSS macro provided by Hayes (2013) for multiple mediation analysis operating in parallel. The macro provided 90 % bias-corrected confidence intervals for the indirect effects using 1000 bootstrap samples. When the interval does not include zero, the indirect effect is deemed to be significant.

#### *Aggregated affect*

First, we tested whether less intensive want conflicts in everyday life account for the positive effect of self-control on affective well-being, whereas mindfulness should yield an incremental direct effect (see Fig. 1). Hence, self-control was specified as predictor in the model, want and should conflict as parallel mediators, and aggregated affect as criterion. Mindfulness served as a covariate in all regression steps. Findings are summarized in the left part of Table 3. In a first step (Model 1), mindfulness positively predicted aggregated affect. Second (Model 2), self-control yielded an incremental positive effect. However, when entering the conflict measures in the model (Model 3), self-control no longer remained a significant predictor, whereas the direct effect of mindfulness did. In addition, want conflicts, but not should conflicts, yielded an incremental negative effect on aggregated affect. Somewhat unexpectedly, both indirect effects of self-control on aggregated positive affect via want and should conflicts were substantial ( $a*b = .06$ , CI [.00, .18] and  $a*b = .08$ , CI [.01, .23], respectively). However, in the case of should conflicts, the effect was mainly carried via the relatively high direct effect of self-control on should conflicts ( $\beta = -.34$ ,  $p < .01$ ). As expected, for mindfulness, no substantial mediation effect was found.

#### *Life satisfaction*

Second, we investigated whether the positive effect of mindfulness on life satisfaction is mainly due to less intensive should conflicts, whereas self-control should yield an incremental direct effect when serving as a covariate (see Fig. 2). Findings are summarized in the right part of Table 3. In a first step (Model 1), self-control positively predicted life satisfaction. Second (Model 2), mindfulness yielded an incremental positive effect. However, when we entered the conflict measures in the model (Model 3), both self-control and mindfulness remained significant predictors, although both direct effects dropped slightly. In addition, as expected, should conflicts yielded an incremental negative effect on life satisfaction, whereas want conflicts did not. In line with our predictions, the indirect effect of mindfulness on life satisfaction via should conflicts was substantial ( $a*b = .09$ , CI [.01, .25]). Unexpectedly, the

<sup>2</sup> Such a procedure we deemed adequate given the substantial correlations we found between the three affect components.

**Table 3** Regression of aggregated affect and life satisfaction (level 2)

Model	$\beta$	$R^2$	$\Delta R^2$	Model	$\beta$	$R^2$	$\Delta R^2$
Aggregated affect				Life satisfaction			
1. Mindfulness	.36**		.13**	1. Self-control	.41***		.17***
2. Mindfulness	.30*		.05*	2. Self-control	.33**		.09**
Self-control	.24*			Mindfulness	.31**		
3. Mindfulness	.20*		.24***	3. Self-control	.22*		.09*
Self-control	.10			Mindfulness	.23*		
Want conflicts	-.35**			Want conflicts	.07		
Should conflicts	-.22			Should conflicts	-.37**		
One-sided <i>t</i> test		.42				.34	
* $p < .05$ , ** $p < .01$ , *** $p < .001$		<i>F</i>	9.61***			6.90***	

indirect effect of self-control via should conflicts yielded significance too ( $a*b = .13$ , CI [.03, .30]). As expected, no mediation effect was found via want conflicts.

**Discussion**

We explored two separate kinds of post-decisional motivational conflicts and found that both want and should conflicts are ubiquitous in the life of university students. We also found initial evidence that both conflict experiences are related to well-being, but somewhat differentially. Overall, want conflicts were more important with regard to students’ affective well-being (at the situational as well as on the personal level), and should conflicts were more important with regard to students’ cognitive well-being (on the personal level). With regard to momentary affective impairments, we also demonstrated that this pattern remained stable while controlling for different life domains (i.e., leisure vs. study context) and the underlying form of motivation that energized current engagement. Finally, we found evidence that experiencing less intensive want and should conflicts mediated the positive effect of self-control on affective well-being. In addition, experiencing less should conflicts mediated the positive effect of both mindfulness and self-control on cognitive well-being. In the following, we discuss these findings, emphasizing the relative importance of both want and should conflicts in daily self-regulation.

Motivational conflicts as a by-product of action regulation

Our findings indicate that instances of post-decisional conflict are frequently experienced in everyday life. In fact, totaling a 57 % of all observations we analyzed, motivational conflicts that outlast into the action phase seem to depict the rule rather than the exception in our daily self-regulatory struggle. From this point of view, instances of

motivational conflict can be seen as a natural by-product of action regulation (Atkinson and Birch 1970) in which we continuously monitor those hints for “successful” self-regulation that are not found in the consequences of action (e.g., whether we reach a specific goal and whether the consequences are worth the effort), but that accompany current action (e.g., whether we feel competent and aligned with the self). In many situations, initial judgments about the feasibility, value, and self-concordance of a specific goal pursuit may turn out to be wrong, which is likely to destabilize ongoing action regulation and open the view for alternative action tendencies. The problematic part of motivational conflicts then would not be the conflict experience in itself, but whether and how we react to such experiences, either by using primary control (i.e., changing the world in order to bring it in line with one’s wishes) or by using secondary control (i.e., changing the self in order to bring it in line with the environment, e.g., Heckhausen et al. 2010). Especially in the case of repeated want conflicts, this could well involve disengagement from goals that are not experienced as satisfying (Brandstätter et al. 2013; Heckhausen et al. 2010).

Motivational conflicts and impairments in well-being

In the present study, we focused on differential effects of want and should conflicts on affective and cognitive well-being. Overall, findings clearly supported the assumption that experiences of motivational conflict come at a cost in terms of well-being (cf. Emmons and King 1988; Palys and Little 1983; Riediger 2007). However, for the first time to our knowledge, want and should conflicts have been analyzed as distinctive conflict experiences in their relation to affective and cognitive aspects of well-being. We assumed want conflicts to be mostly critical with regard to impairments in momentary affective well-being. That is, when people have the feeling that they would like to do something else besides the current activity, then they experience affective setbacks. At least two differential processes might

explain these setbacks: The first concerns the quality of the focal activity, whereas the second concerns the conflict experience itself. With regard to the first explanation, it is obvious that not all activities are experienced as pleasurable in themselves. For example, Goetz et al. (2010) recently found that achievement-related activities go along with less enjoyment compared to non-achievement-related activities. Moreover, it has been found that such context effects are mediated via the degree of experienced autonomy in achievement settings (Bassi and Delle Fave 2012). Hence, given the close overlap between want and should conflicts and specific activity contexts (Riediger and Freund 2008; Grund et al. 2014), one could assume that motivational conflict is *accompanied* by impairments in momentary affect rather than *leads* to such impairments, just because the initial motivation for a given focal activity is suboptimal in terms of the basic need for autonomy (e.g., Deci and Ryan 2000). However, concerning the second explanation, we could demonstrate that motivational conflicts served as an incremental predictor for affective impairments above and beyond the autonomy measure. This finding is also in line with experimental studies demonstrating that motivational conflict indeed leads to impairments in momentary affect (e.g., Fries and Dietz 2007).

Given these arguments, future research may more directly investigate the interplay between momentary autonomy, motivational conflicts, and affect. The degree of self-determination may serve as an antecedent of conflict experience and current affect. The less autonomy a specific activity provides, the more pressing should be the feeling that one would like to do something different, and the worse should be the current affect (cf. Ratelle et al. 2005). From this perspective, it seems only natural that if these conditions are not fulfilled, the organism is searching for satisfaction of this basic need (cf. Deci and Ryan 2000), which may result in an orientation toward more gratifying activities that allow a more self-concordant goal pursuit. However, the emergence of should conflicts would probably require a different explanation.

Directly comparing want and should conflicts, we found more consistent and larger direct and indirect effects for want conflict experiences on affective well-being (on the situational as well as on the personal level), and only should conflicts directly predicted cognitive life satisfaction (on the personal level). This supports the assumption that both conflicts depict somewhat differential conflict phenomena because different aspects of motivation are frustrated or satisfied, respectively. In the case of a want conflict, individuals act in opposition to their inner affective needs. In the case of a should conflict, individuals act in opposition to more explicit motivational construals and normative standards. However, despite this rather cognitive, future-oriented nature, should conflicts are also

experienced in the here and now as an inner disharmony. This may explain why they are also accompanied by small current affective setbacks (cf. Riediger and Freund 2008).

With regard to specific effects on the different components of momentary affect, we found no straightforward differences for want and should conflicts. Want conflicts consistently outperformed should conflicts in effect size. However, the difference seemed to be most clear for positive activation, where should conflicts yielded no incremental effect. Assuming that positive and negative activation depict not only descriptively distinctive affective dimensions, but also "... reflect the operation of two broad, evolutionarily adaptive motivational systems that mediate goal-directed approach and withdrawal behaviors" (Watson et al. 1999, p. 829f.), it seems that want conflicts are especially detrimental with regard to the behavioral activation system (BAS), whereas both want and should conflicts are facilitating with regard to the behavioral inhibition system (BIS, Carver and White 1994). The BAS is thought to be in charge of the initiation of goals and the experience of positive feelings, such as elation and happiness, and to be sensitive to signals of reward and non-punishment. By contrast, the BIS is thought to be responsible for the inhibition of goal-directed behavior and the experience of negative feelings, such as fear and frustration, and to be sensitive to signals of nonreward and punishment. In other words, want conflicts especially signal little impetus for current engagement as well as high costs of further engagement, whereas should conflicts mainly signal some costs of further engagement. This characterizes the want conflict as even more pestering for the individual to solve in a self-concordant manner. However, this reasoning clearly requires further validation.

Motivational conflicts, self-control, mindfulness, and well-being

Our expectations regarding the role of self-control and mindfulness in situations of motivational conflict and concerning different aspects of subjective well-being were largely supported, although we found a more complex pattern. First, with regard to self-control, we found the expected *direct* effect on life satisfaction, as a more cognitive-oriented component of well-being. Those who were better able to tame their immediate affective desires in favor of their long-term cognitive goal representations also reported being more satisfied with their current life. We also found the expected *indirect* effect of self-control on aggregated affect via want conflict experiences. Higher levels of self-control came along with less intensive want conflicts, which in turn related to lower current affect, leaving no substantial direct effect of self-control. We also found a substantial mediation of self-control via less

intensive should conflicts on aggregated affect, which was mainly carried via the strong negative relation between self-control and should conflict experiences. That is, it is not the execution of self-control itself, but the reduction of motivational conflicts, that seems to go along with positive affect. Indeed, the very nature of willpower in the sense of a controlling instance lies in the suppression of disadvantageous emotional or motivational states (Sokolowski 1997). In other words, if there were no kind of current inner or outer resistance, then there would be no need for self-control. How is it then that people who report being high compared to low in self-control also report being happier generally (cf. Hofmann et al. 2014)?

More generally, self-controlled people seem to be better able to plan and structure their days (Hofmann et al. 2012). If these plans include both working on long-term goals (e.g., working on a career) as well as acknowledging short-term desires (e.g., meeting friends), feelings of wanting to do something else or that one should do something else may be reduced, which in turn promotes current affect. This strategy should work fine as long as the initial plans insure a balance in line with the self and core values (cf. Grund and Fries 2014). In addition, more conflict-specific processes are thinkable. Self-controlled people are thought to be better at taming their affective impulses (Tangney et al. 2004), which should make them less susceptible to current want conflict experiences if ongoing action itself is not accompanied by positive affective experiences (e.g., working on a dull but necessary project). This would equal a volitional strategy of action control (cf. Heckhausen 1991). However, Galla and Duckworth (2015) recently proposed a less deliberate process, arguing that people with more self-control may rely on beneficial habits more than others. Such routines provide structure to daily life, thereby promoting the pursuit of long-term rewarding but momentary aversive goals above and beyond effortful inhibition. Fittingly, overcoming current affective unpleasantness' is not the core phenomena in should conflict scenarios. Here, self-controlled people may more readily adhere to external obligations and normative rather than internal standards. If this is routinely the case, then there is clearly no need to feel ashamed or guilty of what one is doing, which reduces should conflict experiences and, in turn, promotes affective well-being. In line with this reasoning, in our study, should conflict experiences were even closer related to life satisfaction, as a rather rational approach to well-being.

Second, with regard to mindfulness, we found the expected *direct* effect on aggregated positive affect. Furthermore, we found the expected *indirect* effect via less should conflicts on life satisfaction. However, this time, the direct effect of mindfulness also remained significant.

Although not expected, the latter finding is quite plausible in that assessments of life satisfaction, at least partly, may draw on one's accumulated affective experiences (Kim-Prieto et al. 2005). With regard to the mediation effect via should conflict experiences, it can be assumed that mindful people apply a somewhat different strategy to promote their life satisfaction compared to self-controlled people. Rather than judging in advance what is wrong or what is right in the light of normative standards (i.e., planning), moment-by-moment decisions that are guided by self-concordant standards might be applied. In other words, being mindful may foster disengagement from external affordances that corrupt one's truly personal goal pursuits, which in turn promotes life satisfaction (cf. Levelsque and Brown 2007).

### Study limitations

Most critically, our current reasoning surrounding motivational conflict and its accompanying outcomes is limited by the cross-sectional nature of our experience-sampling data. Hence, although we conceptualized motivational conflicts as predictors and current affect as criterion, we cannot rule out the reciprocal path. Moreover, even though we demonstrated mediation effects in line with our proposed models on the personal level, they cannot prove patterns of causation (e.g., Preacher and Hayes 2004). Longitudinal and experimental designs are therefore needed to further substantiate our findings.

Concerning our analyses on the personal level, it would have been reasonable to include an additional global measure of affective well-being instead of using the aggregate of participants' momentary affect. This way, both aspects of well-being would have been measured on the same level of abstraction. However, in line with Kahneman (1999), we figured that asking people at random moments in their life about their feelings would be the primary method of getting valid access to their average affective well-being, given the problems that may arise when people are asked at one specific moment about their general affect (Diener et al. 1999).

Finally, our findings may be limited to the specific population of university students and therefore require further generalization. Although we intended to capture a wide range of daily (conflict) situations, and although we controlled for interindividual differences in our multilevel analyses, it may be that findings are somewhat different in other populations (e.g., school children, employees). For example, Riediger and Freund (2008) found that motivational conflicts occur less often in older compared to younger adults, which partly accounted for group differences in affective well-being.

## Conclusion

With our current analyses on everyday motivational conflict, we tapped into a rather underspecified field of research that we believe offers an extremely fruitful perspective on the understanding of self-regulation processes and subjective well-being. Our main intention was to bring forward and compare two different kinds of motivational conflict, namely want and should conflicts. We were struck that the current discussion on instances of motivational conflict was somewhat narrowed to want conflicts, especially with regard to research on self-control, and that a complementing perspective that regards should conflicts as well might shed further light on the accompanying processes. Importantly, we found that the daily struggle is not only about “not giving into temptation” but also about “acting self-concordantly.” We clearly verified the link between motivational conflict and well-being. However, we hope that our additional analyses concerning the inclusion of context effects, the current form of motivation that energizes actions, and more general regulatory styles, such as self-control and mindfulness, especially serve as an interesting starting point for further research. Notably, it appeared to us that many of the tackled questions are as normative in nature as they are empirical. Is the good life lived in concordance with external or internal standards? Which type of conflict is more “problematic” and with regard to what criteria? Apparently, different answers are conceivable depending on which standard is of focus to researchers, the individual, and the culture in which they are embedded.

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