



Better off without? Benefits and costs of resolving goal conflict through goal shelving and goal disengagement

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Accepted: 28 June 2022 / Published online: 14 September 2022
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Abstract

Pursuing multiple goals with limited time often leads to goal conflicts that can be resolved by prioritizing some goal pursuits over others. This research examines proximal outcomes of two approaches to goal prioritization: Goal shelving (temporarily withdrawing from a goal) and goal disengagement (permanently withdrawing from a goal). We conducted an experiment ($N=214$) to compare motivational and emotional consequences of resolving goal conflict through goal shelving and disengagement. Results suggest that goal shelving and disengagement are similarly effective at reducing different facets of experienced goal conflict, but people regret shelving goals less than disengaging from them. Together, these findings provide first evidence that goal shelving may allow people to “have their cake and eat it too:” to reap the benefits of goal prioritization while minimizing its costs.

Keywords Multiple goals · Goal conflict · Goal prioritization · Goal disengagement · Goal shelving

Most people pursue multiple goals in different life domains (e.g., multiple work, leisure, and family goals), and must do so within the confines of limited time. As a consequence, people often have to deal with goal conflicts, where the pursuit of some goals interferes with the pursuit of other goals. The hours spent working on one goal (e.g., practicing the guitar) are no longer available to work on a different goal (e.g., learning for an exam). To reduce goal conflicts and promote goal success, people can adopt different strategies. For example, a person might choose to engage in goal-directed activities that advance not just one but multiple goals at once (e.g., jogging with friends to simultaneously advance health and social goals; Kruglanski et al., 2002). However, such multifinal means are not always available or instrumental for resolving goal conflicts. When faced with severe or continued goal conflict that cannot be solved otherwise, people may need to *prioritize* among conflicting goals.

On a behavioral level, prioritizing among goals requires reducing or withdrawing investments into some goals to increase investments into other goals. The present research compares two approaches to goal prioritization: *Permanently* withdrawing from a conflicting goal (i.e., goal disengagement) or *temporarily* withdrawing from a conflicting goal (i.e., goal shelving) in favor of focusing on a prioritized goal.

Resolving goal conflict through goal disengagement or goal shelving

One way to resolve time-based conflict between two goals is to disengage from one of the conflicting goals for good. On a behavioral level, goal disengagement involves withdrawing current goal efforts and refraining from future ones (Carver & Scheier, 1998; Wrosch et al., 2003). However, permanently withdrawing from goals can be difficult, even when goals seem out of reach or very difficult to attain (e.g., Brandstätter et al., 2013; Klinger, 1975). To resolve goal conflict but avoid having to give up on a goal permanently, a person could choose to temporarily *shelve* the conflicting goal instead. On a behavioral level, shelving a goal involves withdrawing current goal efforts, but with the intention to revisit and reengage in the goal in the future (Mayer & Freund, 2022). Recent evidence suggests that many adults

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indeed report having such shelved or “frozen” goals—attainable goals to which they remain committed despite not having pursued them for longer periods of time (Davydenko et al., 2019). People may shelve goals in an attempt to sequence their goal pursuits across time (Orehek & Vazeou-Nieuwenhuis, 2013). Yet, sequential goal pursuit is only one possible outcome of shelving goals. Despite initially intending to return to a shelved goal, people may end up never actually revisiting it. Thus, a second possible outcome of goal shelving can be eventual goal disengagement (rather than eventual goal reengagement).

When faced with the necessity to prioritize among two conflicting goals, would you prefer to “pull off the band aid” and give up on one of them for good, or would you rather shelve the conflicting goal and hope for a later chance to revisit? We expect no single or simple answer to this question, as preferences for one approach over the other likely depend on the specific person, the specific context, and the specific goal(s) under consideration. Although the antecedents of disengagement and shelving are worthy of exploration, the present research is concerned with their proximal psychological consequences. What are proximal outcomes of permanently or temporarily withdrawing from a conflicting goal?

Proximal motivational outcomes of resolving goal conflict through goal disengagement and shelving

Our first set of research questions and predictions refers to possible motivational outcomes of goal disengagement and goal shelving.

Proximal motivational changes in goals that were disengaged from and shelved

What are proximal motivational implications of behaviorally disengaging from a goal? Theoretical accounts of goal disengagement conceive of goal disengagement as involving two processes, *behavioral disengagement* and *motivational disengagement* (Carver & Scheier, 1998; Wrosch et al., 2003). To disengage from a goal, the person has to *behaviorally disengage* from the goal by withdrawing current goal-related efforts and investments and *motivationally disengage* from the goal by downgrading its subjective value or personal importance (e.g., Brandstädter & Rothermund, 2002; Heckhausen et al., 2010; Wrosch et al., 2003). Yet, to date, little is known on the temporal interplay of behavioral and motivational disengagement. In some cases, processes of motivational disengagement may precede—and eventually culminate in—the decision to behaviorally disengage

from a goal. This may especially be the case for goals that are increasingly perceived to be unattainable (e.g., due to mounting experiences of goal-related difficulties). Yet, in multiple goal contexts, people may sometimes have to withdraw from goals that are still deemed to be achievable and valued but happen to interfere with other goals. Based on the proposition that motivational disengagement is a key component of goal disengagement (Brandstädter & Rothermund, 2002; Wrosch et al., 2003), we test the hypothesis that *behavioral* goal disengagement can lead to *motivational* goal disengagement: We predict that people who behaviorally disengage from a conflicting goal tend to devalue this goal. Diminishing the value of the goal should facilitate behavioral disengagement, that is, support a person in withdrawing from and staying withdrawn from the goal.

What are proximal motivational implications of shelving a goal? What does it mean to pause and postpone a goal pursuit? One possibility is that the subjective valuation of the shelved goal is unaffected. This would be the case if goal shelving afforded behavioral disengagement without requiring motivational disengagement. After all, why should one devalue a goal one intends to revisit? It is possible that goals that are shelved may just sit in the shelf, “frozen” and unchanged, until they are eventually de-shelved for reengagement. Another possibility is that shelved goals are not unaffected but *devalued* while shelved and *revalued* upon reengagement. Diminishing the value of the shelved goal could facilitate behavioral shelving, that is, support a person in withdrawing from and staying withdrawn from the goal (for now). Such a de-and-revaluation pattern would suggest that subjective goal value, usually conceived of as a predictor of goal engagement (e.g., Eccles & Wigfield, 2002), can also vary as a consequence of goal engagement. Yet, according to Dissonance Theory, goals that were given up on should be devalued more strongly than goals that were shelved, as choices that are perceived or intended to be irreversible should lead to stronger goal devaluation than choices that are perceived or intended to be reversible (Festinger, 1957; Frey et al., 1984).

Proximal motivational changes in goals that were prioritized

Shelving or disengaging from a conflicting goal might not only affect the valuation of the goal that was shelved or given up on, but also the valuation of the goal that was prioritized. One possibility is that the subjective value of the prioritized goal increases. If people were to construe the shelving/disengagement of the conflicting goal as a costly investment they undertook for the sake of their prioritized goal, prioritized goals may gain in subjective value. According to the mental accounting framework

(e.g., Prelec & Loewenstein, 1998; Thaler, 1985), such an investment might be “held on the books,” rendering the prioritized goal more important and motivating the person to eventually recover that investment (e.g., by making progress on or achieving the prioritized goal). Alternatively, associating the prioritized goal with a costly sacrifice could taint a person’s valuation of the goal, as adding a negative attribute (“I had to withdraw from another goal for this goal”) to the goal could render the net subjective value of the goal more negative (see e.g., Berkman et al., 2017, for a recent account on multi-attribute integration in goal pursuit). We aimed to explore these options.

To summarize, we address the following research questions and predictions on proximal motivational outcomes of goal disengagement and shelving:

1. Behavioral goal disengagement leads to goal devaluation. (H1)
2. How does behavioral goal shelving affect the subjective value of the shelved goal?
 - a. The subjective value of the shelved goal is unaffected. (H2a)
 - b. The shelved goal is devalued while shelved and revalued when de-shelved. (H2b)
3. Goal disengagement leads to stronger goal devaluation than goal shelving. (H3)
4. Does the decision to shelve or disengage from a conflicting goal *bolster* or *taint* valuation of the prioritized goal? (Q4)

Antecedents of reengagement in vs. disengagement from shelved goals

When is a person more likely to de-shelve and reengage or to eventually fully disengage from a shelved goal? Recent theoretical work has described conditions under which people resume goal pursuits after nondeliberate interruptions (Moshontz & Hoyle, 2021), but there is no empirical evidence on predictors of reengagement in vs. disengagement from deliberately shelved goals. Given that the subjective value of a goal is key predictor of goal persistence (e.g., Eccles & Wigfield, 2002), we examine whether:

5. (H5a) A greater asymmetry in the initial subjective value of the conflicting goals (i.e., a greater initial preference for one of the conflicting goals over the other), (H5b) a greater devaluation of the shelved goal, and (H5c) a greater revaluation of the prioritized goal predicts dis-

engagement from shelved goals in favor of continued prioritization of the prioritized goal.

Proximal emotional outcomes of resolving goal conflict through goal shelving and goal disengagement

How does it feel to shelve or disengage from a conflicting goal? Our second set of research questions and predictions refers to emotional outcomes of shelving and disengagement.

Emotional benefits of shelving or disengaging from a conflicting goal

What are emotional benefits of choosing to shelve or to disengage from a conflicting goal? Prior research has documented that that people who report greater experiences of goal conflict tend to report reduced subjective well-being (e.g., Emmons & King, 1988; for a review, see Gray et al., 2017). Reducing experienced goal conflict could thus be a proximal emotional benefit of shelving or disengaging from a conflicting goal. To better understand if and how shelving and disengagement may alleviate experienced goal conflict, we distinguish three facets of experienced conflict: (i) *resource conflict* (i.e., the sense that the conflicting goals compete for finite resources), (ii) *goal interference* (i.e., the sense that the conflicting goal pursuits interfere with each other), and (iii) *goal-related opportunity costs* (i.e., the sense of missing out on one goal while pursuing the other goal). Experienced *resource conflict* is based in the perception that the conflicting goal pursuits draw on and compete for finite resources such as time (Riediger & Freund, 2004). Experienced *goal interference* refers to the evaluation that working on one goal interferes with one’s ability to work on and make progress on the conflicting goal (Riediger & Freund, 2004). Unlike general experienced opportunity costs, often conceptualized as the general sense of missing out on any other alternative activity while engaging in an activity (Kurzban et al., 2013; Rom et al., 2020) or as the general sense of wanting to do something else than what one is currently doing (Riediger & Freund, 2008), experienced *goal-related opportunity costs* more narrowly refer to the experience of missing out on the specific conflicting goal pursuit while pursuing the other goal. In addition, we also examine perceptions of the *stressfulness of goal pursuit* (i.e., the extent to which a goal pursuit is experienced as stressful), which we expect to vary as a function of experienced resource conflict (Boudreaux & Ozer, 2013).

We distinguish these dimensions of goal conflict to examine whether goal disengagement and goal shelving are similarly effective at reducing experienced resource conflict and its associated distress, as both approaches allow for more selective investments into fewer goals and both approaches are functionally identical on a behavioral level (i.e., both involve withdrawing investment from one goal to increase investments into another goal). However, shelving a goal could be less effective than disengagement at reducing perceptions of goal interference and goal-related opportunity costs. If goal shelving afforded behavioral goal disengagement without motivational disengagement, this could introduce corollary costs: Withdrawing one's efforts but not one's commitment from a conflicting goal may foster the sense of missing out on the goal and may thus promote, rather than reduce, perceptions of goal interference and goal-related opportunity costs. In terms of reducing goal conflict, "pulling off the bandaid" and disengaging for good could be more beneficial than just postponing to later.

To summarize, we test the following research questions and predictions on emotional benefits:

6. Goal shelving and goal disengagement both alleviate perceptions of *resource conflict* and *stressfulness* of goal pursuit. (H6)
7. Goal disengagement reduces perceptions of *goal interference* and *opportunity costs*. (H7)
8. Does goal shelving *reduce or increase* perceptions of *goal interference* and *opportunity costs*? (Q8)

Emotional costs of shelving or disengaging from a conflicting goal

What are emotional costs of choosing to shelve or to disengage from a conflicting goal? While the emotional benefits of shelving and disengagement may center on the reduction of goal conflict, their emotional costs may center on the loss of the goal that was shelved or given up on. To the extent that the conflicting goals differ in their rewards, shelving and disengagement decisions may trigger feelings of regret: the regret of having to forgo the actual and anticipated benefits linked to the pursuit and achievement of the goal that was shelved or given up on (see e.g., King & Hicks, 2007). Regret is an aversive emotion that is based on counterfactual comparison (e.g., Gilovich & Medvec, 1994; Lecci et al., 1994; Wrosch et al., 2005; Zeelenberg & Pieters, 2007). That is, people experience regret when they compare an outcome (e.g., shelving or disengaging from a goal) to a more favorable outcome they could have obtained had they chosen differently (e.g., continuing to pursue that goal).

Regret related to goal shelving or goal disengagement can be *anticipated* and *experienced* (Kirkeboen & Teigen, 2011; Zeelenberg, 1999; Zeelenberg & Pieters, 2007), referring to how people *expect to* feel and *actually* feel about shelving and disengagement. Previous research on regret suggests that people anticipate to experience stronger regret over irreversible decisions than over reversible ones (Zeelenberg & Pieters, 2007) and tend to experience stronger regret over immutable decision outcomes than over mutable ones (Beike et al., 2009; Summerville, 2011). As the loss of a goal that was shelved should be more likely to be perceived as temporary and reversible than the loss of the goal that was given up on, we predict that:

9. People *anticipate* (H9a) and *experience* (H9b) less regret over goal shelving than goal disengagement

On a correlational level, we also examine antecedents and concomitants of experienced regret. Theoretical accounts of goal disengagement emphasize that the devaluation or downgrading of goals is key to adaptive goal disengagement and should alleviate the distress of withdrawing from a goal (Brandstädter & Rothermund, 2002; Carver & Scheier, 1998; Heckhausen et al., 2010; Wrosch et al., 2003). Based on this proposition, we predict that:

10. Greater valuation of shelved/disengaged goals (H10a) *prior* to and (H10b) *after* shelving/disengagement is linked to greater experienced regret.

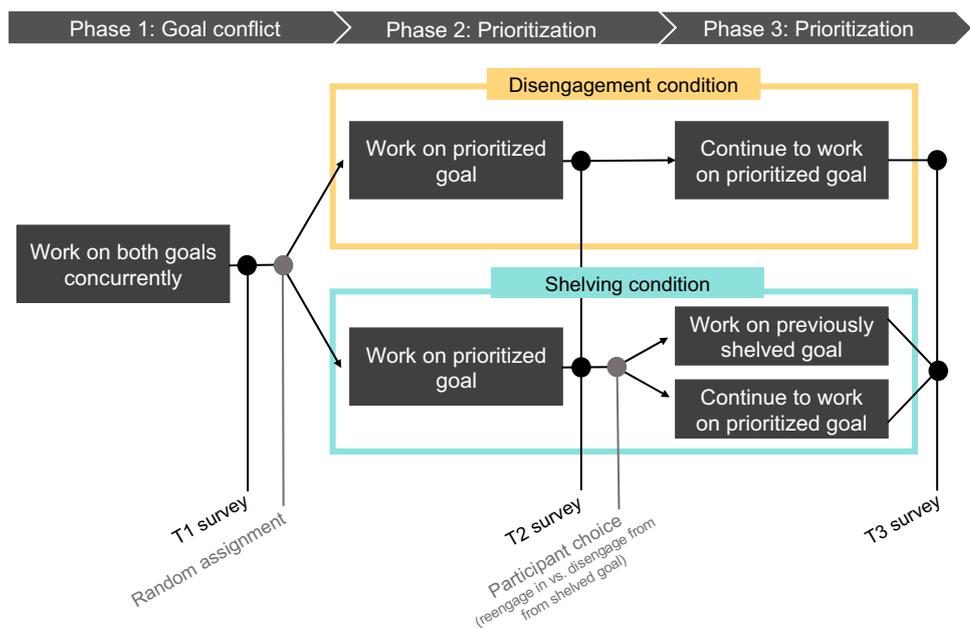
Method

To address our research questions and predictions, and to overcome some of the limitations of observational designs, we designed an experiment to examine and compare proximal outcomes of shelving and disengaging from conflicting goals. As described in more detail below, participants first worked on two conflicting goals before they had to either shelve or disengage from one goal.

Preregistration and data availability

Research questions and predictions, study design, sample size, and statistical analyses were preregistered. Some deviations from the preregistered statistical analysis were necessary and are noted in the text. Exploratory analyses are marked as such in the text. Preregistration, experimental materials, data, analysis scripts, and detailed supplemental result reports are available on the Open Science

Fig. 1 Visual summary of experimental phases and conditions. After completing the goal conflict phase (phase 1), participants were randomly assigned to the experimental condition (shelving vs. disengagement). Participants in the disengagement condition disengaged from one goal and continued to work on their prioritized goal in phases 2 and 3. Participants in the shelving condition initially shelved one goal and continued to work on their prioritized goal in phase 2, but could choose to either reengage in or disengage from the shelved goal in phase 3. Self-report questionnaires were administered after each phase



Framework (OSF) project of this article (<https://osf.io/ef4rx/>).¹ The research reported in this manuscript was carried out in accordance with the regulations of the local ethics committee. All participants provided informed consent and were debriefed at the end of the study; no deception was used.

Sample size rationale

Sample size was determined by means of an a priori power analysis for a mixed ANOVA using G*power (Faul et al., 2007). We aimed for a sample size of $N=234$ to be able to detect an effect size $f=0.15$ with 0.95 power and a type 1 error rate of 0.05 (assuming pre-post measures are intercorrelated at $r=0.2$).

Participants

A total of $N=235$ adults participated in an online experiment in exchange for the opportunity to take part in two prize lotteries (described in more detail below) and for partial course credit (for students). Participants were recruited through online advertisement. To ensure data quality, we excluded data from 3 participants whose response time was too short (shorter than 20 min, indicating they had not seriously engaged in the experiment) and from 18 participants who did not adhere to the experimental instructions,

resulting in a sample of $N=214$ adults ($M_{age}=26.54$; 64 male; 54% Psychology students).

Procedure

We developed a novel goal conflict paradigm that involved three goal pursuit phases. Initially, all participants worked on two conflicting goals in phase 1, before they were randomly assigned to either behaviorally disengage from one of the goals (disengagement condition) or to behaviorally shelve one of the goals (shelving condition) in phase 2. Participants in the shelving condition—but not those in the disengagement condition—had the opportunity to reengage in the shelved goal in phase 3. The study design is depicted in Fig. 1 and described in more detail below. The experiment took approx. 50 min to complete.

Goal conflict phase (phase 1)

After completing a brief demographic questionnaire, participants were informed that they had the opportunity to work on two different goals, a “health goal” and a “social goal.” To work on either goal, participants selected the goal on a choice screen. Depending on their choice, participants next read an information card (approx. 200 words) on either the topic of “health psychology” (for the health goal) or “social psychology” (for the social goal). Participants then answered a multiple-choice quiz on the content of the previously presented card. Figure 2 shows a simplified version of the procedure.

¹ The preregistration on OSF also included additional secondary analyses unrelated to the current manuscript.



Fig. 2 Screen setup of goal tasks. Within each trial, participants first chose on which goal to work next (step 1), then read a goal-specific information card (step 2), and subsequently answered a multiple-

choice quiz on the information card (step 3). Each experimental phase involved 6 trials (6 choices, cards, and questions)

For each correctly answered quiz, participants received one goal point. The amount of collected goal points determined participants' chances of winning two distinct goal prizes, a health goal prize and a social goal prize (each with a value of approx. 100 €). To minimize differences between the two goal pursuits, the general task set was kept identical (i.e., reading information and answering quiz questions). Yet, we ensured that both goal pursuits were distinct in terms of task content (i.e., distinct topics) and task outcome (i.e., distinct prizes) to create two distinct goal pursuits that were non-substitutable in their more proximal and tangible benefits (i.e., learning about distinct topics) and in their more distal and probabilistic benefits (i.e., the distinct goal prizes).²

After being introduced to the general goal pursuit setting, participants practiced the two goal tasks (1 card and 1 quiz on each goal) and then entered the goal conflict phase (phase 1), which involved 6 trials (i.e., 6 goal choices, reading 6 information cards, and completing 6 quizzes). Participants were instructed to collect as many points as possible for both goals. We emphasized that the time was limited and that participants had to work fast to collect points. Participants did not receive information on how much time was remaining and did not receive performance feedback. Prior research using a similar paradigm has shown that such dual goal pursuit settings induce time-based goal conflict (Freund & Tomasik, 2021).

Experimental manipulation

At the beginning of the experiment, participants expected to work on both goals across all phases of the experiment. However, after completing phase 1, participants were

randomly assigned either to the shelving ($N=110$) or the disengagement condition ($N=104$). Participants were made aware of the two experimental conditions to allow for comparison among the two distinct options, as in a free-choice situation in which one deliberates between shelving versus disengaging from a goal.

Prioritization phases (phases 2 and 3) in the disengagement condition

Participants in the disengagement condition were asked to behaviorally disengage from one goal to focus working on the other goal (i.e., their prioritized goal) for the remainder of the experiment (phases 2 and 3). The screen setup remained identical to phase 1 (see Fig. 2), that is, both goal buttons were continuously presented on the screen. Although participants were asked to disengage from one goal, they were technically still able to work on both goals in phases 2 and 3. This design choice served as a behavioral manipulation check, as it allowed us to trace whether participants behaviorally adhered to the disengagement instruction. Both prioritization phases involved 6 trials each.

Prioritization phases (phases 2 and 3) in the shelving condition

Participants in the shelving condition were asked to behaviorally shelve one of the goals to focus working on the other goal (i.e., their prioritized goal) in phase 2. After completing phase 2, participants could choose whether to (a) reengage in and work on the previously shelved goal in phase 3 (while shelving the other, previously prioritized goal) or to (b) continue to work on the initially prioritized goal and disengage from the previously shelved goal. Participants indicated their choice on a binary decision measure prior to starting phase 3 and were asked to proceed according to their choice. As in the disengagement condition, the screen setup remained

² Results from a pilot study had indicated that students enjoyed reading cards on these topics (data and results from the pilot study can also be found on OSF).

identical to phase 1 to trace whether participants behaviorally adhered to the shelving instruction.

Measures

At the end of each goal pursuit phase, participants answered brief self-report measures on their motivational and emotional states during the preceding goal pursuit phase. Phase 1 questionnaires were administered after completion of phase 1, but prior to the prioritization instruction and to the randomized condition assignment. Participants in the shelving condition completed the phase 2 questionnaire prior to selecting whether to reengage in or disengage from the shelved goal in phase 3. All self-report measures used Likert response scales ranging from 0 (“not at all”) to 6 (“very much”). We report the within-person reliability of measures where applicable (e.g., Cranford et al., 2006). A full documentation of measures is provided in the online supplemental materials on OSF.

Subjective goal value

The momentary subjective value of each goal was assessed after each goal pursuit phase, and was also measured for goals that were shelved/given up on. Subjective value was assessed with four items (example item: “At the moment, how attractive is the goal prize to you?”; $R_{C(\text{social goal})} = 0.84$, $R_{C(\text{health goal})} = 0.87$).

Goal Conflict

Goal conflict was assessed after each goal pursuit phase. We measured three facets of experienced conflict (three items per facet): *Resource conflict* (example item: “To what extent were the two goals competing for your attention?”; $R_C = 0.80$), *goal interference* (example item: “To what extent did you feel that working on one goal interfered with your progress in the other goal?”; $R_C = 0.93$), and *opportunity costs* (example item: “While working on one goal, to what extent did you feel you were missing out on the opportunity to work on the other goal?” $R_C = 0.89$). The selection and wording of items was partially informed by previous single-item measures of motivational conflict (Riediger & Freund, 2008) and opportunity costs (Rom et al., 2020). We adapted existing items and formulated new items tailored to the context of goal conflict. Perceived *stressfulness* of goal pursuit was measured with three items that were adapted from the multidimensional mood questionnaire (Steyer et al., 1994) to indicate how participants experienced the goal pursuit (e.g., “very calm—very restless”; $R_C = 0.88$). Confirmatory factor analyses (CFAs) indicate that the facets of experienced conflict and stressfulness of goal pursuit shared moderate-strong associations in phase 1

($r_{\text{resource conflict} \sim \text{stress}} = 0.43$; $r_{\text{resource conflict} \sim \text{goal interference}} = 0.74$; $r_{\text{resource conflict} \sim \text{opportunity costs}} = 0.70$; $r_{\text{stress} \sim \text{goal interference}} = 0.36$; $r_{\text{stress} \sim \text{opportunity costs}} = 0.30$; $r_{\text{goal interference} \sim \text{opportunity costs}} = 0.83$). Model comparisons favored a four-factor solution (1 factor per facet) over solutions with fewer factors. CFA results can be found in the supplemental result reports on OSF.

Anticipated regret and experienced regret

Anticipated regret was measured with three items and was assessed prior to condition assignment (example items: “How would you feel about shelving/disengaging from one of the goals? (very unhappy–very happy)”); $\alpha_{\text{shelving}} = 0.71$, $\alpha_{\text{disengagement}} = 0.88$). Experienced regret was assessed after phase 2 and was measured in two facets (three items per facet): *experienced action regret* (example item: “How do you feel about shelving/disengaging from one of the goals? (very unhappy–very happy)”); $\alpha_{\text{shelving}} = 0.90$, $\alpha_{\text{disengagement}} = 0.89$) and *experienced goal regret* (example item: “How much do you regret currently not working on the shelved/abandoned goal? (not at all–very much)”); $\alpha_{\text{shelving}} = 0.97$, $\alpha_{\text{disengagement}} = 0.96$). Both facets of experienced regret were intercorrelated at $r = 0.59$. The selection and wording of regret items was informed by previous regret measures (Brehaut et al., 2003).

Data analysis

Because ordinal models are recommended for Likert scale data (Bürkner & Vuorre, 2019; Lidell & Kruschke, 2018), particularly when Likert responses are zero-inflated or skewed (as was the case for some of our dependent variables), we adjusted our preregistered analysis plan and analyzed the data using Bayesian multilevel cumulative probit models.

We fitted separate models for each dependent variable. To test for effects of goal shelving and goal disengagement on subjective goal value and experienced goal conflict, we estimated phase 1–phase 2 changes within each condition. To examine shelving- and disengagement-differences in these changes, we regressed post-prioritization dependent variable values (phase 2) on pre-prioritization dependent variable values (phase 1) and the condition factor (shelving vs. disengagement): $post_i = \beta_0 + \beta_1 * condition + \beta_2 * pre_i + \epsilon$.³ To examine predictors of reengagement in vs. disengagement

³ This model tests whether, adjusting for initial pre-prioritization (phase 1) differences, participants in the shelving and disengagement condition differed in post-prioritization levels of the dependent variable. In addition to this model, which was preregistered as our approach for testing for differential change, we also compared difference scores between the two groups, an approach that ignores possible initial group differences in the dependent variables. The results of these additional analyses are presented in the supplemental result reports. For a comparison of the two approaches, see Castro-Schillo and Grimm (2018) and Pearl et al. (2016).

Table 1 Means and standard deviations of variables by condition and phase

Measure	Shelving condition (n = 110)				Disengagement condition (n = 104)		
			Reengagers	Disengagers			
	Phase 1	Phase 2	Phase 3	Phase 3	Phase 1	Phase 2	Phase 3
Value prioritized goal	4.01 (1.22)	4.23 (1.44)	3.39 (1.40)	4.82 (1.21)	4.30 (1.13)	4.59 (1.20)	4.45 (1.50)
Value shelved/disengaged goal	3.70 (1.21)	2.93 (1.68)	3.90 (1.50)	2.03 (1.54)	3.77 (1.32)	2.26 (1.62)	2.14 (1.63)
Resource conflict	1.98 (1.52)	0.52 (1.12)	0.65 (1.09)	0.41 (0.86)	2.04 (1.67)	0.48 (1.00)	0.30 (0.73)
Stressfulness	2.96 (1.28)	2.18 (1.39)	2.29 (1.21)	1.57 (1.22)	2.71 (1.43)	2.18 (1.31)	2.06 (1.46)
Goal interference	2.10 (1.77)	0.93 (1.58)	0.85 (1.31)	0.72 (1.26)	2.17 (2.02)	0.82 (1.57)	0.58 (1.08)
Opportunity costs	2.23 (1.72)	1.21 (1.66)	1.26 (1.38)	0.84 (1.25)	1.92 (1.84)	1.18 (1.59)	1.04 (1.42)
Anticipated shelving regret		2.39 (0.96)				2.36 (1.13)	
Ant. disengagement regret		3.03 (1.32)				2.98 (1.54)	
Experienced goal regret		1.27 (1.55)				2.12 (1.83)	
Experienced action regret		1.95 (1.48)				2.27 (1.58)	

Mean scores and standard deviations (in brackets) of the respective 7-point Likert items

from shelved goals (in phase 3), we regressed the reengagement decision values (disengagement vs. reengagement) on the difference score of the subjective value of both goals in phase 1 and the pre- vs. post-prioritization (phase 1–phase 2) change score of the subjective value of the shelved and prioritized goal. To test for shelving- and disengagement-related differences in anticipated and experienced regret, we regressed dependent variable values (phase 2) on the condition factor. To examine associations between experienced goal regret and goal valuation, we regressed experienced action and goal regret on the subjective goal value of shelved and abandoned goals prior and after shelving/disengagement.

To evaluate the evidence for our predictions, we estimated size and sign of the coefficients of interest and the amount of certainty in these estimates. To this end, we interpret posterior means and 95% highest posterior density intervals (HDIs) around the point estimates, henceforth referred to as Bayesian 95% credible intervals (CI₉₅). In addition, where applicable, we compared main effect models (post-priorization score regressed on pre-priorization score) and interaction models (post-priorization scores regressed on pre-priorization score and condition factor) by inspecting the difference in their expected predictive accuracies, $Diff_{ELPD}$, a Bayesian measure of model fit computed via approximate leave-one-out cross-validation (LOO-IC; Vehtari et al., 2016). We concluded in favor of a model if $Diff_{ELPD}$ was at least two times as large as its standard error, $Diff_{ELPD} \geq 2 * SE_{Diff_{ELPD}}$ (Vehtari et al., 2017).

We fitted multilevel ordinal models that included random intercepts for persons and items to account for dependencies between ratings from the same person and between ratings of the same item (i.e., we treated the construct-specific items as a repeated measure of the respective latent construct). Prior

distributions used for model parameters were intended to be non-informative or very weakly informative; they placed most prior density on reasonable parameter values and were broad enough to let the data drive inference. Details about the priors, convergence behavior, and posterior predictive checks can be found in the supplemental result reports on OSF.

Most participants divided their efforts approximately equally across both conflicting goals in the goal conflict phase (phase 1): The mean number of goal choices for the health goal was 2.72 and for the social goal was 3.28 (SD = 1.52). To address our research questions on goal conflict and regret, we excluded $n = 37$ participants who had only worked on one goal in the goal conflict phase. The remaining predictions were tested on the full sample. All models were estimated with the R package *brms* (Bürkner, 2017), an R interface to the probabilistic programming language Stan (Carpenter et al., 2017).

Results

All estimates are reported and plotted on the latent probit scale. Additional visualizations of the predicted response probabilities can be found in the supplemental result reports on OSF. Table 1 summarizes descriptive statistics by experimental condition and phase.

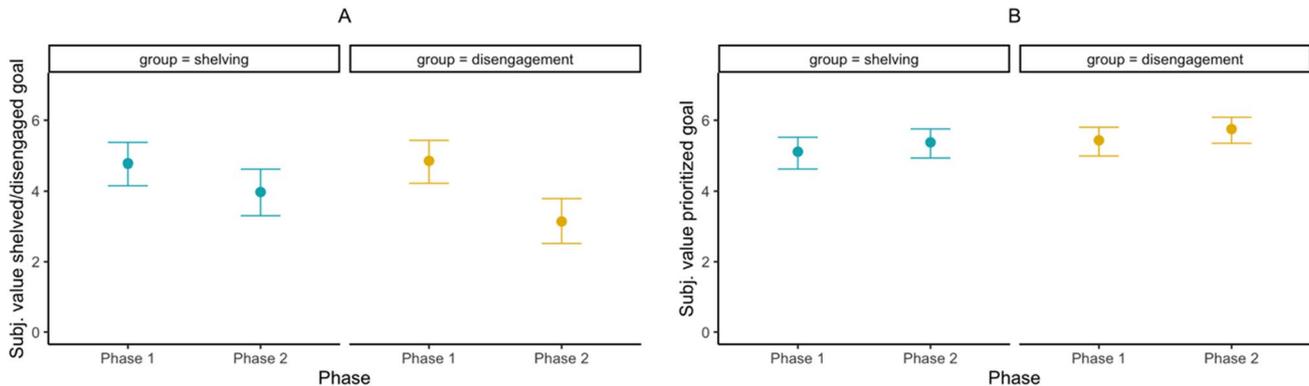
Motivational changes in shelved, disengaged, and prioritized goals

As predicted (H1), participants who behaviorally disengaged from a goal also tended to devalue the goal, as evident from a phase 1–phase 2 decrease in participants’ goal valuation

Table 2 Results from model comparisons of main effects and interaction models

Analysis	Δ_{elpd}	$SE_{\text{diff elpd}}$	Criterion
Value shelved/disengaged goal	−20.4	6.6	3.09 * $SE_{\text{Diff ELPD}}$ in favor of M1
Value prioritized goal	−1.5	2.3	0.65 * $SE_{\text{Diff ELPD}}$ in favor of M1
Resource conflict	−0.8	0.9	0.88 * $SE_{\text{Diff ELPD}}$ in favor of M0
Stressfulness	−0.7	0.8	0.88 * $SE_{\text{Diff ELPD}}$ in favor of M0
Goal interference	−0.9	0.2	4.5 * $SE_{\text{Diff ELPD}}$ in favor of M0
Opportunity costs	−1.1	0.3	3.66 * $SE_{\text{Diff ELPD}}$ in favor of M0

M0 = Main Effects Model. M1 = Interaction Model

**Fig. 3** Marginal effects of goal shelving and goal disengagement on **A** the subjective value of non-prioritized (shelved vs. disengaged) goals and on **B** the subjective value of prioritized goals. Points indi-

cate posterior mean estimates of ordered probit model coefficients. Error bars indicate 95% CIs

(estimate = −1.06, CI_{95} [−2.00, −0.93]). Shelved goals were not unaltered either: Participants tended to devalue the goal they shelved, as evident from a phase 1–phase 2 decrease in participants' valuation of the goal (estimate = −0.50, CI_{95} [−0.63, −0.38]). However, as predicted (H3), goal disengagement led to stronger goal devaluation than goal shelving (estimate = 0.22, CI_{95} [0.15, 0.28]; for model comparisons see Table 2).

At the same time, in both the shelving condition (estimate = 0.24, CI_{95} [0.12, 0.37]) and disengagement condition (estimate = 0.32, CI_{95} [0.19, 0.46]), participants reported a pre-post-prioritization (phase 1–phase 2) increase in the valuation of the prioritized goal. This pattern suggests that goal prioritization via shelving and disengagement bolstered, rather than tainted, valuation of the prioritized goal (RQ4). Exploratory interaction analyses revealed that the bolstering effect was slightly more pronounced in the disengagement condition than in the shelving condition (estimate = −0.08, CI_{95} [−0.14, −0.01]). A model comparison favored the model with interaction term but indicated only small (i.e., below-criterion) improvements to model fit when including the interaction term (see Table 2). Model predictions are visualized in Fig. 3.

Motivational changes in shelved goals: comparing goal “reengagers” vs. “disengagers”

A subsample of $n=61$ participants in the shelving condition chose to reengage in the shelved goal in phase 3, whereas $n=49$ participants chose to permanently disengage from the shelved goal to continue to focus on their prioritized goal in phase 3. In line with prediction H2b, participants who reengaged in the shelved goal reported an increase in the subjective value of this goal (from phase 2–phase 3; estimate = 0.39, CI_{95} [0.26, 0.56]; Fig. 4A). At the same time, exploratory analyses revealed that these participants reported a decrease in the valuation of the previously prioritized goal they now shelved (from phase 2 to phase 3; estimate = −0.43, CI_{95} [−0.43, −0.60]; Fig. 4B), providing further evidence for shelving-related goal devaluation. In contrast, participants who chose to disengage from the shelved goal further devalued this goal (from phase 2–phase 3; estimate = −0.30, CI_{95} [−0.49, −0.11]; Fig. 4A), providing additional evidence for disengagement-related goal devaluation. These participants also reported a further increase in the subjective value of the goal they continued to prioritize (estimate = 0.23, CI_{95} [0.02, 0.43]; Fig. 4B).

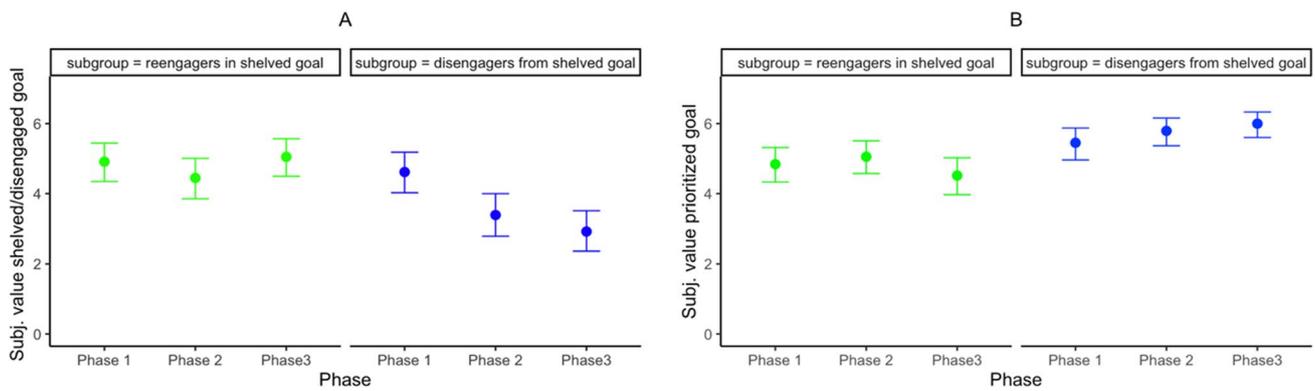


Fig. 4 **A** Marginal effects of reengaging in (subgroup=reengagers) vs. disengaging from (subgroup=disengagers) shelved goals on their subjective value. **B** Marginal effects of shelving (subgroup=reengagers) vs. continuing to prioritize (subgroup=disengagers) initially

prioritized goals on their subjective value. Points indicate posterior mean estimates of ordered probit model coefficients. Error bars indicate 95% CIs

Shelving condition: antecedents of reengagement in vs. disengagement from the shelved goal

As predicted (H5a and H5b), participants in the shelving condition who reported a greater asymmetry in the initial subjective value of the conflicting goals (in phase 1) and who devalued the shelved goal to a greater extent (from phase 1–phase 2) were more likely to disengage from (rather than reengage in) the shelved goal in phase 3 (estimate_{asymmetry} = - 0.55, CI₉₅ [- 1.01, - 0.13]; estimate_{devaluation} = - 0.47, CI₉₅ [- 0.79, - 0.16]). Contrary to our expectations (H5c), a greater increase in the valuation of the prioritized goal (from phase 1 to phase 2) did not predict disengagement from the shelved goal in favor of continuing to prioritize the goal (estimate_{revaluation} = - 0.13, CI₉₅ [- 0.59, 0.31]). All of the estimates reported above represent incremental association from the full model including all three predictors.⁴

⁴ Further exploratory analyses revealed that the two shelving subgroups (reengagers vs. disengagers) did not differ in their initial valuation (in phase 1) of the initially shelved goal (estimate = - 0.18, CI₉₅ [- 0.58, 0.19]; Fig. 2A). However, they did differ in their initial valuation of the initially prioritized goal: Those participants who disengaged from the shelved goal in phase 3 to continue to work on the initially prioritized goal initially valued (in phase 1) the initially prioritized goal more than those participants who chose to reengage in the shelved goal in phase 3 rather than continuing to work on the initially prioritized goal (estimate = 0.54, CI₉₅ [0.08, 0.99]; Fig. 2B). Additional subgroup analyses and visualizations can be found in the supplemental result reports on OSF.

Emotional outcomes of goal shelving and goal disengagement

Experienced goal conflict

As predicted (H6), both goal disengagement and shelving reduced perceived *resource conflict* (estimate_{disengagement} = - 1.70, 95% CI₉₅ [- 1.94, - 1.46]; estimate_{shelving} = - 1.78, 95% CI₉₅ [- 2.03, - 1.54]) and perceived *stressfulness* of goal pursuit (estimate_{disengagement} = - 0.41, 95% CI₉₅ [- 0.61, - 0.24]; estimate_{shelving} = - 0.52, 95% CI₉₅ [- 0.70, - 0.36]). As predicted (H7), goal disengagement also reduced perceptions of *goal interference* (estimate = - 1.13, 95% CI₉₅ [- 1.35, - 0.90]) and *opportunity costs* (estimate = - 0.73, 95% CI₉₅ [- 0.93, - 0.53]). Critically, goal shelving also reduced, rather than increased, perceptions of *goal interference* (estimate = - 1.11, 95% CI₉₅ [- 1.34, - 0.91]) and *opportunity costs* (estimate = - 0.80, 95% CI₉₅ [- 1.01, - 0.61]; RQ8). Model predictions are visualized in Fig. 5. Exploratory interaction analyses revealed no evidence for shelving- vs. disengagement-related differences in conflict alleviation (estimate_{resource conflict} = - 0.05, 95% CI₉₅ [- 0.16, 0.07]; estimate_{stressfulness} = - 0.04, 95% CI₉₅ [- 0.13, 0.05]; estimate_{goal interference} = 0.01, 95% CI₉₅ [- 0.09, 0.12]; estimate_{opportunity cost} = - 0.01, 95% CI₉₅ [- 0.11, 0.09]). Model comparisons favored the more parsimonious models without the interaction term, but the criterion for selecting the more parsimonious model without the interaction term was only met for *goal interference* and *opportunity costs*, not for *resource conflict* and *stressfulness* (see Table 2).

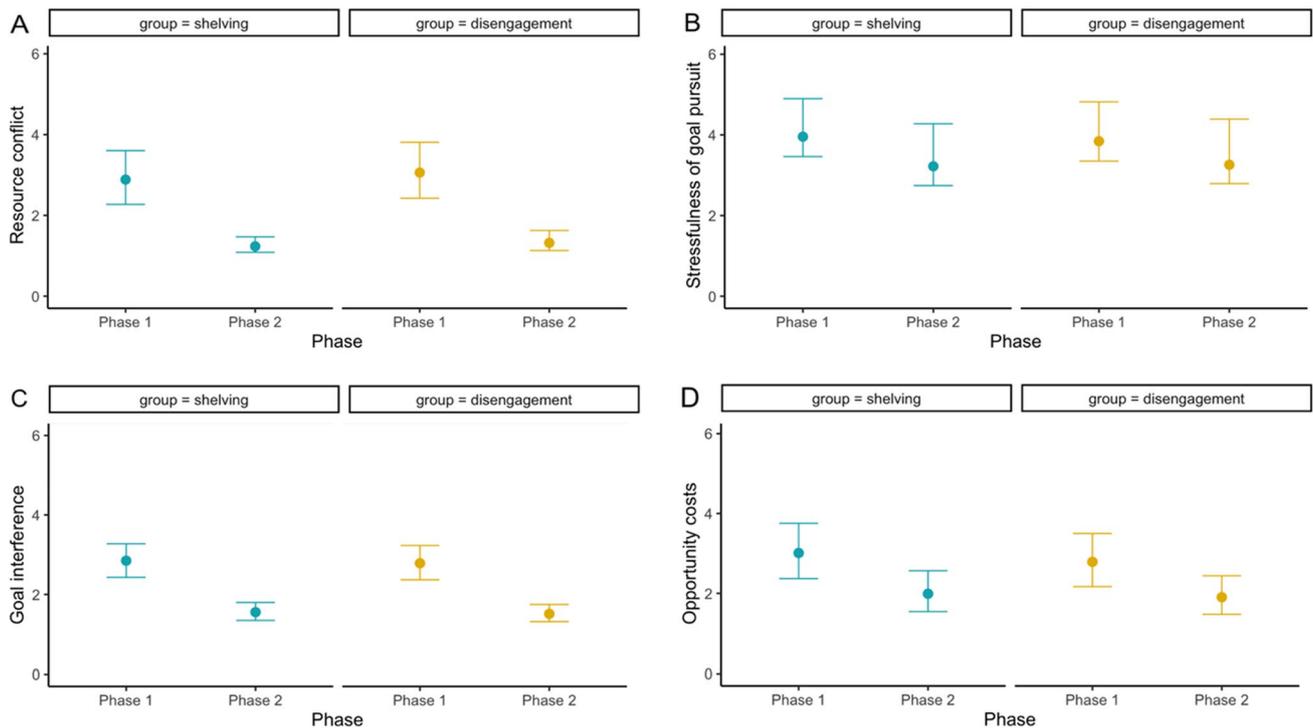


Fig. 5 Marginal effects of goal shelving and goal disengagement on the experience of **A** resource conflict, **B** stressfulness of goal pursuit, **C** goal interference, and **D** opportunity cost. Points indicate posterior mean estimates of ordered probit model coefficients. Error bars indicate 95% CIs

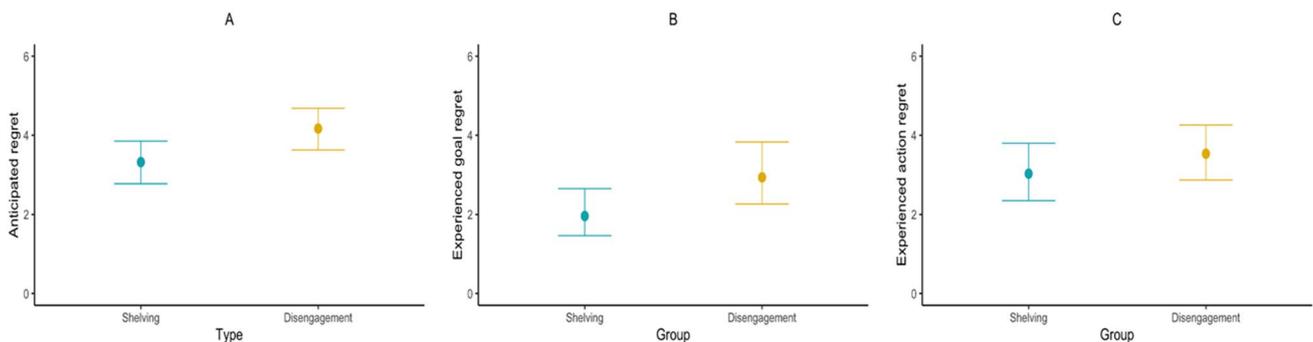


Fig. 6 Marginal effects of goal shelving and goal disengagement on the experience of **A** anticipated regret, **B** experienced goal regret, and **C** experienced action regret. Points indicate posterior mean estimates of ordered probit model coefficients. Error bars indicate 95% CIs

Anticipated and experienced regret

As predicted (H9a), prior to condition assignment, participants reported lower anticipated regret for goal shelving than for goal disengagement (estimate = -0.66 , 95% CI_{95} [$-0.79, -0.53$]). Also in line with our prediction (H9b), participants who shelved a goal reported lower experienced regret than participants who disengaged from a goal; both in terms of experienced goal regret (estimate = -1.29 , CI_{95} [$-0.38, -2.26$]) and experienced action regret

(estimate = -0.52 , CI_{95} [$-0.03, -1.06$]). Additional exploratory analyses revealed that group differences in experienced action and goal regret also emerged when adjusting for group differences in the subjective value of shelved/disengaged goals in phase 2 (estimate_{goal regret} = -0.94 , CI_{95} [$-1.37, -0.51$]; estimate_{action regret} = -0.36 , CI_{95} [$-0.61, -0.12$]), indicating that observed group differences in regret are not related to group differences in goal valuation. Model predictions are visualized in Fig. 6.

GOAL SHELIVING

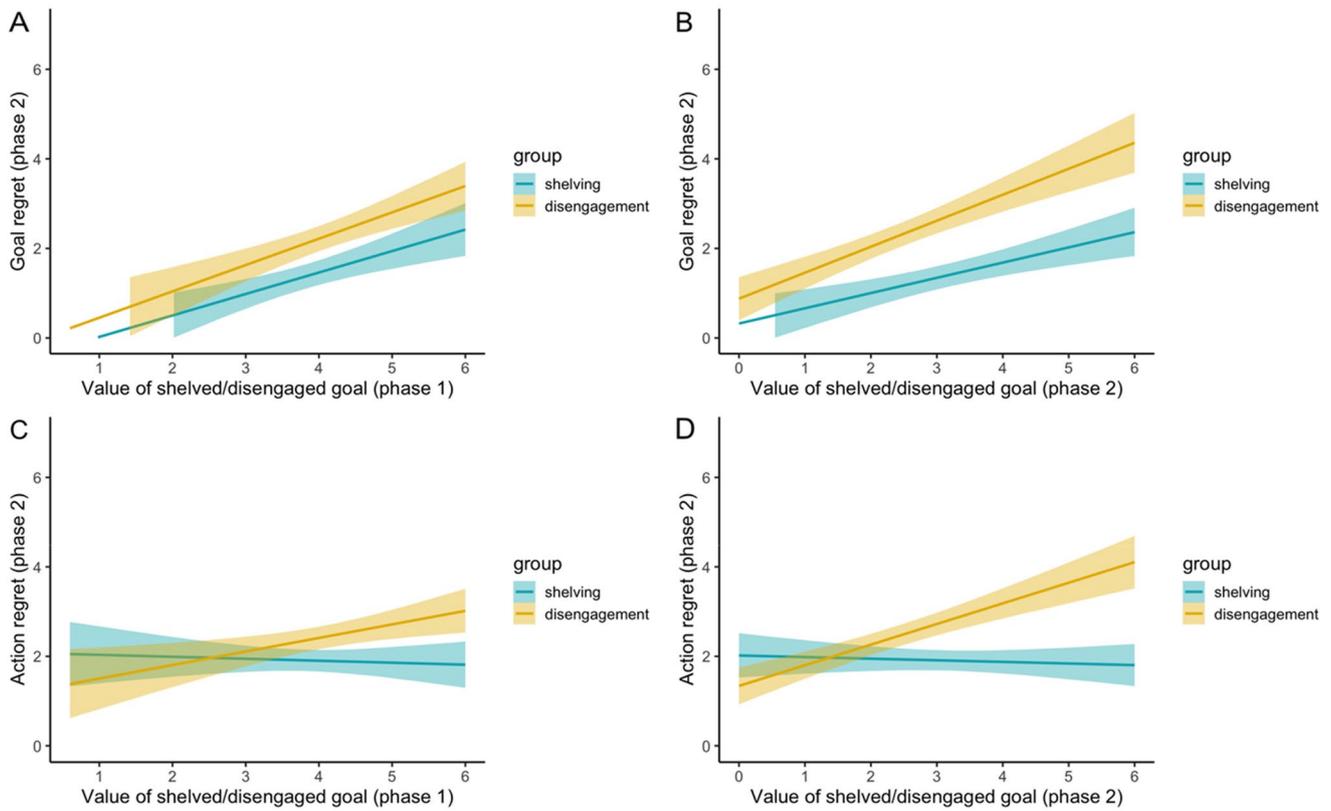


Fig. 7 Model predictions for associations of experienced *goal* regret and experienced *action* regret with the subjective value of shelved/disengaged goals *prior* to shelving/disengagement (**A, C**) and *after*

shelving/disengagement (**B, D**). Regression lines indicate posterior mean estimates of the ordered probit model coefficients. Filled area reflects 95% CIs

Antecedents and correlates of experienced regret

Although participants, on average, tended to devalue shelved and disengaged goals, there was variation in participants' subjective valuation of the shelved and disengaged goal within each condition ($SD_{shelving} = 1.68$; $SD_{disengagement} = 1.62$). As predicted (H10), within the disengagement group, higher levels of experienced goal regret were associated with greater valuation of the disengaged goal *prior* to disengagement (estimate_{prior} = 0.57, CI₉₅ [0.25, 0.89]) and *after* disengagement (estimate_{after} = 0.57, CI₉₅ [0.37, 0.78]). Similarly, within the shelving group, higher levels of experienced goal regret were associated with greater valuation of the shelved goal *prior* to shelving (estimate_{prior} = 0.48, CI₉₅ [0.21, 0.76]) and *after* shelving (estimate_{after} = 0.34, CI₉₅ [0.15, 0.53]). Additional exploratory interaction analyses revealed no evidence for shelving- vs. disengagement-related differences in the association between experienced goal regret and goal valuation, neither *prior* to nor *after* shelving/disengagement (estimate_{prior} = - 0.05, CI₉₅ [- 0.25, 0.14]; estimate_{after} = - 0.12, CI₉₅ [- 0.26, 0.02]).

Within the disengagement group, a similar pattern emerged for experienced action regret: Higher levels of experienced action regret were associated with greater valuation of the disengaged goal, both *prior* to disengagement (estimate_{prior} = 0.31, CI₉₅ [0.03, 0.59]) and *after* disengagement (estimate_{after} = 0.46, CI₉₅ [0.28, 0.64]). However, contrary to our expectations, experienced action regret was not associated with the subjective value of shelved goals, neither *prior* to shelving (estimate_{prior} = - 0.06, CI₉₅ [- 0.30, 0.18]) nor *after* shelving (estimate_{after} = - 0.04, CI₉₅ [- 0.21, 0.13]). Exploratory interaction analyses revealed that the association between experienced action regret and goal valuation, both *prior* to and *after* shelving/disengagement, was stronger in the disengagement condition than in the shelving condition (estimate_{prior} = - 0.17, CI₉₅ [- 0.35, - 0.01]; estimate_{after} = - 0.25, CI₉₅ [- 0.37, - 0.13]). Model predictions are visualized in Fig. 7.

Discussion

To resolve goal conflicts and ensure success in their goals, people need to selectively invest their efforts into a small number of goals and prioritize some goal pursuits over others. While a growing amount of research has addressed the proximal antecedents of goal prioritization (Neal et al., 2017; Schmidt & Dolis, 2009), and while theoretical work has suggested that sequencing goal pursuits across time can help manage resource restrictions (Orehek & Vazeou-Nieuwenhuis, 2013), little is known on the proximal psychological outcomes of prioritizing goals. The current research provides first experimental evidence on motivational and emotional outcomes of temporary shelving or permanently disengaging from a conflicting goal in favor of prioritizing a different goal. Does it make a difference to give up on a goal for good or intend to return to the goal later? In terms of motivational outcomes, results suggest that people devalue goals they shelve, but less so than goals they disengage from, and revalue goals they prioritize. In terms of emotional outcomes, results suggest that the shelving of conflicting goals provides the same emotional benefits as goal disengagement but at fewer emotional costs: Goal shelving and goal disengagement were similarly effective at reducing different facets of experienced goal conflict, but people regretted shelving goals less than disengaging from them.

Overall, the present findings support predicted motivational differences between temporary shelving and permanent disengagement. Behavioral disengagement resulted in greater goal devaluation than behavioral shelving. Yet, shelved goals were not unaffected: People tended to devalue the shelved goal while they were no longer engaged in it and revalued it upon reengagement. In other words: Goal valuation traced behavioral goal engagement. These findings suggest that subjective goal value is dynamic (e.g., Berkman et al., 2017), and provide evidence that behavioral goal disengagement can be both a *cause* and a *consequence* of goal devaluation: Disengagement and shelving resulted in goal devaluation, and a greater devaluation of shelved goals predicted subsequent disengagement from shelved goals. These findings provide first experimental evidence on proximal processes of goal disengagement and extend previous research, which has mainly addressed goal disengagement from an individual difference perspective (for recent reviews, see Barlow et al., 2020; Brandstätter & Bernecker, 2022; Wrosch & Scheier, 2020). Yet, although the current data suggests co-variation of behavioral and motivational disengagement, we do not know whether participants *immediately* devalued the shelved/disengaged goal (i.e., directly after having chosen which goal to shelve/disengage from), or did so *after* a period of behavioral disengagement. Further research is needed to better understand the (temporal

dynamics of) processes that may underlie the observed goal devaluation pattern.

In terms of motivational implications for prioritized goals, the current findings suggest that “the grass is greener where you water it.” Shelving and disengagement from a conflicting goal bolstered, rather than tainted, the subjective value of the prioritized goal. Results from the parameter estimation approach suggest that this effect was slightly stronger for disengagement than for shelving, but the present evidence for this interaction was weak and should be considered to be preliminary, as the results from the model comparison did not strongly favor the interaction over the main effects model (according to our pre-specified decision criterion). The specific processes underlying these observed prioritization effects remain to be addressed. Yet, contrary to our expectations, greater bolstering of the prioritized goal did not predict disengagement from the shelved goal in favor of focusing on the prioritized goal. Rather, initial preferences mattered: People with a greater initial preference for one of the conflicting goals were more likely to later choose to continue to prioritize that goal and disengage from the shelved goal.

In terms of emotional benefits, both goal shelving and disengagement effectively reduced perceptions of resource conflict and the associated stressfulness of goal pursuit. Moreover, shelving was just as effective as disengagement at reducing perceptions of *goal interference* and *opportunity costs*. This contradicts the proposition that behavioral disengagement in absence of motivational disengagement may cause distress (Wrosch et al., 2003; see also Freund & Tomasik, 2021). Rather, it seems that taking a short, temporary break from a goal can relieve motivational conflict even when people remain motivationally committed to the goal. However, successful conflict reduction through shelving, more so than through disengagement, may hinge on a person’s ability to “shield” (e.g., Shah et al., 2002) shelved goals, limiting their interference with the focal goal pursuit. Future research should attempt to specify the conditions under which “not now” or “never” can be experienced as more or less beneficial.

Goal shelving and goal disengagement provided similar emotional benefits, but differed in their costs: People anticipated and experienced fewer shelving- than disengagement-related regrets. As prior research has shown that anticipated regret affects decisions in various domains (e.g., Kirkebøen & Teigen, 2011; Zeelenberg, 1999; Zeelenberg & Pieters, 2007), differences in anticipated regret may underlie preferences for goal shelving over disengagement. This is one of the questions to be addressed in future research on antecedents of shelving and disengagement. The finding that reversible shelving decisions were linked to lower experienced regret than irreversible disengagement decisions contradicts previous findings that people tend to prefer reversible

decisions but tend to be more satisfied with irreversible ones (Gilbert & Ebert, 2002). However, previous work examined people's satisfaction with a chosen object, while the present results concern goals and suggest that people associate and experience fewer costs with reversible goal prioritization (for similar findings, see Kirkebøen & Teigen, 2011).

The results on antecedents and correlates of experienced regret integrate some of the findings on motivational and emotional outcomes. Participants who experienced greater regret about disengaging from the conflicting goal also valued the goal to a greater extent, both prior and after disengagement. This finding underlines the adaptive value of reducing the desirability of goals one no longer pursues, a theoretical proposition (e.g., Brandstädter & Rothermund, 2002; Carver & Scheier, 1998; Heckhausen et al., 2010; Wrosch et al., 2003) that has, to our knowledge, not yet received empirical support (for longitudinal observational evidence, see Salmela-Aro & Suikkari, 2008). A more differentiated picture emerged for goal shelving: Greater valuation of shelved goals was linked to greater regret about having to (temporarily) withdraw from the goal but not to greater regret about the shelving of the goal itself. This dissociation may be linked to the perceived reversibility of shelving, which renders shelving less costly, regardless of how highly shelved goals are valued.

Limitations

The strengths of experimental designs (i.e., its high internal validity) also introduce certain limitations. To isolate the outcomes of shelving and disengagement from their antecedents, we experimentally induced goal shelving and goal disengagement by instructing participants to shelve or disengage from one goal. Consequently, participants had little control over the decision to shelve or disengage from the conflicting goal. However, regret is generally thought to emerge when people attribute an event to internal rather than external factors (e.g., Tracy & Robins, 2004). We tried to allow for some perceptions of control by means of allowing participants to choose *which* goal to shelve/disengage from, but nevertheless, regret ratings in our data were positively skewed. Another limitation is that we used task goals, which was necessary to induce goal conflict in an experimentally controlled setting. Although the subjective goal value ratings indicated that participants valued the goals, goal conflict ratings indicate that the experimental setting did not induce high levels of goal conflict. To address the limitations of the present design and explore the generalizability of the present results, future work should examine processes of disengagement and shelving in (a) self-initiated disengagement and shelving decisions that refer to (b) personal long-term goals, and (c) longer periods of time (e.g., days, months,

years). Psychological outcomes of shelving likely depend on the length of the shelving period. For instance, the longer shelved goals sit in the shelf, the more people may tend to idealize them, as with increasing psychological distance to the goal, people may increasingly tend to think about the goal in terms of their more abstract and high-level features (e.g., Trope & Liberman, 2010; but see Maier et al., 2022), which for many goals, tend to be positive, and may decreasingly tend to think about the more concrete and low-level features of the goal, some of which can also be negative, even for valued goals (e.g., daily life hassles that were linked to the goal pursuit). Permanently disengaging from such a long-term shelved goal might be even more difficult than it would have been at the outset. Alternatively, shelved goals might “gather dust” the longer that people don't engage in them and the longer they are not reminded of the benefits that are linked to the pursuit of the goals. In addition, life circumstances may change while goals sit in the shelf. For instance, traveling through Morocco on a camel might seem attractively adventurous at the age of 25, but mainly uncomfortable at the age of 50, rendering disengagement from the goal easier than before.

Future work will also benefit from linking the observed consequences of shelving and disengagement decisions to their distinct antecedents. The present research focused on time-based goal conflict as an antecedent of shelving and disengagement. However, various individual, contextual, and goal-related factors may underlie a person's decision to permanently disengage from or temporarily shelve a goal, and the antecedents of these decisions are certainly worthy of investigation. For instance, differences in expectations for future goal-related opportunities may shape preferences for shelving or disengagement. For this reason, older adults may prefer goal disengagement over goal shelving. With increasing age, future time perspective decreases (Lang & Carstensen, 2002), and with this the possibility to pursue goals (Baltes et al., 2006). This might lead older adults to think more along the lines of “now or never” than younger adults, who can afford to imagine revisiting shelved goals in the future (Mayer & Freund, 2022).

Conclusion

To reduce goal conflict and ensure success in their most valued goals, people often need to prioritize among goals. This study presents first experimental evidence on benefits and costs of resolving goal conflict through discontinuing the pursuit of a conflicting goal temporarily (i.e., goal shelving) or permanently (i.e., goal disengagement). Taken together, the results suggest that shelving goals may allow people to “have their cake and eat it too:” to reap the benefits of goal prioritization while minimizing its costs.

Acknowledgements We would like to thank the members of Developmental Psychology: Adulthood Lab at the University of Zurich for valuable input into this research.

Author contributions All authors contributed to the study conception and design. Material preparation, programming, data collection and data analysis were performed by ZM. The first draft of the manuscript was written by ZM and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Funding Open access funding provided by University of Zurich.

Data availability All experimental materials, data, and analysis code are available on the Open Science Framework (<https://osf.io/ef4rx/>).

Declarations

Competing interests The authors have no competing interests to declare.

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References

- Baltes, P. B., Lindenberger, U., & Staudinger, U. M. (2006). Lifespan theory in developmental psychology. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology* (6th ed., Vol. 1, pp. 569–664). Wiley.
- Barlow, M. A., Wrosch, C., & McGrath, J. J. (2020). Goal adjustment capacities and quality of life: A meta-analytic review. *Journal of Personality*, 88(2), 307–323.
- Beike, D. R., Markman, K. D., & Karadogan, F. (2009). What we regret most are lost opportunities: A theory of regret intensity. *Personality and Social Psychology Bulletin*, 35(3), 385–397.
- Berkman, E. T., Hutcherson, C. A., Livingston, J. L., Kahn, L. E., & Inzlicht, M. (2017). Self-control as value-based choice. *Current Directions in Psychological Science*, 26(5), 422–428.
- Boudreaux, M. J., & Ozer, D. J. (2013). Goal conflict, goal striving, and psychological well-being. *Motivation and Emotion*, 37(3), 433–443.
- Brandstätter, V., & Bernecker, K. (2022). Persistence and disengagement in personal goal pursuit. *Annual Review of Psychology*, 73, 271–299.
- Brandstätter, V., Herrmann, M., & Schüler, J. (2013). The struggle of giving up personal goals: Affective, physiological, and cognitive consequences of an action crisis. *Personality and Social Psychology Bulletin*, 39(12), 1668–1682.
- Brandstätter, J., & Rothermund, K. (2002). The life-course dynamics of goal pursuit and goal adjustment: A two-process framework. *Developmental Review*, 22, 117–150. <https://doi.org/10.1006/drev.2001.0539>
- Brehaut, J. C., O'Connor, A. M., Wood, T. J., Hack, T. F., Siminoff, L., Gordon, E., & Feldman-Stewart, D. (2003). Validation of a decision regret scale. *Medical Decision Making*, 23(4), 281–292.
- Bürkner, P. C. (2017). brms: An R package for Bayesian multilevel models using Stan. *Journal of Statistical Software*, 80(1), 1–28.
- Bürkner, P. C., & Vuorre, M. (2019). Ordinal regression models in psychology: A tutorial. *Advances in Methods and Practices in Psychological Science*, 2(1), 77–101.
- Carpenter, B., Gelman, A., Hoffman, M. D., Lee, D., Goodrich, B., Betancourt, M., ... Riddell, A. (2017). Stan: A probabilistic programming language. *Journal of Statistical Software*, 76(1), 1–32.
- Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior*. Cambridge University Press.
- Castro-Schilo, L., & Grimm, K. J. (2018). Using residualized change versus difference scores for longitudinal research. *Journal of Social and Personal Relationships*, 35(1), 32–58.
- Cranford, J. A., Shrout, P. E., Iida, M., Rafaeli, E., Yip, T., & Bolger, N. (2006). A procedure for evaluating sensitivity to within-person change: Can mood measures in diary studies detect change reliably? *Personality and Social Psychology Bulletin*, 32(7), 917–929.
- Davydenko, M., Werner, K. M., Milyavskaya, M., & Donnellan, M. B. (2019). Frozen goals: Identifying and defining a new type of goal. *Collabra: Psychology*, 5(1), 17.
- Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53(1), 109–132.
- Emmons, R. A., & King, L. A. (1988). Conflict among personal strivings: Immediate and long-term implications for psychological and physical well-being. *Journal of Personality and Social Psychology*, 54(6), 1040.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175–191.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Freund, A. M., & Tomasik, M. J. (2021). Managing conflicting goals through prioritization? The role of age and relative goal importance. *PLoS ONE*, 16(2), e0247047.
- Frey, D., Kumpf, M., Irle, M., & Gniech, G. (1984). Re-evaluation of decision alternatives dependent upon the reversibility of a decision and the passage of time. *European Journal of Social Psychology*, 14(4), 447–450.
- Gilbert, D. T., & Ebert, J. E. (2002). Decisions and revisions: The affective forecasting of changeable outcomes. *Journal of Personality and Social Psychology*, 82(4), 503.
- Gilovich, T., & Medvec, V. H. (1994). The temporal pattern to the experience of regret. *Journal of Personality and Social Psychology*, 67(3), 357.
- Gray, J. S., Ozer, D. J., & Rosenthal, R. (2017). Goal conflict and psychological well-being: A meta-analysis. *Journal of Research in Personality*, 66, 27–37.
- Heckhausen, J., Wrosch, C., & Schulz, R. (2010). A motivational theory of life-span development. *Psychological Review*, 117(1), 32.
- King, L. A., & Hicks, J. A. (2007). Whatever happened to “What might have been”? Regrets, happiness, and maturity. *American Psychologist*, 62(7), 625.
- Kirkeboen, G., & Teigen, K. H. (2011). Pre-outcome regret: Widespread and overlooked. *Journal of Behavioral Decision Making*, 24(3), 267–292.
- Klinger, E. (1975). Consequences of commitment to and disengagement from incentives. *Psychological Review*, 82(1), 1.
- Kruglanski, A. W., Shah, J. Y., Fishbach, A., Friedman, R., Chun, W. Y., & Sleeth-Keppler, D. (2002). A theory of goal systems. *Advances in Experimental Social Psychology*, 34(2), 331–378.

- Kurzban, R., Duckworth, A., Kable, J. W., & Myers, J. (2013). An opportunity cost model of subjective effort and task performance. *Behavioral and Brain Sciences*, *36*(6), 661–679.
- Lang, F. R., & Carstensen, L. L. (2002). Time counts: Future time perspective, goals, and social relationships. *Psychology and Aging*, *17*(1), 125.
- Lecci, L., Okun, M. A., & Karoly, P. (1994). Life regrets and current goals as predictors of psychological adjustment. *Journal of Personality and Social Psychology*, *66*(4), 731.
- Liddell, T. M., & Kruschke, J. K. (2018). Analyzing ordinal data with metric models: What could possibly go wrong? *Journal of Experimental Social Psychology*, *79*, 328–348.
- Maier, M., Bartoš, F., Oh, M., Wagenmakers, E., Shanks, D., & Harris, A. J. L. (2022, March 3). Publication bias in research on construal level theory. <https://doi.org/10.31234/osf.io/r8nyu>
- Mayer, Z., & Freund, A. M. (2022). *Take a Break from Your Goals? Antecedents and Consequences of Goal Shelving*. Manuscript submitted for publication.
- Moshontz, H., & Hoyle, R. H. (2021). Resisting, recognizing, and returning: A three-component model and review of persistence in episodic goals. *Social and Personality Psychology Compass*, *15*(1), e12576.
- Neal, A., Ballard, T., & Vancouver, J. B. (2017). Dynamic self-regulation and multiple-goal pursuit. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*, 401–423.
- Orehek, E., & Vazeou-Nieuwenhuis, A. (2013). Sequential and concurrent strategies of multiple goal pursuit. *Review of General Psychology*, *17*(3), 339–349.
- Pearl, J., Glymour, M., & Jewell, N. P. (2016). *Causal inference in statistics: A primer*. Wiley.
- Prelec, D., & Loewenstein, G. (1998). The red and the black: Mental accounting of savings and debt. *Marketing Science*, *17*(1), 4–28.
- Riediger, M., & Freund, A. M. (2004). Interference and facilitation among personal goals: Differential associations with subjective well-being and persistent goal pursuit. *Personality and Social Psychology Bulletin*, *30*(12), 1511–1523.
- Riediger, M., & Freund, A. M. (2008). Me against myself: Motivational conflicts and emotional development in adulthood. *Psychology and Aging*, *23*(3), 479.
- Rom, S. C., Katzir, M., Diel, K., & Hofmann, W. (2020). On trading off labor and leisure: A process model of perceived autonomy and opportunity costs. *Motivation Science*, *6*(3), 235.
- Salmela-Aro, K., & Suikkari, A. M. (2008). Letting go of your dreams—Adjustment of child-related goal appraisals and depressive symptoms during infertility treatment. *Journal of Research in Personality*, *42*(4), 988–1003.
- Schmidt, A. M., & Dolis, C. M. (2009). Something's got to give: The effects of dual-goal difficulty, goal progress, and expectancies on resource allocation. *Journal of Applied Psychology*, *94*(3), 678.
- Shah, J. Y., Friedman, R., & Kruglanski, A. W. (2002). Forgetting all else: On the antecedents and consequences of goal shielding. *Journal of Personality and Social Psychology*, *83*(6), 1261.
- Steyer, R., Schwenkmezger, P., Notz, P., & Eid, M. (1994). Testtheoretische Analysen des Mehrdimensionalen Befindlichkeitsfragebogen (MDBF). *Diagnostica*, *40*(4), 320–328.
- Summerville, A. (2011). The rush of regret: A longitudinal analysis of naturalistic regrets. *Social Psychological and Personality Science*, *2*(6), 627–634.
- Thaler, R. (1985). Mental accounting and consumer choice. *Marketing Science*, *4*(3), 199–214.
- Tracy, J. L., & Robins, R. W. (2004). Putting the self into self-conscious emotions: A theoretical model. *Psychological Inquiry*, *15*(2), 103–125.
- Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review*, *117*(2), 440.
- Vehtari, A., Gelman, A., & Gabry, J. (2017). Practical Bayesian model evaluation using leave-one-out cross-validation and WAIC. *Statistics and Computing*, *27*, 1413–1432.
- Vehtari, A., Mononen, T., Tolvanen, V., Sivula, T., & Winther, O. (2016). Bayesian leave-one-out cross-validation approximations for Gaussian latent variable models. *The Journal of Machine Learning Research*, *17*(1), 3581–3618.
- Wrosch, C., Bauer, I., & Scheier, M. F. (2005). Regret and quality of life across the adult life span: The influence of disengagement and available future goals. *Psychology and Aging*, *20*(4), 657.
- Wrosch, C., & Scheier, M. F. (2020). Adaptive self-regulation, subjective well-being, and physical health: The importance of goal adjustment capacities. *Advances in motivation science* (Vol. 7, pp. 199–238). Elsevier.
- Wrosch, C., Scheier, M. F., Carver, C. S., & Schulz, R. (2003). The importance of goal disengagement in adaptive self-regulation: When giving up is beneficial. *Self and Identity*, *2*(1), 1–20.
- Zeelenberg, M. (1999). Anticipated regret, expected feedback and behavioral decision making. *Journal of Behavioral Decision Making*, *12*(2), 93–106.
- Zeelenberg, M., & Pieters, R. (2007). A theory of regret regulation 1.0. *Journal of Consumer Psychology*, *17*(1), 3–18.

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