Self-Regulation in Life-Transitions:
Using Mental Contrasting to Cope with Upcoming Endings

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Abstract

Every period or stage in life eventually comes to an end. Although these endings are often foreseeable and unavoidable (e.g., school years), research on how people cope with these foreseeable endings is sparse. We tested if people benefit from ending well-rounded, defined as a feeling of having done everything that could have be done, a sense of completeness, and if the self-regulatory strategy of *mental contrasting* can support people in finding a well-rounded ending. In Study-set 1, we observed across seven methodologically diverse studies that experiencing an ending as well-rounded, is linked to high positive affect, low negative affect, little regret, and an easy transition into the next phase. In Studies 1 to 3, we observed that the more well-rounded participants remembered a particular ending (a stay abroad, the ending of high school, an idiosyncratic event), the more they experienced positive affect and the less they experienced negative affect regarding the reported ending. They also felt less regret in the wake of this ending and the transition into the next phase was easier. In Studies 4 to 6, we used hypothetical scenarios of upcoming endings (e.g., the move to another state, the end of a party) that were either well-rounded or not to adjust for possible biases in memory that might explain the results in Studies 1 to 3. Finally, Study 7 was a controlled laboratory experiment where participants were confronted with – rather than recalling or imagining - a well-rounded or not well-rounded ending. The findings point to the importance of ending well-rounded for the experience of positive affect, little regret and the ease of transition into the subsequent phase. In Study-set 2 we observed that the self-regulatory strategy of *mental contrasting* can support people in finding well-rounded endings by fostering selective goal pursuit (Studies 1 and 2). Moreover, using an explorative approach, we found that *mental contrasting* may have beneficial interpersonal effects in ending situations (Study 3).

Keywords: life transitions, endings, self-regulation, mental contrasting

Self-Regulation in Life-Transitions: Using Mental Contrasting to Cope with Upcoming Endings

Throughout our lifetime, we deal with endings: Education, professional life, the time with our children living at home, a vacation or a fun night out with our friends – all those things eventually come to an end. Whether we like it or not, there is a timestamp on most of our experiences. Moreover, we do not just endure those endings, but try actively to shape how we end: We throw a graduation party to end our school days, give a farewell speech when ending our professional life, have a last family dinner when we move out, and end a fun night out with friends by saying goodbye. Moreover, even for small endings, people highlight the importance of ending well: Finding the right closing remarks for your speech, leaving a job interview on a positive note, or programming a graceful exit for your computer program. Although we experience many inevitable endings throughout life, there is yet little research on how the way we deal with inevitable endings (e.g., end of school) impacts our well-being and the transition into the subsequent phase. So far, research on transition and life-long development focused mainly on the new beginning: Studies identified variables in the person as well as in the environment that are associated with adapting successfully to new roles, tasks and challenges the new life phase imposes (e.g., Bye & Pushkar, 2009; Cusick, Havlicek, Courtney, 2012; Poulin & Heckhausen, 2007). And theories highlight the importance of coping strategies to adapt to the changes (P. B. Baltes & M. M. Baltes, 1990; Brandtstädter & Rothermund, 2002; Heckhausen, Wrosch, & Schulz, 2010).

We sought to complement this research by investigating how the way we cope with an upcoming ending impacts the beginning of the new phase. In the present research, we tested in Study-set 1 if ending well-rounded (i.e., feeling of having done eveything that could be done, a sense of completeness) is associated with high positive affect, low negative affect, little regret, and an easy transition into the subsequent phase. In Study-set 2, we further tested

if the self-regulatory strategy of mental contrasting (Oettingen, 2000, 2012) is an effective strategy to support people in finding a well-rounded ending.

Closure

"Thank You and Good Bye: A Note From the Outgoing Editor-in-Chief" was the title of the leaving editor's farewell letter to the readers of the journal Social Psychology (Erb, H. P., 2012). In his farewell letter, the former editor reflects on his work for the journal, thanks to the contributors, coworkers, and readers and welcomes the new editor. The anthropologist Van Gennep (1960) describes rituals that peoples all over the world developed and that have the function of symbolically closing life phases and preparing the individual for the next phase. Even though a farewell-letter is not the same as engaging in an elaborated ritual, it may have a similar function. The act of writing a farewell letter gives the opportunity to close what comes to an end (e.g., reflect on the work and send a thank you note) and to prepare the transition to the new phase (e.g., welcome the new editor). Similarly, graduation parties, last family dinners or even the simple gesture of saying good-bye are further examples for the observations that we do not simply leave, but actively try to end with a feeling of closure.

From a psychological perspective, the concept of closure exists in different lines of research. In Gestalt psychology, the principle of closure describes the tendency to perceive a figure as closed even when it is not, or partly hidden by other figures: "A good figure is always a "closed" figure, which the boundary line has the function of closing" (Koffka, 1922, p. 20). In social psychology, the need for cognitive closure describes a personal preference for the need of a firm answer and discomfort regarding ambiguity (Webster & Kruglanski, 1994). Furthermore, Zeigarnik (1927) described the concept of closure in her work on finished and unfinished tasks. She states that once people start with a task they develop a quasi-need to complete the task. In her work she asked participants to work on 18 to 22 tasks. She interrupted participants in 50% of the tasks and participants had to leave these tasks

unfinished. After having worked on all tasks, participants were asked to name all tasks they had worked on. Even though participants had spent on average more time on the tasks they were allowed to complete, they remembered the unfinished tasks better than the finished tasks. More recent research on autobiographical memory used the term closure to describe two different kinds of memories: open and closed memories. Closed memories are memories that elicit only weak emotions, and that come with a feeling of closure, which is defined as a sense of pastness. On the other hand, open memories are subjectively rated as being still part of the present (Beike, Adams, & Wirth-Beaumont, 2007; Beike & Wirth-Beaumont, 2005). Finally, the term closure can also be found in research on trauma in which closure is referred to as a resolution of emotional dissonance (Skitka, Bauman, & Mullen, 2004). It is described as the desired end-state after a traumatic event that allows a person to go on with their current life (Gold & Faust, 2001; Skitka et al., 2004).

In summary, the concept of closure has been used in different lines of research, describing a human striving for closure on a perceptual (Koffka, 1922) as well as on a motivational level (Beike & Wirth-Beaumont, 2005; Skitka et al., 2004; Webster & Kruglanski, 1994; Zeigarnik, 1927). Transferring the idea to life transitions, we assume that people strive to end a life phase with a feeling of closure.

Ending a Life Phase with the Feeling of Closure

The need to end a life phase with a feeling of closure may explain why people increase their goal striving in the face of an upcoming ending. For example, people are more likely to run their first marathon when they face the ending of a life decade (e.g., age 29, 39, 49) than when they are younger or older (Alter & Hershfield, 2014). Regular marathon runners run faster when they are 29 or 39 than two years before or after (Alter & Hershfield, 2014). Moreover, a study showed that facing the end of a season, professional baseball players were more likely to achieve a base hit if their season’s batting average was just below

a round number (i.e., .299) than when it was above a round number (i.e., 300; Pope & Simonsohn, 2011). This means professional baseball players increased their goal striving in the face of an upcoming ending (i.e., end of a season) to reach their goal of ending with a round batting average.

The impact of an upcoming ending on goal striving can also be found in smaller endings: The likelihood of cashing in a coupon does not simply follow a steady decrease but increases just before the expiration date (Inman & McAlister, 1994). Another study shows that when facing their last move of a game, people are more likely to cheat (to win) than at the beginning of a game (Effron, Bryan, & Murnighan, 2015).

In summary, in the face of an upcoming ending, people increase their effort to reach their goals within the remaining time. We suggest that this increase in goal effort reflects the need for ending a life phase with a feeling of closure. Following this assumption, we define closure as a feeling of having done everything that could be done, a sense of completeness. We refer to this concept as a *well-rounded ending*. People should describe an ending as well-rounded if they have the feeling that they have done everything they could have done (increased effort), that they have completed something to the fullest and that all loose ends are tied up (closure).

Consequences of a Well-Rounded Ending

Finding a well-rounded ending should have several positive outcomes. We hypothesize that ending in a well-rounded way is associated with high positive affect, low negative affect, little regret, and with an easy transition into the subsequent phase.

Well-rounded ending and positive affect. Upcoming endings do not only impact goal striving but also which goals we pursue. Socioemotional selectivity theory posits that human goals can be divided into goals that are future oriented and serve the purpose of acquiring knowledge, and goals that are oriented to the present and serve the purpose of

regulating emotional states (Carstensen, 2006; Carstensen, Isaacowitz, & Charles, 1999; Ersner-Hershfield, Mikels, Sullivan, & Carstensen, 2008). Our time perspective impacts which goals we prefer. When time is perceived as indefinite, future-oriented goals, like trying to acquire new knowledge or expanding our social network, are preferred. When time is perceived as finite (i.e., in the face of an upcoming ending), present-oriented and emotionally meaningful goals that help us regulate our affective state are preferred (Carstensen et al., 1999).

The preference for emotionally meaningful goals in the face of an upcoming ending has been shown in several studies (e.g., Fredrickson & Carstensen, 1990; Fung, Carstensen, & Lutz, 1999; Kurtz, 2008). For example, students who were about to graduate were either reminded of the upcoming ending of their school days or not. In the group of students who were reminded of the ending, the ending was either framed as being still far away or very close. Reminding students of the upcoming ending and framing it as being very close led students to pursue more emotionally meaningful goals (i.e., spending time with friends, taking pictures, visiting a favorite restaurant, bar, or coffee-shop) compared to the other two groups (Kurtz, 2008). Furthermore, those students who were reminded of the imminent ending and who therefore pursued more emotionally meaningful goals reported more happiness after two weeks than students in the other two groups (Kurtz, 2008).

In summary, in the face of an upcoming ending, people strive for emotional meaningful goals. Reaching those goals is associated with positive affect. However, studies reported earlier indicate that people do not exclusively pursue emotional meaningful goals in the face of an upcoming ending (e.g., reaching a round batting average before the end of the season; Alter & Hershfield, 2014). Therefore, we hypothesize that it is not solely the content of the goal that leads to positive affect, but rather the fact that the goal is attained within the limited time. A study supporting this assumption shows that success can be enjoyed more

when a task is fully completed than when it is left incomplete (Schall, Goetz, Martiny, & Hall, 2016). Furthermore, succeeding in attaining one's goals is associated with positive affect and failing to attain one's goals with negative affect (Carver & Scheier, 1990). Therefore, we hypothesize that a well-rounded ending is associated with high positive affect and low negative affect.

Well-rounded ending and regret. The importance of reaching one's goals before it is too late is further supported by research on regret over the lifespan. What people regret most in life is not the mistakes they made (i.e., actions) but the opportunities they failed to seize (i.e., inactions; Gilovich & Medvec, 1995; Morrison & Roese, 2011). When participants were asked to describe their biggest regrets in life, they reported more inactions (e.g., I regret that I never visited Europe) than actions (e.g., I regret I bought that car [Gilovich & Medvic, 1994]). Moreover, participants reported ruminating more about regretted inactions than regretted actions in daily life (Savitsky, Medvec, & Gilovich, 1997). Experimental studies further show that people recall inactions more easily than actions. For example, participants were asked to name three actions and three inactions they regret. After three weeks, they recalled more regretted inactions than actions (Savitsky et al., 1997).

One explanation for the difference in the memory effect and regret severity of inactions and actions is that actions are closed, whereas inactions are open-ended experiences that are psychologically incomplete (Gilovich & Medvec, 1994; Savitsky et al., 1997). Since incomplete tasks are remembered better than completed tasks (Zeigarnik, 1935), people remember regretted inactions (i.e., incomplete tasks) better than actions (i.e., completed tasks; Savitsky et al., 1997). This heightened cognitive availability seems to prolong feelings of regret. This effect was shown in a study in which participants were asked to note regretted actions and inactions and to rate to what degree they evaluated these regrets as an *unfinished business* or as a *closed book* (Savitsky et al., 1997). Participants, as well as independent

raters, evaluated regretted inactions as more psychologically open (i.e., as an unfinished business) than regretted actions. Moreover, the more participants rated their regrets as psychologically open, the better they recalled them, which in turn prolonged feelings of regret (Savitsky et al., 1997).

In summary, low feelings of closure lead to an increase in regret. Building on these findings, we hypothesize that a well-rounded ending is associated with low regret.

Well-rounded ending and ease of transition. The inner tension of the unfulfilled need for completion does not only lead to a better recall of incomplete tasks than completed tasks (Zeigarnik, 1927), but impacts people's behavior as they try to resolve their inner tension by resuming the task (Ovsiankina, 1928), or engaging in compensatory tasks (Mahler, 1933). Similarly, research on autobiographical memory shows that memories that come with a feeling of low closure affect the present as they lead to an increase in memory-related behavior (Beike, Adams, & Naufel, 2010). For example, participants were asked to remember a specific incident in which they had the opportunity to donate to a charity. One group of participants was asked to come up with reasons why this incident was still an unfished business (low closure condition), and one group was asked to come up with reasons why this incident was a closed book (high closure condition). When given the opportunity to donate to a charity, participants in the low closure condition donated more money than participants in the high closure condition, indicating that participants tried to find closure afterwards.

Put differently, ending with a feeling of low closure should encumber the individual in the new phase, and make the individual more likely to show reparative behavior to find closure afterwards. On the other hand, ending with a feeling of closure should result in a feeling of a clean slate, allowing the individual to move on and to deal with the new tasks the new life phase imposes. Consequently, we hypothesize that a well-rounded ending is associated with an easy transition into the subsequent phase.

In summary, transferring the idea that people have a need for completion or closure to transitions in life, we hypothesize that in the face of an upcoming ending, people strive to end with a feeling of closure. Furthermore, the feeling of closure should be achieved by reaching one's goals within the remaining time. We refer to the concept of ending a life phase with a feeling of having done everything that could be done, and a sense of completion, as a well-rounded ending. Based on research showing that reaching one's goals is associated with high positive affect (Schall et al., 2016), low negative affect (Carver & Scheier, 1990), little regret (Savitsky et al., 1997), and little compensatory behavior (Beike et al., 2010), we hypothesize that finding a well-rounded ending is associated with high positive affect, low negative affect, little regret, and an easy transition into the subsequent phase (Figure 1).

Figure 1. Expected associations using the remaining time to fulfill one's wishes, a well-rounded ending and affect, regret and an easy transition into the subsequent phase.

Overview of Study-set 1

With Study-set 1, we sought to test our idea that a well-rounded ending is associated with high positive affect, low negative affect, little regret and an easy transition into the subsequent phase. First, we conducted a preliminary study in which we investigated if participants understand the concept of a well-rounded ending and how important it is to end in a well-rounded way. Next, we examined across seven methodologically diverse studies if a well-rounded ending is associated with high positive affect, low negative affect, little regret, and an easy transition into the subsequent phase. In Studies 1 and 2, we tested these assumptions with a correlational design: Participants who had ended a stay abroad (Study 1)

or who had finished high school (Study 2) indicated how well-rounded they had ended this phase of their lives and rated their affect, feelings of regret, and ease of transition into the subsequent phase. In Study 3, we extended these findings by asking participants to recall an idiosyncratic event (instead of a normative ending) that either ended in a well-rounded way or not, and to report their affect, regret, and ease of transition into the subsequent phase. With Studies 4 to 6, we sought to compensate for possible memory biases that may explain the effects of Studies 1 to 3 by letting all participants read the same vignette about a well-rounded versus not well-rounded experience and instructing them to imagine that they had this experience. Finally, in Study 7, we tested with an experimental design if the effects reported in Studies 1 to 6 can also be found when participants experience (instead of recalling or imagining) a well-rounded versus a not well-rounded ending in a controlled laboratory setting. In all studies reported in this thesis, we did not want to force participants to answer our items and allowed them to leave single items unanswered, therefore degrees of freedom may vary.

Preliminary Study

We conducted a preliminary study in which we sought to explore how people perceive endings in their lives, how they feel regarding upcoming endings, if the concept of a well-rounded ending is a meaningful concept for their everyday lives, which emotions they associate with a well-rounded ending and how important it is to them to have a well-rounded ending.

Method

Participants

Participants were recruited via the online platform Amazon Mechanical Turk (www.mturk.com; Buhrmester, Kwang, & Gosling, 2011). A total of 123 MTurk workers completed the study in return for payment. Three workers were excluded from the analysis as their answers were unrelated to the open-ended questions (e.g., one participant wrote about

her son and what she wants for him in his future when she was asked to define a well-rounded ending). The final sample consisted of 120 MTurk workers (47% female, 52% male, 1% indicated to be genderless, M_{age} = 33.69 years *SD* = 10.13, *min* = 18, *max* = 63).

Materials and Procedure

Endings. To introduce participants to the study, participants were first asked to write down situations in which something in their life had ended. They were asked to write down between one and three endings. They were further asked to describe how they dealt with the endings they had experienced in their lives so far. Next, they were asked how long ago their noted ending had happened, how often they still thought about the ending, and lastly, how well-rounded the ending was.

Following this, they were asked to write down endings they would face in the near, and endings they would face in the far future. They then had to indicate which of the noted endings (one ending in the near and one ending in the far future) was most important to them and to rate their positive and negative affect regarding these two endings with the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Items were rated on a 5-point scale (1 = *very slightly or not at all* and 5 = *extremely*) and combined into four different scales: Regarding endings in the near future, (1) one scale for positive affect PANAS (α = .94) and (2) one scale for negative affect PANAS (α = .91); regarding endings in the far future (3) one scale for positive affect PANAS (α = .92) and (4) one scale for negative affect PANAS (α = .91).

The concept of a well-rounded ending. Participants were asked to write down how they would define a well-rounded ending and which emotions they associated with a well-rounded ending. Following this, they were asked to rate wich emotions they associated with a well-rounded ending on the PANAS. As previous research has shown that people's ideal feeling when they have to deal with limited time is a sense of calmness, peacefulness, and

serenity instead of an exciting, positive affective state (Jiang, Fung, Sims, Tsai, & Zhang, 2016; Mogilner, Aaker, & Kamvar, 2012) we extended the PANAS with items measuring pleasant (i.e., satisfied, at-ease, pleasant, happy, content) and active (i.e., awake, energetic, active, alert, vigorous) positive affect (Smillie, Geaney, Wilt, Cooper, & Revelle, 2013). All items were rated on a 5-point scale (1 = *very slightly or not at all* and 5 = *extremely*) and combined into one scale for pleasant positive affect ($\alpha = .88$), one scale for active positive affect ($\alpha = .86$), and one scale for positive affect PANAS ($\alpha = .93$), and one scale for negative affect PANAS ($\alpha = .92$).

Next, participants were asked to indicate on a 7-point scale (1 = *not at all important* and 7 = *very important*) how important they evaluated ending in a well-rounded way. Furthermore, they were asked to note when it is especially important to them to end in a well-rounded way and when it is not important.

Finally, participants were given eight different stages of life (high school, an internship, a job interview, an employment, work life, a weekend, a vacation, a night out with friends) in randomized order and asked to rate on a 7-point scale (1 = *not at all important* and 7 = *very important*) how important these stages of life are to them in general. Additionally, they were asked to rate how important it would be to them to end these situations in a well-rounded way.

Results

Endings

A total of 68 (57%) participants named three, 38 (32%) participants named two, and 14 (11%) named one situation in which something in their lives came to an end. Most (68%) of the endings that were named first happened more than a year ago ($M = 9.02$ years, $SD = 8.04$, $min = 2$, $max = 40$), followed by 13% that happened within the last year, and 19% that happened within the last months. Participants indicated that they still thought about

this event rather frequently, on a 7-point scale the average was M = 4.51 (SD = 1.71, min = 1, max = 7). They also indicated that they ended the named ending on average in a well-rounded way, on a 7-point scale the average was M = 5.03 (SD = 1.79, min = 1, max = 7).

Participants reported feeling more positive about the most important ending in their *near* future (M = 29.87, SD = 11.53) than in their *far* future (M = 24.36, SD = 10.71), $t(119) = 5.04$, $p < .001$, $d = 0.50$. They also reported feeling less negative about the most important ending in the *near* future (M = 17.74, SD = 8.36) than in the *far* future (M = 21.86, SD = 9.81), $t(119) = 4.52$, $p < .001$, $d = 0.45$.

Strategies to deal with upcoming endings. Participants described different ways in which they have dealt with endings in their lives so far. One described strategy was to accept or even celebrate the ending (e.g., “I tried to enjoy them as much as possible knowing that I would never be back in that experience again”; “With an open mind. There is no need to resist endings, they all happen. Change is inevitable so why not embrace it”) or to look for social support (e.g., “Talking is another good way of dealing with endings. It helps to talk to someone and share your feelings about your time before the ending and how you feel about the ending.”). Another strategy was to avoid the situation (e.g., “running away from them”; “It always felt sad, but I just bit the bullet and went through it. I tried not to think about what I was missing when the endings happened”), or simply to focus on what was coming next (e.g., “I honestly just rolled with the punches and moved on. I tried not to hold on to whatever it was that ended in order to focus on what I have to do next”). Some reported having difficulties with endings and mainly experiencing negative feelings (e.g., “Typically, I've dealt with the endings in my life in a way that I don't prefer. When something I enjoy or means a lot to me ends, I tend to fall into a deep depression. Whether it's the end of a vacation with family or completing school, I'm always left feeling empty. I think it's because I miss the sensations / feelings I had in the moment”). Some reported having mixed emotions,

feeling sad about the ending but also happy about the new beginning (e.g., “here's certainly a bit of sadness about the ending occurring, but there's also happiness from having been able to experience the event to begin with. Even when the event ends the memories will remain and they can be a bittersweet comfort. I try to focus on the good that came from going through the experience, and the new opportunities that the experience may have opened up for the future”).

The concept of a well-rounded ending. All participants answered the question about how they would define a well-rounded ending. Two independent raters rated if participants indicated any insecurity regarding the concept of a well-rounded ending. The raters agreed in 100% of the cases. Only four participants (3%) indicated that they were not sure what a well-rounded ending is (e.g., “I'm not sure. Maybe something that…”; “A complete ending?”). Several participants’ definitions fitted very well with our definition, for example:

> ***Participant 1***. A well-rounded ending is one in which all the loose ends are tied off, and there is a sense of closure. A well-rounded ending is one in which I can look back on the event without regrets and feel a sense of accomplishment.
>
> ***Participant 2.*** You are able to walk away from a situation without any regrets or any unresolved issues. There is a sense of peace and closure, and you know that you've done your best in this instance.
>
> ***Participant 3.*** Closure: everything taken care of, no loose ends left hanging to deal with later.

Next, to extract the emotions associated with a well-rounded ending, two independent raters isolated from every answer the different emotions that were named by the participant. If one participant named two different emotions (e.g., “acceptance and satisfaction”), two different emotions were extracted. Out of the 120 answers, we could extract 65 different

emotions that participants associated with a well-rounded ending. The top three named emotions were happiness (48), satisfaction (27), and contentedness (27). Next, two independent raters rated the named emotions as either positive, negative or as mixed emotions. The positive emotions were further rated as either pleasant (e.g., content) or active positive affect (e.g., alert; Smillie et al., 2013). If the emotion could not be valenced as an emotion (e.g., anticipation) it was rated as unclear. The raters agreed on 100% of the named emotions. Out of the 65 different emotions, 28 (43%) of the named emotions were rated as pleasant positive affect and 10 (15%) as active positive affect. Seven (11%) noted emotions could not be rated as pleasant or active positive affect (e.g., prepared) and were therefore rated as positive affect. A total of 11 (17%) were rated as negative affect and four (6%) named emotions were positive as well as negative and therefore coded as mixed affect (e.g., bittersweet). Five (8%) were rated as unclear (Table 1). Beside the four explicitly named mixed emotions, 31 (26%) out of the total 120 answers included both, positive as well as negative emotions.

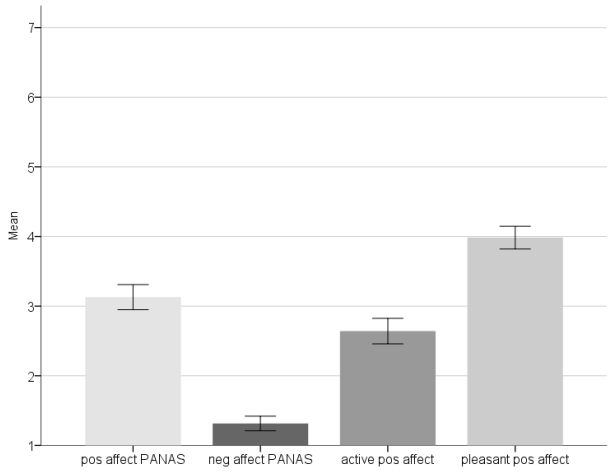


Figure 2. Preliminary Study: Ratings of how much participants associated predefined emotions with a well-rounded ending. Error bars represent +/-2 SE.

The results of the open-ended question was reflected by the ratings of the predefined emotions: Participants' mean rating of pleasant positive affect was the highest (M = 3.98, SD = 0.89), followed by the positive affect rating on the PANAS (M = 3.12, SD = 0.99), followed by the active positive affect (M = 2.64, SD = 1.01). The lowest score was the negative affect rating on the PANAS (M = 1.32, SD = 0.58). To make the means comparable, we divided the mean of the four different scales by the number of items a scale consists of (Figure 2).

Within-subjects comparisons of the scales revealed that participants' ratings for pleasant positive affect was higher than for negative affect PANAS, $t(119) = 24.95$, $p < .001$, $d = 2.85$, active positive affect, $t(119) = 15.07$, $p < .001$, $d = 1.40$, and positive affect PANAS, $t(119) = 11.54$, $p < .001$, $d = 0.90$ (see Table 2 for all comparisons).

Participants' ratings of the importance of ending a phase in their lives in a well-rounded way were high: On a 7-point scale, the average importance was M = 5.70 (SD = 1.19, min = 1, max = 7). Participants' answers to the open-ended questions indicated that ending in a well-rounded way is important to them most of the time, and especially important when the ending itself is important as well as when closely related other people are involved. The importance ratings of the eight predefined endings echoed this result: The ratings were all high (above the mid-point of the scale), and tended to be higher for more important endings (e.g., ending an employment received the highest rating, ending a week ended the lowest rating; Appendix Figure 3). Interestingly, the ratings of how important it is to end in a well-rounded way were at least as high as the ratings of how important the predefined stages of life were rated in general, and in some cases, even higher (Figure 4).

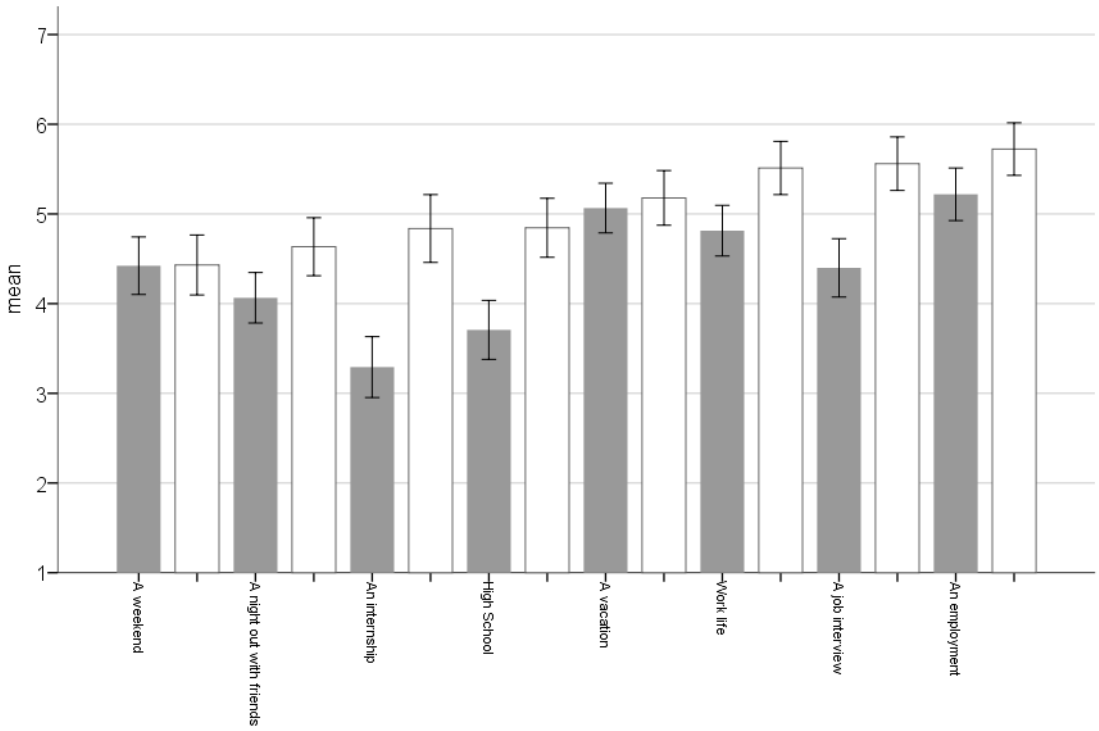


Figure 4. Preliminary Study: Participants' ratings of how important eight different life phases are (gray bars) and how important it is to end these life phases in a well-rounded way (white bars). Error bars represent +/-2 SE.

Discussion

In the preliminary Study, we asked participants what kind of endings they had already experienced in their lives, how they dealt with those endings, what endings they will face in their future and how they feel regarding these endings. They were asked how they define a well-rounded ending and which emotions they associated with a well-rounded ending.

Participants' strategies to deal with endings were diverse and ranged from actively coping with them by asking friends for support to passively coping with them by ignoring the ending. Participants seemed to have no problem with defining a well-rounded ending. Participants associated more positive than negative feelings with a well-rounded ending. The associated positive affect was more pleasant (e.g., contentedness) than active (e.g., excitement). These results are in line with the finding that people's ideal feeling, when they

have to deal with limited time, is a sense of calmness, peacefulness, and serenity instead of an exciting, positive affective state (Jiang et al., 2016; Mogilner et al., 2012).

In summary, our results show that that people do value a well-rounded ending and finding a well-rounde ending is especially important to them if the life phase is important and if significant others are involved. In the following Study-set, we aimed to test if finding a well-rounded ending is asssociated with high positive affect, low negative affect, little regret, and an easy transtiton into the subsequent phase.

Study 1: Ending a Visit Abroad

In Study 1, we sought to test if a well-rounded ending is associated with high positive affect, low negative affect, little regret, and an easy transition into the subsequent phase. We asked people who took part in an international student exchange program how well-rounded they ended their visit abroad and measured their affect regarding the ending, feelings of regret, and ease of transition to the next phase. To test if the evaluation of the ending of an experience adds more to the prediction of affect, regret, and ease of transition than the evaluation of the beginning and overall experience of the life phase, we measured how participants started into their visit abroad and how they expierenced the time overall.

We assessed several confounding variables that may be related to our outcome measures to be able to statistically account for their impact. We assessed participants' personality traits as extraversion is associated with positive affect (Rusting & Larsen, 1997; Smillie, 2013) and neuroticism is associated with negative affect (Rusting & Larsen, 1997). We assessed participants' self-control capability and habitual use of emotion regulation strategies as they are associated with positive and negative affect (Carver & Scheier, 1990; John & Gross, 2004) and regret (Kivetz & Keinan, 2006; Zeelenberg & Pieters, 2007). As social bonds play an important role in managing transitions (e.g., Cusick et al., 2012) and

could be associated with our outcome measure of ease of transition, we asked participants to evaluate their social relationships with their peers and teachers.

Method

Participants

Participants were recruited via online advertisements on the social media platforms Facebook (www.facebook.com) and Twitter (www.twitter.com), and the ERASMUS alumni newsletter from the University of Hamburg. The advertisement and the questionnaire were both in English and participants were allowed to take part in the study if they indicated that they had participated in the ERASMUS (https://eu.daad.de/de/) student exchange program. A total of 131 participants (78% female, M_{age} = 23.32 years, *SD* = 2.15, *min* = 20, *max* = 35) completed the survey in return for the offer to take part in a raffle for six 10 Euro Amazon vouchers.

Participants came from 24 different countries, most of them from Germany (43%) followed by Italy (12%). They spent their visit abroad in 19 different countries (95% member states of the European Union (EU), 5% non-EU program countries[1]), and most of them spent their year in Spain (30%), followed by Sweden (19%). They spent on average 6 months abroad (*SD* = 2.34, *min* = 1, *max* = 13), and their stay was on average 16 months ago (*SD* = 18.59, *min* = 0, *max* = 163). The temporal distance between the time participants answered the questionnaire and the ending of their visit abroad (*M* = 16 months, *SD* = 19, *min* = 0, *max* = 163) did not correlate with how well-rounded participants indicated to have ended their visit abroad, nor with affect, regret, or ease of transition (Table 3).

Materials and Procedure

After consenting to take part in the study, participants were asked to rate how they started into their visit abroad as well as how positive their overall experience was (i.e.,

[1] We also included non-European countries as the Erasmus+ Program also includes stays in countries all over the world: http://ec.europa.eu/programmes/erasmus-plus/about_en#tab-1-1.

"Please think about the beginning of your Erasmus visit abroad. How was your start?", "Please think about your whole visit abroad. How was your overall experience?"). Both questions were answered on a 7-point scale (1 = *not so good* and 7 = *very good*). We assessed these questions to test if the evaluation of the ending of an experience adds more to the prediction of the outcome variables than the evaluation of the beginning and overall experience of the stay abroad.

To activate a vivid memory of the ending, participants were asked to describe how they ended their visit abroad (i.e., "Please think about the end of your Erasmus time abroad. In a few sentences, please describe how you ended your stay abroad:…") and to note their thoughts and feelings regarding the ending (i.e., "Please note your thoughts/feelings that come to your mind when you think about the ending of your time abroad:…").

Predictor variable: Well-rounded ending. To measure how well-rounded participants had ended their visist abroad, they were asked to answer the following six self-generated items: "When I think about the ending of my time abroad… (1) I feel that all loose ends are tied up (2) I feel that I have done everything I could have done (3) I feel that I have completed something to the fullest (4) I have a feeling of completeness (5) I have a feeling of closure" (6) "Considering the end of your Erasmus stay, to what degree does it feel well-rounded?". The items were rated on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale ($\alpha = .81$).

Outcome variable: Affect. To measure positive affect, participants were asked: "When you think about the ending of your time abroad, how does it make you feel?" and to rate their positive and negative affect on the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). As people facing an upcoming ending value pleasant over excited positive affect (Jiang et al., 2016; Mogilner et al., 2012), measuring pleasant positive affect should be a more specific measure for affect in ending situations. Therefore, we extended the

PANAS to measure pleasant positive affect. We used the items *satisfied, at-ease, pleased, happy*, and *content* (Smillie et al., 2013). All items were rated on a 5-point scale (1 = *very slightly or not at all* and 5 = *extremely*). The items were combined into one scale for pleasant positive affect (5 items; α = .83), one scale for positive affect PANAS (10 items; α = .83), and one scale for negative affect PANAS (10 items; α = .78).

Outcome variable: Regret. To measure the level of regret, participants were asked to answer the following four self-generated items: "When you think about the ending of your time abroad, how much do you agree with the following statements?" (1) "I often thought with regret about the last days of my time abroad" (2) "I often thought about what I could have done differently" (3) "I wish I could travel back in time to end things differently" (4) "I had thoughts with regret." The items were rated on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale (α = .80).

Outcome variable: Ease of transition. To measure ease of transition, participants were asked to answer the following eight self-generated items: "After the ending of your time abroad, how was the transition into the next phase of your life?" (1) "I was able to move on" (2) "I had the feeling that I had a clean slate and could move forward freely" (3) "I had a smooth transition" (4) "I could start new tasks without having any problems" (5) "I had a relaxed transition to the next phase of my life" (6) "I had the feeling that I could start the following period of my life unencumbered" (7) "I didn't really know what to do" (8) "I had no idea what to do next." The items were rated on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale (α = .93).

Confounding variable: Big five personality traits. We assessed participants' personality traits with the Big-Five-Inventory 10 (Rammstedt & John, 2007). The inventory measures each of the five personality dimensions (extraversion α = .63, agreeableness α = .10, conscientiousness α = .15, neuroticism α = .78, openness to experiences α = .14) with

only two items. The scales were not used for further analyses due to the low internal consistency in three of the five personality traits.

Confounding variable: Self-control. We assessed participants' self-control skills via the Brief Self-Control Scale (Tangney, Baumeister, & Boone, 2014). The Brief Self-Control Scale consists of 13 items (e.g., "I am able to work effectively toward long-term goals.") that were rated on a 5-point scale (1 = *not at all* and 5 = *very much*) and combined into one scale ($\alpha = .81$).

Confounding variable: Emotion regulation strategies. We assessed participants' habitual use of emotion regulation strategies with the Emotion Regulation Questionnaire (Gross & John, 2003). The scale consists of 10 items assessing two different strategies: *cognitive reappraisal* (e.g., "When I want to feel more positive emotion, I change the way I'm thinking about the situation") and *expressive suppression* (e.g., "I control my emotions by not expressing them"). Items were answered on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale for cognitive reappraisal (6 items; $\alpha = .76$), and one scale for expressive suppression (4 items; $\alpha = .76$).

Confounding variable: Social bonds. We assessed the quality of participants' social bonds by asking them to evaluate the quality of their relationship before the end of their stay abroad with (1) their international friends (i.e., other ERASMUS students), (2) local friends, as well as with their (3) friends at home (i.e., "During my stay abroad the relation with my international friends/with my local friends/with my friends at home had been..."; 1 = *not so good* and 7 = *very good*).

Besides controlling for possible influence on the outcome variables affect, regret, and ease of transition, the confounding variables were also used as distractors to conceal our hypothesis and to decrease the good subject-demand effect (Orne, 1962). Therefore, the confounding variables were measured before the variables affect, regret, and ease of

transition were assessed. At the end of the questionnaire, participants were thoroughly debriefed and thanked for their participation.

Results

Simple correlations revealed that the more well-rounded participants had ended their visit abroad, the more positive was their affect ($r_{\text{pleasant}} = .52$, $p < .001$; $r_{\text{positive PANAS}} = .29$, $p < .01$), the less negative was their affect ($r = -.20$, $p = .027$), the less feeling of regret they reported ($r = -.52$, $p < .001$), and the easier was their transition into the subsequent phase ($r = .18$, $p = .045$). A multivariate test showed that there was an overall association between well-roundedness and pleasant positive affect, positive affect PANAS, negative affect PANAS, regret, and ease of transition $F(5, 109) = 12.68$, $p < .001$ $\eta_p^2 = .37$. See Table 4 for correlations and partial correlations.

Well-rounded ending and affect. To test the expected association between a well-rounded ending and affect while controlling for the assessed confounding variables, we conducted three separate two-step multiple regressions. The rating of the beginning and overall stay, self-control, reappraisal, suppression, relationship quality with international friends, local friends, and friends at home, were entered at stage one, participants' ratings of the well-rounded ending was entered at stage two. Adding well-roundedness to the regression model explained an additional 21% of the variation in *pleasant positive affect*, an additional 6% of the variation in *positive affect PANAS*, and an additional 2% of the variation in *negative affect PANAS.* The change in R^2 was significant for *pleasant positive affect*, $F(1, 116) = 35.47$, $p < .001$ and *positive affect PANAS*, $F(1, 116) = 7.86$, $p < .01$. The change in R^2 was not significant for *negative affect PANAS*, $F(1, 113) = 2.76$, $p = .099$ (Tables 5, 6, 7).

Well-rounded ending and regret. To test the expected association between a well-rounded ending and regret while controlling for the confounding variables, we conducted the same two-step multiple regression as before but entered regret as the outcome variable.

Adding well-roundedness to the regression model explained an additional 12% of the variation in regret, and this change in R^2 was significant, $F(1, 120) = 25.41$, $p < .001$ (Table 8).

Well-rounded ending and ease of transition. To test the expected association between a well-rounded ending and ease of transition while controlling for the confounding variables, we conducted the same two-step multiple regression as before but entered ease of transition as the outcome variable. Adding well-roundedness to the regression model explained an additional 3% of the variation in ease of transition, and this change in R^2 was significant, $F(1, 119) = 4.23$, $p = .042$ (Table 9).

The confounding variables self-control, reappraisal, suppression, relationship quality with international, local, and friends at home correlated in part with the outcome variables affect, regret, and ease of transition (Table 10). The correlations between the outcome variables affect, regret, and ease of transition ranged from $r = -.36$ to $r = .34$ (Table 11).

Discussion

In Study 1, we asked participants who had spent a visit abroad how well-rounded they had ended their visit and to indicate their affect, feelings of regret regarding the ending, and the ease of their transition into the subsequent phase. Results confirmed the hypothesis that a well-rounded ending is associated with high positive affect, low negative affect, little regret and an easy transition into the subsequent phase. The association between a well-rounded ending and the outcome variables held true, even when we controlled for the rating of how positive participants experienced the beginning of their visit, how positive they experienced their visit overall, their self-control capabability, emotion regulation strategies, and relationship quality with their peers abroad as well as at home. The association between a well-rounded ending and low negative affect vanished when we controlled for these variables. This finding is very interesting and fits our observation in the preliminary study:

Participants associated spontaneously more positive than negative emotions with a well-rounded ending. Therefore, positive affect may be the most suitable measure to assess participants' affect regarding a well-rounded ending.

Participants' rating of the overall experience was also correlated with the outcome variables affect, regret, and ease of transition. This association is not surprising, as the overall experience should correlate with the outcome variables, especially as the overall rating includes the ending. Interestingly, an overall positive experience was associated with a lowered ease of transition: The more positive the overall experience was, the less easy was the transition into the subsequent phase. Hence, finding a well-rounded ending could be especially important for ending positive events. The temporal distance to the ending did not correlate with the outcome variables, indicating that time alone does not heal all wounds. The correlations between the outcome variables affect, regret, and ease of transition showed small to medium effect sizes, indicating similar but distinct constructs.

In summary, Study 1 offers first support that a well-rounded ending is important for the experience of positive affect, little regret, and the transition into the subsequent phase. Interestingly, the effect on negative affect vanished when we controlled for confounding variables. We sought to test this effect in a second study to examine if this effect is only true for this specific sample. Furthermore, we found the expected associations regarding the ending of a stay abroad. To be able to draw more general conclusions we sought to replicate conceptually the findings regarding another ending and in another sample in Study 2.

Study 2: Ending High School

In Study 2, we asked participants shortly after finishing high school how well-rounded they had ended high school and measured their affect regarding the ending, feelings of regret, and ease of transition to the next phase. Ending high school is a unique ending, that is experienced only once in a person's lifetime. Additionally, it is a very important ending as

by ending high school students receive the qualification for higher education. We assessed several confounding variables to be able to account statistically for possible influences. Following Study 1, we measured students' capability for self-control capability as well as the quality of their social relationships with their peers and teachers before ending high school. Additionaly, we assessed participants final course grade. Germany has a tracked school system. Those students who finish high school after 12-13 years of school in total need to take final exams to receive a high school diploma which qualifies them for university studies. The better their final course grade, the higher are their chances to get accepted at a University. Grades are better the lower their number with 0.7 being the best possible final course grade and 4.0 the worst. As receiving a good final course grade is probably the most salient goal towards the end of high school, we assessed participants' final course grade to be able to control for it statistically.

Method

Participants

Participants were recruited via online advertisements on the social media platform Facebook (www.facebook.com). A total of 114 participants completed the survey. One participant indicated to be 29 years old. As the average age for graduating from high school ranges between 17 and 20 years, we excluded the participant with the age of 29 due to his exceptional age. The final sample included in the analysis consisted of 113 participants (61% female, M_{age} = 18.22 years, *SD* = 0.70, *min* = 17, *max* = 20). Participants could choose either to get a 5 Euro Amazon (www.amazon.de) voucher or to take part in a raffle for three 30 Euro Amazon vouchers as compensation for their participation. Participants came from ten (out of 16) different German federal states. The survey period was between July 23rd and August 16th, 2015. All participants had already graduated, most of them graduated in June

(47%) and July (46%), and only a few in March (1%), April (3%), and May (3%). One student did not indicate the month in which she graduated.

Materials and Procedure

Following Study 1, after consenting to take part in the study, participants were asked to describe how they ended their high school and to note their thoughts and feelings regarding the ending (i.e., "Please think about the end of your time at school. Please describe your associated thoughts and feelings…") in order to activate a vivid memory of the ending.

Predictor variable: Well-rounded ending. To measure how well-rounded participants had ended their high school they were asked to answer four items out of the six items used in Study 1: "When I think about the ending of my high school... (1) I feel that all loose ends are tied up, (2) I feel that I have done everything I could have done, (3) I feel that I have completed something to the fullest, (4) Considering the end of your time at school – to what degree does it feel well-rounded? With well-rounded, we mean that the ending feels round and complete." We excluded the two items (i.e., "I have a feeling of completeness", "I have a feeling of closure") from the scale as calculating the scale in Study 1 without the two items only led to a negligible change in the scales' internal consistency ($\alpha = .83$ to $\alpha = .82$). All items were answered on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one well-rounded ending scale ($\alpha = .76$).

Outcome variable: Affect. Participants' affect was measured as in Study 1. The items were combined into one scale for pleasant positive affect ($\alpha = .86$), positive affect PANAS ($\alpha = .86$), and one for negative affect PANAS ($\alpha = .83$).

Outcome variable: Regret. To measure level of regret, participants were asked to answered three items out of the four items used in Study 1: "Since graduation school... (1) I had regretful thoughts regarding the last weeks of my high school, (2) I often thought about what I could have done differently during the last weeks, (3) I wished I could travel back in

time to end things differently". The items were slightly adapted in their wording, and one item was excluded (i.e., "I had thoughts with regret"). We excluded the item as calculating the scale in Study 1 without the item only led to a negligible change in the scales' internal consistency ($\alpha = .81$ to $\alpha = .80$). The items were rated on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale ($\alpha = .77$).

Outcome variable: Ease of transition. To measure ease of transition, participants were asked to answer three out of the seven items used in Study 1: "After graduation… (1) I had the feeling that I had a clean slate and could move forward freely (2) I had a smooth transition (3) I was able to move on". The items "I could start new tasks without having any problems", "I had a relaxed transition to the next phase of my life", "I had the feeling that I could start the following period of my life unencumbered", "I didn't really know what to do", "I had no idea what to do next" were excluded as calculating the scale in Study 1 without the items only led to a negligible change in the scales' internal consistency ($\alpha = .81$ to $\alpha = .80$). The items were rated on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale ($\alpha = .77$).

Confounding variable: Self-control. Following study 1, participants' self-control skills were measured with the Brief Self-Control Scale (Tangney et al., 2014; German version by Bertrams & Dickhäuser, 2009). The 13 items were combined into one scale ($\alpha = .78$).

Confounding variable: Social bonds. We assessed the quality of participants' relationships with their peers and teachers by asking participants to evaluate the quality of their relationship with their best friends, classmates and teachers before the end of high school (i.e., "My relationship with my teachers/classmates/best friends before end of high school was..."; 1 = *not very good* and 7 = *very good*).

Confounding variable: Final course grade. Lastly, participants were asked to indicate their final course grade. We further assessed on a 7-point scale (1 = *not at all* and

7 = *very*) if participants received the final course grade they had expected (final course grade expectations: "How much did you expect the final course grade you have received") as well as how satisfied they were with their course grade (final course grade satisfaction: "How satisfied are you with your final course grade?"). At the end of the questionnaire, participants were thoroughly debriefed and thanked for their participation.

Results

Simple correlations revealed that the more well-rounded participants had ended their high school, the more positive was their affect ($r_{\text{pleasant}} = .49$, $p < .001$; $r_{\text{positive PANAS}} = .54$, $p < .001$), the less negative was their affect ($r = -.36$, $p < .001$), the less feeling of regret they reported ($r = -.35$, $p < .001$), and the easier was their transition into the subsequent phase ($r = .48$, $p < .001$). See Table 12 for correlations and partial correlations. A multivariate test showed that there was an overall association between well-roundedness and pleasant positive affect, positive affect PANAS, negative affect PANAS, regret, and ease of transition $F(5, 99) = 7.78$, $p < .001$ $\eta_p^2 = .28$.

Well-rounded ending and affect. To test the expected association between a well-rounded ending and affect while controlling for the confounding variables, we conducted three separate two-step multiple regressions. The level of self-control, final course grade, final course grade expectation, final course grade satisfaction, relationship quality with classmates, best friends, and teachers were entered at stage one, participants' ratings of the well-rounded ending was entered at stage two. Adding well-roundedness to the regression model explained an additional 13% of the variation in *pleasant positive affect*, an additional 13% of the variation in *positive affect PANAS*, and an additional 7% of the variation in *negative affect PANAS*. The change in R^2 was significant for *pleasant positive affect* $F(1, 103) = 22.18$, $p < .001$, *positive affect PANAS*, $F(1, 103) = 22.61$, $p < .001$, and *negative affect PANAS* $F(1, 103) = 10.08$, $p = .002$ (Tables 13, 14, 15).

Well-rounded ending and regret. To test the expected association between a well-rounded ending and regret while controlling for the confounding variables, we conducted the same two-step multiple regression as before but entered regret as the outcome variable. Adding well-roundedness to the regression model explained an additional 2% of the variation in regret and this change in R^2 was not significant, $F(1, 103) = 3.40$, $p = .068$ (Table 16).

Well-rounded ending and ease of transition. To test the expected association between a well-rounded ending and ease of transition while controlling for the confounding variables, we conducted the same two-step multiple regression as before but entered ease of transition as the outcome variable. Adding well-roundedness to the regression model explained an additional 11% of the variation in ease of transition, and this change in R^2 was significant, $F(1, 103) = 15.55$, $p < .001$ (Table 17).

The confounding variables self-control, final course grade, final course grade expectation, final course grade satisfaction, relationship quality with best friends, classmates, and teachers (before the end of high school) correlated in part with the outcome variables affect, regret, and ease of transition (Table 18). The correlations between the variables affect, regret, and ease of transition ranged from $r = -.49$ to $r = .54$ (Table 19).

Participants' final course grade was $M = 2.5$ ($SD = 0.6$, $min = 1.0$, $max = 3.7$). The course grade's distribution did not deviate from normal $W(94) = .98$, $p = .18$ (Shapiro-Wilk) and was similar to the nationwide final course grade in 2015[2] and the year before. Participants received on average the final course grade they had expected $M = 4.78$ ($SD = 1.61$, $min = 1$, $max = 7$), and their satisfaction with their final course grade was also above the scale's midpoint $M = 4.63$ ($SD = 2.01$, $min = 1$, $max = 7$).

Discussion

[2]Weighted average of final course grade of 15 (out of 16) states in 2015: $M = 2.43$, $Min = 2.16$ $Max = 2.59$; Weighted average of final course grade of 16 (out of 16) states in 2014: $M = 2.45$, $Min = 2.16$ $Max = 2.61$; Source: Voluntary disclosure of federal offices.

In Study 2, we asked participants after their graduation from high school how well-rounded they had ended their high school and to indicate their affect and feelings of regarding the ending, and ease of transition. Results confirmed the hypothesis that a well-rounded ending is associated with high positive affect, low negative affect, little regret and an easy transition into the subsequent phase. The association between a well-rounded ending and the outcome variables held true even when controlled for several confounding variables, such as participants' self-control, final course grade, expectations and satisfaction with their final course grade, and the quality of their relations with their teachers and peers. The association between a well-rounded ending and low regret was only significant at the 10% level, after controlling for all confounding variables. The best predictor for low regret was how satisfied participants were with their final course grade. As receiving the final course grade one is aiming for, is likely to be the most important goal when ending high school, it is not surprising that it is highly correlated with regret. Although, a correlation between well-roundedness and regret, controlled for the variable *final course grade satisfaction* (partial correlation), revealed a correlation of $r = -.24$, speaking to a meaningful association between well-roundedness and regret above final course grade satisfaction.

The confounding variables final course grade, final course grade expectation, and satisfaction correlated with the outcome variables affect, regret, and ease of transition. This finding may speak to the importance of reaching one's goals before it is too late. Students who reached their goal of a good final course grade may have ended their school in a well-rounded way and therefore reported high positive affect, low negative affect, little regret and an easy transition into the subsequent phase.

In summary, Study 2 supported our findings of Study 1 that a well-rounded ending is associated with positive affect, little regret, and an easy transition into the subsequent phase. Furthermore, we could support the findings in another population, and regarding a very

meaningful ending that happens only once in a life time (i.e., end of high school). With Study 3, we wanted to further extend these findings by testing whether or not the associations can only be found regarding normative endings such as the ending of a stay abroad or the ending of high school, or if they could also be found for an idiosyncratic ending that is either remembered as well-rounded or not well-rounded.

Study 3: Ending an Idiosyncratic Life Event

In Study 3, we asked participants to recall an event in their lives that ended in a well-rounded way or an event that did not end in a well-rounded way and then measured affect, regret, and ease of transition. Following Studies 1 and 2, we assessed participants' self-control capability and habitual use of emotion regulation strategies. Furthermore, research has shown that the two strategies *tenacious goal pursuit* and *flexible goal pursuit* are associated with managing life transitions and are predictive for well-being over the life-span (Kelly, Wood, & Mansell, 2013). As they could be associated with our outcome variables affect and ease of transition, we measured these strategies in Study 3 to be able to statistically control for their influence. Additionally, as people have a bias towards recalling more positive memories to protect their self-image (e.g., Sedikides, Green, & Pinter, 2004; Walker, Skowronski, & Thompson, 2003), asking them to report a not well-rounded ending may lead them to devaluate the reported event to protect their self-value (Crocker & Major, 1989). Therefore, we asked participants to indicate how important the reported ending was to be able to statistically control for it.

Method

Participants

Participants were recruited via the online platform MTurk (www.mturk.com). A total of 90 MTurk workers (46% female, M_{age} = 35.76 years, *SD* = 10.27, *min* = 19, *max* = 69) participated in return for payment.

Materials and Procedure

After consenting to take part in the study, participants were told that the study was about endings and how people experience endings. Participants were randomly assigned to the well-rounded condition (n = 52) or the *not* well-rounded condition (n = 38). Participants in the well-rounded condition were asked to recall and describe an ending that they experienced in their life that did end in a well-rounded way. Participants wrote for example:

> ***Participant 1***. When my family moved my time living in my old town ended. It was sad to leave a place that I called home for so many years but it worked out very well for us. All my friends got together and had a big BBQ as a kind of going away party.
>
> ***Participant 2***. When I graduated college with a bachelors degree. I was able to collect the necessary letters of recommendation that I would need if I chose to go to graduate school. I was able to achieve a high grade point average.

Participants in the *not* well-rounded condition were asked to recall and describe an ending that they experienced in their life that did not end in a well-rounded way. Participants wrote for example:

> ***Participant 1***. It would be my last high school basketball game. I was sick and was playing terrible. My coach yelled at me and I yelled back. I regret that experience to this day and that was over 30 years ago.
>
> ***Participant 2***. I got to the end of my community college life/experience and it just sort of stopped. It didn't really end properly. I got my degrees but didn't prepare anything else for afterward so I just stopped.

Participants wrote on average 90 words (SD = 64, min = 13, max = 330). Regarding word count, the well-rounded ending condition (M = 82, SD = 62) did not differ from the not well-rounded condition (M = 101, SD = 67), $t(88) = 1.34$, $p = .183$.

Manipulation check. As a manipulation check, participants were asked to the answer the same four items we used in Study 2, assessing participants' ratings of well-roundedness ($\alpha = .90$).

Outcome variables: Affect, regret, and ease of transition. The variables affect, regret, and ease of transition were measured as in Study 2. The items were combined into one scale for pleasant positive affect ($\alpha = .97$), one scale for positive affect PANAS ($\alpha = .93$), and one scale for negative affect PANAS ($\alpha = .91$). The three items measuring regret were combined into one scale ($\alpha = .86$), and the three items measuring ease of transition were combined into one scale ($\alpha = .80$).

Confounding variable: Self-control. Following Study 2, participants' self-control skills were measured with the Brief Self-Control Scale (Tangney et al., 2014). The 13 items were combined into one scale ($\alpha = .91$).

Confounding variable: Emotion regulation strategies. Following Study 1, participants' habitual use of emotion regulation strategies was measured with the Emotion Regulation Questionnaire (Gross & John, 2003). The items were combined into one scale for cognitive reappraisal (5 items; $\alpha = .93$), and one scale for expressive suppression (5 items; $\alpha = .84$).

Confounding variable: Tenacious goal pursuit and flexible goal pursuit. To assess participants' tendency for *tenacious goal pursuit* and *flexible goal pursuit,* we used a short version of the Brandstädter and Renner (1990) goal pursuit scale (Kelly et al., 2013). The *tenacious goal pursuit scale* (e.g., "Even when things seem hopeless, I keep on fighting to reach my goals") and the *flexible goal pursuit scale* (e.g., "In general, I am not upset very long about an opportunity passed") consists both of five items. All items were answered on a 5-point scale (1 = *not at all* and 5 = *very much*) and combined into one scale for tenacious goal pursuit (5 items; $\alpha = .79$) and one scale for flexible goal pursuit (5 items; $\alpha = .78$).

Confounding variable: Importance of ending. To assess the importance of the described ending, participants were asked to answer the item "How important was the ending you just described?" on a 7-point scale (1 = *not at all* and 7 = *very much*).

The confounding variables were assessed before the outcome variables affect, regret, and ease of transition were measured to conceal our hypothesis and to decrease experimental demand effects. The confounding variables were presented in randomized order. At the end of the questionnaire, participants were thoroughly debriefed and thanked for their participation.

Results

To control statistically for the impact of the confounding variables and avoid an accumulation of the alpha error, we conducted a one-way MANCOVA, with condition as independent variable, manipulation check, pleasant positive affect, positive affect PANAS, negative affect PANAS, regret, and ease of transition as dependent variables and importance of ending, self-control, emotion-control, and tenacious goal pursuit and flexible goal pursuit as covariates. Results show that there was an overall effect of condition $F(6, 77) = 17.26$, $p < .001$, Wilks' $\Lambda = .43$, $\eta_p^2 = .57$.

Manipulation check. Participants in the well-rounded condition reported that the experience they described had a more well-rounded ending ($M = 23.52$, $SD = 6.49$) than participants in the not well-rounded condition ($M = 13.00$, $SD = 6.05$), $F(1, 82) = 74.15$, $p < .001$, $\eta_p^2 = .48$.

Outcome variables: Affect, regret, and ease of transition. Participants in the well-rounded condition reported a higher pleasant positive affect $F(1, 82) = 83.32$, $p < .001$, $\eta_p^2 = .50$, higher positive affect PANAS $F(1, 82) = 25.20$, $p < .001$, $\eta_p^2 = .24$, lower negative affect PANAS $F(1, 82) = 10.95$, $p = .001$, $\eta_p^2 = .12$, lower regret $F(1,82) = 35.93$, $p < .001$, $\eta_p^2 = .31$, and an easier transition into the subsequent phase $F(1, 82) = 46.49$, $p < .001$,

η_p^2 = .36 than participants in the not well-rounded condition (see Table 20 for means and standard deviations).

The covariates emotion control strategies, *reappraisal* and *tenacious goal pursuit* also had an effect on the dependent variables. There was an effect of the strategy *reappraisal* on participants' pleasant positive affect $F(1, 82) = 12.00$, $p = .001$, $\eta_p^2 = .13$, and positive affect PANAS $F(1, 82) = 18.04$, $p < .001$, $\eta_p^2 = .18$. Furthermore, there was an effect of *tenacious goal pursuit* on pleasant positive affect $F(1, 82) = 5.83$, $p = .018$, $\eta_p^2 = .07$, positive affect PANAS $F(1, 82) = 10.30$, $p = .002$, $\eta_p^2 = .11$, regret $F(1, 82) = 4.57$, $p = .035$, $\eta_p^2 = .05$, and ease of transition $F(1, 82) = 7.08$, $p = .009$, $\eta_p^2 = .08$.

Participants did not differ in the confounding variables emotion regulation, self-control and tenacious goal pursuit and flexible goal pursuit (Table 21). However, participants in the well-rounded condition ($M = 6.27$, $SD = 1.01$) reported that the experience they described was more important than participants in the not well-rounded condition ($M = 5.71$, $SD = 1.33$), $F(1, 88) = 5.11$, $p = .026$, $\eta_p^2 = .06$.

Discussion

In Study 3, we asked one group of participants to recall and describe an idiosyncratic event that ended in a well-rounded way and another group to recall and describe an idiosyncratic event that did not end in a well-rounded way. As expected, participants who recalled an event that did end in a well-rounded way reported more positive affect, less negative affect, less regret, and an easier transition into the subsequent phase than participants who recalled an event that did not end in a well-rounded way.

In line with John and Gross (2004), the emotion control strategy reappraisal was associated with the variable positive affect. The goal pursuit strategy *tenacious goal pursuit* was associated with all three outcome variables affect, regret, and ease of transition. This may speak to the importance of acting on one's goals before it is too late: People high in

tenacious goal pursuit may have reached their goals and therefore ended more well-rounded (which consequently affects their affect, regret, and ease of transition) than participants low in *tenacious goal pursuit*.

In summary, Study 3 supported our findings from Studies 1 and 2. We could extend the findings by showing that that the association between a well-rounded ending and affect, regret, and ease of transition cannot only be found regarding normative endings such as ending a visit abroad or ending high school, but more generally, regarding an idiosyncratic ending that is remembered as well-rounded.

As memories are fallible (Schacter, 1999), we sought to replicate conceptually the findings in Study 4, by asking participants to read vignettes that described an experience that either ended well-rounded or not. The vignettes have the advantages that they allow to adjust for possible memory biases, such as the *fading affect effect* that states that negative affect associated with an experience diminishes faster than positive affect (e.g., Walker et al., 2003). Additionally, the vignettes allowed us to hold the manipulation's intensity constant between the subjects and to ensure that the stories only differed regarding the well-roundedness of the ending.

Study 4: Moving Away

In Study 4, we asked participants to read vignettes that described a life-event that ended in a well-rounded way or in a not well-rounded way and asked them to imagine to be the main character of the vignette. The first three studies showed that the association between a well-rounded ending and the outcome variables held true even when we controlled for several confounding variables. Hence, we did not include confounding variables in this study.

Method

Participants

Participants were recruited via the online platform MTurk (www.mturk.com). A total of 100 MTurk workers (47% female, M_{age} = 33.79 years, *SD* = 10.15, *min* = 19, *max* = 67) completed the study in return for payment.

Materials and Procedure

After consenting to take part in the study, participants were told that the study is about life experiences. Participants were asked to read a story about an experience a fictional character had had in his/her life and to imagine that they were the fictional character and that they had had this experience. Participants were randomly assigned to the well-rounded condition (*n* = 43) or the not well-rounded condition (*n* = 57). Participants in the well-rounded condition read a story with a well-rounded ending:

> Recently, I moved away from my hometown where I grew up because I was offered a new position in another state. It was a once in a lifetime opportunity, so I just had to do it. The move was organized very well, so I was able to complete all tasks and did not have to leave anything unfinished. I managed to throw a goodbye party and therefore got to say goodbye to my friends and coworkers.

Participants in the *not* well-rounded condition read the same story participants in the well-rounded condition read, but the ending in this story was described as not well-rounded:

> Recently, I moved away from my hometown where I grew up because I was offered a new position in another state. It was a once in a lifetime opportunity, so I just had to do it. The move was *not* organized very well, so I was *un*able to complete all tasks and *had* to leave *a lot of things* unfinished. I did *not* manage to throw a goodbye party and therefore *did not get* to say goodbye to my friends and coworkers.

Manipulation check. As a manipulation check, participants were asked to the answer the same four items we used in Study 2, assessing participants' ratings of well-roundedness ($\alpha = .96$).

Outcome variables: Affect, regret, and ease of transition. The variables affect, regret, and ease of transition were measured as in Study 2. The items measuring affect were combined into one scale for pleasant positive affect ($\alpha = .98$), one scale for positive affect PANAS ($\alpha = .94$), and one scale for negative affect PANAS ($\alpha = .88$). The three items measuring regret were combined into one scale ($\alpha = .96$), and the three items measuring ease of transition were combined into one scale ($\alpha = .92$). At the end of the questionnaire, participants were thoroughly debriefed and thanked for their participation.

Results

We conducted a one-way MANOVA, with the condition as the independent variable and the manipulation check, pleasant positive affect, positive affect PANAS, negative affect PANAS, regret, and ease of transition as dependent variables. There was an overall effect of condition $F(6, 93) = 68.63$, $p < .001$, Wilks' $\Lambda = .20$, $\eta_p^2 = .82$.

Manipulation check. Participants in the well-rounded ending condition reported that the experience they read about had a more well-rounded ending ($M = 24.28$, $SD = 3.08$) than participants in the not well-rounded condition ($M = 9.44$, $SD = 4.77$), $F(1, 98) = 318.25$, $p < .001$, $\eta_p^2 = .76$.

Outcome variables: Affect, regret, and ease of transition. Participants in the well-rounded condition reported a higher pleasant positive affect $F(1, 98) = 128.25$, $p < .001$, $\eta_p^2 = .57$, higher positive affect PANAS $F(1, 98) = 42.04$, $p < .001$, $\eta_p^2 = .30$, lower negative affect PANAS $F(1, 98) = 39.64$, $p < .001$, $\eta_p^2 = .29$, less regret $F(1, 98) = 269.67$ $p < .001$, $\eta_p^2 = .73$, and an easier transition into the subsequent phase $F(1, 98) = 149.94$, $p < .001$,

$\eta_p^2 = .61$ than participants in the not well-rounded condition (see Table 22 for means and standard deviations).

Discussion

In Study 4, participants read a vignette about an experience that either ended well-rounded or not. As expected, participants who were asked to take the perspective of the fictional character who experienced a well-rounded ending reported more positive affect, less negative affect, less regret, and an easier transition into the subsequent phase than participants who were asked to take the perspective of the fictional character who experienced a not well-rounded ending. Study 4 supports our findings from Studies 1 to 3 and extends the findings by showing that the effects are not only driven by memory effects.

As preceding items impact the answers to subsequent questions (Schwarz & Strack, 1991), we aimed to replicate Study 4 without the manipulation check. Leaving the manipulation check out allowed us to test if the results were only driven by making the concept of a well-rounded ending salient or if the results can also be found by the stories alone.

Study 5: Moving Away: Eliminating Effects of the Manipulation Check

In Study 5, we used the same materials used in Study 4, except for the manipulation check, which was left out.

Method

Participants

Participants were recruited via the online platform MTurk (www.mturk.com). A total of 103 MTurk workers (43% female, M_{age} = 39.01, *SD* = 10.15, *min* = 19, *max* = 71) participated in return for payment.

Materials and Procedure

After consenting to take part in the study, participants were told that the study is about life experiences. Participants were randomly assigned to the well-rounded condition (n = 54) or the not well-rounded condition (n = 49) and read the same vignettes used in Study 4.

Outcome variables: Affect, regret, and ease of transition. The variables affect, regret, and ease of transition were measured as in Study 2. The items measuring affect were combined into one scale for pleasant positive affect (α = .96), one scale for positive affect PANAS (α = .95), and one scale for negative affect PANAS (α = .85). The three items measuring regret were combined into one scale (α = .90), and the three items measuring ease of transition were combined into one scale (α = .84). At the end of the questionnaire, participants were thoroughly debriefed and thanked for their participation.

Results

We conducted a one-way MANOVA, with condition as independent variable and pleasant positive affect, positive affect PANAS, negative affect PANAS, regret, and ease of transition as dependent variables. There was an overall effect of condition $F(5, 95) = 25.56$, $p < .001$, Wilks' $\Lambda = .43$, $\eta_p^2 = .57$. Participants in the well-rounded condition reported higher pleasant positive affect $F(1, 99) = 82.35$, $p < .001$, $\eta_p^2 = .45$, higher positive affect PANAS $F(1, 99) = 32.38$, $p < .001$, $\eta_p^2 = .25$, lower negative affect PANAS $F(1, 99) = 23.93$, $p < .001$, $\eta_p^2 = .20$, less regret $F(1, 99) = 90.95$, $p < .001$, $\eta_p^2 = .48$, and an easier transition into the subsequent phase $F(1, 99) = 86.19$, $p < .001$, $\eta_p^2 = .47$ than participants in the not well-rounded condition (see Table 22 for means and standard deviations).

Discussion

In Study 5, we used the same procedure used in Study 4 but without the manipulation check. As expected, participants who were asked to take the perspective of the fictional character that experienced a well-rounded ending reported more positive affect, less negative affect, less regret, and an easier transition into the subsequent phase than participants who

were asked to take the perspective of the fictional character that experienced a not well-rounded ending. With Study 5 we could replicate the findings of Study 4 and furthermore conclude that the effects are not only due to making the concept of a well-rounded ending salient to the participants.

Our measurements in Studies 1 to 5 were all based on self-report. Even though self-report is an often-used and direct measurement (Paulhus & Vazire, 2007), self-reported behavior does not necessarily translate into real behavior (Kormos & Gifford, 2014). This concern may pertain mostly to our outcome variable ease of transition. Therefore, with Study 6 we aimed to replicate conceptually Study 5 and to extend the findings by additionally assessing ease of transition with a behavioral measure.

Study 6: Ending a Party

In Study 6, we asked participants to read vignettes that described a life-event (i.e., the wedding party of a friend) that either ended well-rounded or not and asked them to imagine to be the main character of the vignette. Contrary to Studies 4 and 5, we measured ease of transition not only via self-report but also with a behavioral measure. Not ending well-rounded should lead to reparative behavior, trying to make up for the not well-rounded ending and to get the feeling of closure afterwards to be able to move on with the new tasks the subsequent phase imposes. Therefore, we assessed in Study 5 how much participants showed reparative behavior (i.e., sending a text message after leaving a party not well-rounded). We hypothesized that participants in the well-rounded condition show less reparative behavior than participants in the not well-rounded condition.

We were further interested if a well-rounded (vs. a not well-rounded ending) is reflected in the text messages' content. As a well-rounded ending is indicated by a feeling of completion, participants in the well-rounded condition should be less past oriented (i.e., writing in past tense and referring to past events) than participants in the not well-rounded condition. Furthermore,

a well-rounded ending is associated with high positive affect and low negative affect and little regret. Therefore, we expect participants in the well-rounded condition to express in their text messages more positive emotions, less negative emotions and less regret than participants in the not well-rounded condition. As a well-rounded ending should ease the transition into the subsequent phase, participants should show less cognitive involvement (i.e., using words like cause, know, ought) following the ending than participants in the not well-rounded condition. Furthermore, as frequent use of the first-person singular in a written text is associated with reporting stressful life events (Boals, 2005; Pennebaker & Lay, 2002) and experiencing psychological distress (Boals, 2005), we expect participants in the well-rounded condition to write less in the first-person singular than participants in the not well-rounded condition.

We analyzed participants' text messages with the Linguistic Inquiry and Word Count Program (LIWC; Pennebaker, Booth, Boyd, & Francis, 2015). The program compares each word of a given text against an internal dictionary that consists of more than 6,400 words, word stems, and select emoticons (emoticons are pictorial signs of facial expressions, e.g., :-) a smiley). Each word of the dictionary is assigned to one or several linguistic categories. For example, the word *cried* is assigned to five different categories: sadness, negative emotion, overall affect, verb, and past focus. The reported score is the number of words in a given category relative to the total words in a given text. For example, a score of 3.60 in the *positive emotions category* means that 3.60% of all the words were detected as positive emotional words (e.g., love, nice, sweet).

We analyzed participants' texts regarding the categories *past focus* (as an indicator for closure), *positive emotions* (as an indicator for positive affect), *negative emotions* (as an indicator for negative affect, including feelings of regret), *cognitive processes* (as an indicator for ease of transition), and *first-person-singular* (as an indicator for reporting a stressful life event) of the Linguistic Inquiry and Word Count Program (LIWC; Pennebaker et al., 2015).

Method

Participants

Participants were recruited via the online platform MTurk (www.mturk.com). A total of 474 Mturk workers (58% female, M_{age} = 36.01 years, *SD* = 11.77, *min* = 18, *max* = 80).

Materials and Procedure

After consenting to take part in the study, participants were told that the study was about life experiences. Participants were asked to read a story about an experience a fictional character had had in his/her life and to imagine that they were the fictional character and that they had had this experience. Participants were randomly assigned to the well-rounded condition (*n* = 235) or the not well-rounded condition (*n* = 239). Participants in the well-rounded condition read a story with a well-rounded ending:

> ***Well-rounded ending***. Your best friend asked you to be his best man/her bridesmaid. Today is the day of the wedding. The ceremony went great and people were having a great time. Time flew by and now it's already 4.30 am in the morning. The party is over, and everyone is leaving. You are very tired. So you get up from your chair, look for your friend in the crowd of wedding guests, say good bye and take the next cab that drives you home.

Participants in the not well-rounded condition read the same story but with a not well-rounded ending:

> ***Not well-rounded ending***. Your best friend asked you to be his best man/her bridesmaid. Today is the day of the wedding. The ceremony went great and people were having a great time. Time flew by and now it's already 4.30 am in the morning. The party is over, and everyone is leaving. You are very tired. So you get up from your chair, *don't* look for

your friend in the crowd of wedding guests, *don't* say good bye and take the next cab that drives you home.

Manipulation check. As a manipulation check, participants were asked to answer the same items we used in Study 2, except for the item "To what degree does the ending feel well-rounded?". The item was excluded to avoid the effects on the outcome variables being only driven by making the concept of a well-rounded ending salient. The items were combined into one scale (3 items; $\alpha = .93$).

Outcome variables: Affect and regret. Affect and regret were measured as in Study 2 and combined into one scale for pleasant positive affect ($\alpha = .93$), positive affect PANAS ($\alpha = .92$), and negative affect PANAS ($\alpha = .91$). The three items were combined into one scale ($\alpha = .95$).

Outcome variable: Ease of transition. To measure ease of transition, we asked participants to answer the following item: "On your way home in the cab - would you write your best friend a text message?" on a 7-point scale (1 = *very unlikely* and 7 = *very likely*). To receive a behavioral measure for ease of transition participants were given the option to write a text message. We took participants' intention to write, their actual behavior if they wrote a text message, and how much they wrote (word count) as an indicator for ease of transition.

Outcome variable: Text analysis. We analyzed participants' texts regarding the categories *past focus* (as an indicator for closure), *positive emotions*, *negative emotions* (including feelings of regret), *cognitive processes* (as an indicator for ease of transition), and *first-person-singular* (as an indicator for reporting a stressful life event) of the Linguistic Inquiry and Word Count Program (LIWC; Pennebaker et al., 2015). To avoid order effects (Schwarz & Strack, 1991), the manipulation check, affect, regret and ease of transition were presented in randomized order. At the end of the questionnaire, participants were thoroughly debriefed and thanked for their participation.

Results

We conducted a one-way MANOVA, with the condition as the independent variable, manipulation check, affect, regret and ease of transition (self-reported likelihood of sending a text message) as dependent variables. There was an overall effect of condition $F(6, 467) = 64.17$, $p < .001$, Wilks' $\Lambda = .55$, $\eta_p^2 = .45$.

Manipulation check. Participants in the well-rounded ending condition reported that the experience they read had a more well-rounded ending ($M = 16.70$, $SD = 4.07$) than participants in the not well-rounded condition ($M = 10.98$, $SD = 5.41$), $F(1, 472) = 168.77$, $p < .001$, $\eta_p^2 = .26$.

Outcome variables: Affect, regret, and ease of transition. Participants in the well-rounded condition reported higher pleasant positive affect $F(1, 472) = 162.20$, $p < .001$, $\eta_p^2 = .26$, higher positive affect PANAS $F(1, 472) = 86.00$, $p < .001$, $\eta_p^2 = .15$, lower negative affect PANAS $F(1, 472) = 89.01$, $p < .001$, $\eta_p^2 = .16$, less regret $F(1, 472) = 193.60$, $p < .001$, $\eta_p^2 = .29$, and an easier transition into the subsequent phase (measured via self-reported likelihood of sending a text message) $F(1, 472) = 99.67$, $p < .001$, $\eta_p^2 = .17$ than participants in the not well-rounded condition (see Table 23 for means and standard deviations).

Furthermore, participants in the well-rounded condition not just indicated that they would be less likely to write a text message but they actually wrote fewer text messages than participants in the not well-rounded condition χ^2 $(1, N = 474) = 25.93$, $p < .001$ (73% in the well-rounded condition and 91% in the not well-rounded condition wrote a text message).

As only some participants (82%, $n = 387$) wrote a next message, we conducted a separate MANOVA in which we included the same variables of the first MANOVA but instead of the self-reported likelihood of writing a text message, we included the variable word count as a measurement for ease of transition and left out the manipulation check. There was an overall effect of condition $F(5, 381) = 57.70$, $p < .001$, Wilks' $\Lambda = .57$, $\eta_p^2 = .43$.

Participants in the well-rounded condition reported higher pleasant positive affect $F(1, 385) = 150.13$, $p < .001$, $\eta_p^2 = .28$, higher positive affect PANAS $F(1, 385) = 112.10$, $p < .001$, $\eta_p^2 = .23$, lower negative affect PANAS $F(1, 385) = 75.02$, $p < .001$, $\eta_p^2 = .16$, less regret $F(1, 385) = 153.59$, $p < .001$, $\eta_p^2 = .29$, and an easier transition into the subsequent phase (measured via word count) $F(1, 385) = 35.21$, $p < .001$, $\eta_p^2 = .08$ than participants in the not well-rounded condition (see Table 23 for means and standard deviations).

Outcome variable: Text analysis. We conducted a one-way MANOVA, with condition as independent variable and the LIWC categories past focus, positive emotions, negative emotions, cognitive processes, and first-person-singular as dependent variables. There was an overall effect of condition $F(5, 381) = 20.36$, $p < .001$, Wilks' $\Lambda = .79$, $\eta_p^2 = .21$. Participants in the well-rounded condition wrote less about the past $F(1, 385) = 34.74$, $p < .001$, $\eta_p^2 = .08$, more about positive emotions $F(1, 385) = 32.37$, $p < .001$, $\eta_p^2 = .08$, less about negative emotions $F(1, 385) = 29.08$, $p < .001$, $\eta_p^2 = .07$, wrote less words indicating cognitive involvement $F(1, 385) = 8.30$, $p = .004$, $\eta_p^2 = .02$, and wrote less in the first-person-singular $F(1, 385) = 49.58$, $p < .001$, $\eta_p^2 = .11$ than participants in the not well-rounded condition (see Table 23 for means and standard deviations).

Discussion

Study 6 replicated conceptually and extended the findings of Studies 4 and 5. Participants read a vignette about an experience that either ended well-rounded or not. As expected, participants who took the perspective of the fictional character who did end in a well-rounded way, reported more positive affect, less negative affect, less regret, and an easier transition into the subsequent phase than participants who took the perspective of the fictional character who did not end in a well-rounded way. In this study, we showd that the effects of a well-rounded ending can not only be found regarding self-reported measures but also regarding participants' behavior regarding a scenario (the vignette). Participants in the

well-rounded condition indicated that they would be less likely to write a text message after leaving their friend's wedding party. And indeed, when given the opportunity to write a text message, they were less likely to write a text message.

Furthermore, analyzing the text messages regarding their content revealed the expected differences between those sent by participants in the well-rounded condition from those sent by participants in the not well-rounded condition. First, text messages from participants in the well-rounded condition were less focused on the past than the text messages from participants in the not well-rounded, indicating a higher feeling of completion.

Second, participants in the well-rounded condition (compared to participants in the not well-rounded condition) wrote in a more positive tone, less negative tone and less regretful (indicated by the negative emotions category that includes regret-related words).

Third, their text messages showed less cognitive involvement, indicating an easier transition into the subsequent phase. Furthermore, participants in the well-rounded condition wrote less about themselves, indicating that they experienced less psychological distress than participants in the not well-rounded condition.

In Studies 1 to 6, we asked participants to recall or imagine an ending. To be able to draw more causal conclusions, we sought to let participants experience a well-rounded ending versus a not well-rounded ending. Therefore, in Study 7 we sought to extend our findings by assessing participants' behavior to a real scenario by letting them experience a well-rounded ending versus a not well-rounded ending.

Study 7: Ending a Conversation

In Study 7, by creating an ending situation in the controlled setting of a lab, we let participants experience a well-rounded ending versus a not well-rounded ending while controlling for possible confounding variables. This design allows stronger causal conclusions. We induced a well-rounded ending versus a not well-rounded ending. Following

Study 6, we assessed ease of transition with a behavioral measure. Participants in the well-rounded condition should be able to fully concentrate on the next task, whereas participants' thoughts in the not well-rounded condition should shift away from the demands of a subsequent task to the unfulfilled goal of not having ended in a well-rounded way (e.g., Klinger, 1975, 1990; Savitsky et al., 1997; Singer, 1966; Smallwood, 2010). As a higher reaction time is an indicator of a higher cognitive load (Brünken, Steinbacher, Plass, & Leutner, 2002), we expected participants in the well-rounded condition to show shorter reaction times in a subsequent reaction-time task than participants in the not well-rounded condition. Furthermore, one indicator for the mental shift away from a task at hand to one's thoughts is the participants' reaction time coefficient of variability (RTCV; Bastian & Sackur, 2013). Higher RTCV reflects higher fluctuations in performance. Therefore, we used a reaction time paradigm to measure ease of transition. The outcome variable of interest were participants' reaction times and response time coefficient of variability (RTCV).

As we wanted participants to think that the reaction time task is unrelated to the first task, they were told that they would participate in a pilot study, assessing participants color perception dependent on their favorite color. Therefore, we used the Stroop task (MacLeod, 1991; Stroop, 1935) to get a measure of participants' reaction times.

Method

Participants

A total of 64 students from the University of Hamburg took part in the study in return for payment. In this study, we used as reaction time paradigm to measure ease of transition. As reaction times interferes with age (e.g., Comalli, Seymour, & Werner, 1962; Hultsch, MacDonald, & Dixon, 2002; MacLeod, 1991) we set an age limit for the Study (18-40 years). Two participants did not meet this criterion (49 years and 55 years) and were excluded from

the analysis. The final sample consisted of 62 participants (86% female, M_{age} = 25.27 years, *SD* = 4.66, *min* = 19, *max* = 40).

Materials and Procedure

After consenting to take part in the study, participants sat in a cubicle and were told that the study's aim was to investigate how people get to know each other. Therefore, their first task was to try to get to know another person. The other person was a female confederate who was blind to the condition and hypothesis of the study. Participants and the confederate sat in separate cubicles and were connected to each other via Skype (www.skype.com). Participants were only connected via audio and could not see each other. They were told that they would have 10 minutes to get to know the other person. Participants were randomly assigned to the well-rounded condition (*n* = 30) or the not well-rounded condition (*n* = 32). Two minutes before the 10 minutes ended, participants in the well-rounded condition received a message warning them that they had only two minutes left and that they should try to end the call well-rounded. Participants in the not well-rounded condition did not receive a warning. The Skype-session ended automatically after 10 minutes.

Manipulation check. As a manipulation check, participants were asked to answer the same four items we used in Study 2, assessing participants' ratings of well-roundedness (α = .83).

Outcome variable: Affect. Affect was measured as in Study 2 and combined into one scale for pleasant positive affect (α = .84), positive affect PANAS (α = .89), and negative affect PANAS (α = .83).

Outcome variable: Regret (anticipated). To measure regret, participants answered the three items we used in Study 2, and one additional item. The items were slightly adapted to assess how they think they will feel in the following hours (i.e., "Think about the next hours - how much do you agree with the following statements: I will think remorsefully about

the end of the conversation (additional item); I will think about what I could have done differently; I will wish that I could go back in time to end the conversation differently; I will be upset that I couldn't finish the conversation"). The four items were answered on a 5-point scale (1 = *not at all* and 5 = *very much*) and combined into one scale (α = .62).

Outcome variable: Ease of transition (anticipated). To measure ease of transition, participants answered three items in which they were asked to think about the following hours and to imagine how they will feel (i.e., "Think about the next hours - how much do you agree with the following statements: I will have the feeling of leaving something unfinished and therefore feel an emotional drain while working on the next tasks; I will think of the conversation even if I am actually busy with something else; I will move on to the next item on my agenda without thinking further about the conversation"). The three items were answered on a 5-point scale (1 = *not at all* and 5 = *very much*) combined into one scale (α = .56).

Outcome variable: Ease of transition (behavioral measure). To get a measure of participants' reaction times, they were given a Stroop task (MacLeod, 1991; Stroop, 1935). Participants indicated the color of a word stimulus (RED, GREEN, BLUE, and BLACK) as quickly as possible by using one of four response keys (d,f,j,k). The word's meaning was compatible with its color in congruent trials (e.g., 'BLUE' was written in blue ink), and incompatible in incongruent trials (e.g., 'BLUE' was written in red ink). The stimuli words were written in capital letters and presented on a white background. The stimuli were presented until participants answered to the stimuli, inter-trail-interval was 200 milliseconds. Before participants started the Stroop task, they took one test trail. Participants completed four blocks with a break after two blocks. Each block consisted of 80 trails with 40 congruent and 40 incongruent trails. The order of presentation was random; stimuli repetition was possible.

All trials with response times shorter than 150 ms and response times that were greater than three interquartile range of the median (Tukey, 1977) were excluded to avoid invalid outliers. An overall RTCV score was calculated (standard deviation/mean) for the four blocks (Flehmig, Steinborn, Langner, Scholz, & Westhoff, 2007). At the end of the questionnaire, participants were thoroughly debriefed and thanked for their participation.

Results

We conducted a one-way MANOVA, with the condition as the independent variable and the manipulation check, pleasant positive affect, positive affect PANAS, negative affect PANAS, anticipated regret, anticipated ease of transition, and the behavioral measure of ease of transition (RTCV and overall reaction time) as dependent variables. There was an overall effect of condition $F(8, 53) = 2.30$, $p = .034$, Wilks' $\Lambda = 0.74$, $\eta_p^2 = .26$.

Manipulation check. Participants in the well-rounded ending condition reported that the experience they described had a more well-rounded ending ($M = 0.30$, $SD = 0.96$) than participants in the not well-rounded condition ($M = -0.28$, $SD = 0.97$), $F(1, 60) = 5.70$, $p = .020$, $\eta_p^2 = .09$.

Outcome variables: Affect, regret, and ease of transition. Participants in the well-rounded condition reported higher pleasant positive affect $F(1, 60) = 6.47$, $p = .014$, $\eta_p^2 = .10$ and higher positive affect PANAS $F(1, 60) = 7.23$, $p = .009$, $\eta_p^2 = .11$. There was no effect of condition on negative affect PANAS $F(1, 60) < 0.00$, $p = .949$, $\eta_p^2 < .00$, anticipated regret $F(1, 60) = 0.11$ $p = .746$, $\eta_p^2 < .00$, and no effect on anticipated ease of transition $F(1, 60) < 0.00$, $p = .99$, $\eta_p^2 < .00$. Although, there was a difference between the conditions regarding the behavioral measure: participants in the well-rounded condition showed lower RTCV $F(1, 60) = 7.64$, $p = .008$, $\eta_p^2 = .11$ and shorter overall reaction time $F(1, 60) = 4.66$, $p = .035$, $\eta_p^2 = .07$ (see Table 24 for means and standard deviations.)

Discussion

In Study 6, participants either experienced a well-rounded ending or not: Participants in the well-rounded condition were given a chance to end a conversation well-rounded whereas participants in the not well-rounded condition were not given that chance. As expected, participants in the well-rounded condition reported more positive affect than participants in the not well-rounded condition. Contrary to Studies 4 to 6, but similar to Study 1 there was no difference between the two groups regarding negative affect. The finding that the changes in negative affect were not observed in two out of seven studies may be due to our manipulations. It may be that participants in the not well-rounded condition ended in a way that was not unpleasant enough to experience high negative affect.

Furthermore, the two conditions did not differ regarding anticipatory regret and anticipatory ease of transition. Research shows that anticipatory emotions can be inaccurate in both directions - over and underestimated (Dorval et al., 2000; Loewenstein & Schkade, 1999). Therefore, this result may reflect people's difficulties projecting themselves into the future. This could be avoided in future studies by asking participants a few hours following the experiment to indicate their feelings of regret and ease of transition. Another possibility would be to use different items to assess anticipatory regret and ease of transition. The internal consistencies of the scales assessing those two constructs were relatively low in this study (scale anticipated regret $\alpha = .62$, scale anticipated transition $\alpha = .56$), whereas they showed good internal consistency in the previous studies.

Importantly, operationalizing ease of transition with a behavioral measure lead to the expected results that ending well-rounded eases the transition into the subsequent phase, indicated by shorter and more consistent reaction times in a subsequent task. This finding supports our assumption that a well-rounded ending allows a person to start with the new phase unencumbered.

General Discussion Study-set 1

We examined in seven studies if a well-rounded ending is associated with high positive affect, low negative affect, little regret, and an easy transition into the subsequent phase. Studies 1 and 2 showed with a correlational design that a well-rounded ending is associated with positive affect, low negative affect, little regret, and an easy transition into the subsequent phase. The more well-rounded students experienced the end of a visit abroad, or their high school graduation, the more positive was their affect, the less negative was their affect, the less regret they reported, and the easier was their transition into the subsequent phase. Study 3 extended the findings of Study 1 and 2 by showing that these effects could not only be found regarding normative endings but also regarding an idiosyncratic ending that is remembered as well-rounded or not. Importantly, the association between a well-rounded ending and affect, regret, and ease of transition held true even when we controlled for relevant confounding variables.

Studies 4 to 6 replicated the findings of Studies 1 to 3 and compensated for possible biases in memory effects by providing all participants with the same experience, instructing them to imagine they had made this experience. In Study 4, participants were asked to read a vignette about a well-rounded ending or a not well-rounded ending. Subsequently, affect, regret, and ease of transition were measured. Study 5 replicated the findings of Study 4 and showed that the effects stayed substantial when the manipulation check was removed. Study 6 replicated conceptually and extended the findings of Studies 4 and 5 by showing that the association between a well-rounded ending and ease of transition can also be found in a behavioral measure. Finally, Study 7 complemented Studies 1 to 6 by letting participants experience (instead of recalling or imagining) a well-rounded ending or not in a controlled laboratory setting. Study 7 revealed that ending a conversation well-rounded leads to more positive affect and easy transition into the subsequent phase.

The seven studies were methodologically diverse: We used a correlative as well as experimental design. Studies 1 to 6 were conducted online, and with Study 7 we showed that the effects could also be found in a controlled laboratory setting. We found the expected results regarding two very meaningful life-transitions (i.e., end of spending a visit abroad, end of high school), as well as regarding smaller endings (i.e., moving away, end of a party, end of a conversation), we found the expected effects in a European sample (Study 1), German samples (Studies 2 and 7), and samples from the Unites States (Studies 3 to 6), with an age range from 17 to years 80.

To receive an estimate on the effect size of our manipulations on the outcome variables, we conducted three separate meta-analyses using the MAVIS Meta-Analysis via Shiny software (Version 2.1; Hamilton, Aydin, & Mizumoto, 2014). We used random effects models due to the heterogeneity of the study populations. Within the Studies 3 to 7 the overall effect size of a well-rounded ending on pleasant positive affect was *Hedges's g* = 1.58 [1.03, 2.12], on positive affect PANAS *Hedges's g* = 0.79 [0.41, 1.17] and on negative affect PANAS *Hedges's g* = 0.79 [0.41, 1.17] based on *k* = 5 tests involving 829 participants (Figure 5, 6, 7). The overall effect size of a well-rounded ending on regret was *Hedges's g* = 1.56 [0.57, 2.56] based on *k* = 5 tests involving 829 participants (Figure 8). The overall effect size of a well-rounded ending on ease of transition was *Hedges's g* = 1.41 [0.75, 2.10] based on *k* = 5 tests involving 829 participants (Figure 9). For Study 5 and 6, we only included the behavioral measures of ease of transition into the analysis (Study 5: word count; Study 6: RTCV). Tests for heterogeneity showed that the effect sizes different heavily between the fives studies, I^2 was greater than 80% in meta-analysis except for the analysis for positive affect PANAS (I^2 = 36%). One explanation for these differences may be that the manipulations and measurements of the dependent variables varied between studies. For example, measuring ease of transition not via self-report but via a behavioral measure

(Study 6) decreased the effect size. If we reran the analysis for the effect on pleasant positive affect and included only Studies 3 to 5, that were similar in the manipulation and measurement of the dependent variable, the heterogeneity test was not significant and I^2 was only 14%. However, these explanations are post hoc explanations and further studies should be conducted to get a more reliable assessment of the association between a well-rounded and affect, regret, and ease of transition and to test for possible moderators (e.g., importance or repeatability of the ending).

In summary, we showed across seven studies that a well-rounded ending is associated with high positive affect, low negative affect, little regret, and an easy transition into the subsequent phase. The findings point to the importance of experiencing an ending as well-rounded for the regulation of emotion and the ease of transition into the subsequent phase.

Limitations and Future Research

Future research could complement our findigns with studies using a longitudinal design. The well-roundedness of an ending could be measured (for example with an ambulatory assessment) right after a life phase comes to an end and the variables affect, regret, and ease of transition continiously over the following weeks. Likewise, additional experimental studies could be conducted to replicate the findings of Study 6 and to add further evidence for causal conclusions. To be able to draw more general conclusions, endings in childhood (e.g., end of primary school) as well as in older age (e.g., end of professional life) should be investigated.

Although we included behavioral measures, most of our dependent variables were assessed via self-report. Self-report measures are limited to assessing conscious processes and can be biased, for example, due to social desirability or social approval (Adams et al., 2005; Nederhof, 1985). Therefore, future studies could extend our findings by focusing on measuring, especially ease of transition, with behavioral measures.

Many of the endings we experience in our lives include other people (e.g., end of high school) and participants in our preliminary study indicated that it is especially important to them to end well-rounded if significant others are involved. Future studies could investigate the role of styles of attachment (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969, 1973, 1980) in ending situations to shed a more differentiated light on possible social interactions.

Implications

As we deal with endings repeatedly, we should try to end on a positive note and support people in doing so. This may be relevant in several life domains. For example, schools could prepare their students for their upcoming graduations. They could emphasize the upcoming ending and support their students to find a well-rounded ending. As we found effects even for small endings (i.e., a conversation with a stranger), schools may consider supporting not only the final ending (e.g., end of high school), but supporting students also in ending a school day, or a lesson well-rounded. Another example might be companies that retire their employees. They could add to their employees' well-being by preparing them for the ending of their work life, actively shaping the final months of their employment and support them to find a well-rounded ending. Moreover, similar to schools – companies may also consider ending a work day well-rounded. Ending a work day well-rounded may not only ease the transition into the employee's evening, but also alleviate the start into the next work day. A further example is ending in psychotherapy. Psychotherapists have addressed the issue of how to end in psychotherapy, reporting about best practices and guidelines on how and when to end well in psychotherapy (Edwards, 1997; Goode, Park, Parkin, Tompkins, & Swift, 2016; Tsai, Gustafsson, Kanter, Loudon, & Kohlenberg, 2016; Vidair, Feyijinmi, & Feindler, 2016). It is important to note that we did not investigate the question of when one should end a certain situation or when a person should disengage (e.g., when to end a

psychotherapy). Especially practical psychotherapists raised the question of *when to end* in their reports. The process of deciding to disengage and to set an ending is an entirely distinct process. Even though, once the decision is made and a date for an ending is set, the processes may be the same for a self-set ending or an ending that was set for the individual.

In summary, using the remaining time to end well-rounded is a good advice to increase positive affect, decrease regret, and ease the transition into the subsequent phase. Future research should expand these findings and most importantly, find a way to support people in reaching their goals and a well-rounded ending. Therefore, in Study-set 2 we sought to investigate how we can support people in ending in a well-rounded way.

Mental Contrasting as a Self-Regulatory Strategy to find Well-Rounded Endings

We may have many wishes we would like to fulfill. However, our resources (e.g., time, energy, effort) are limited, and we have to decide which wishes we strive for and which one we postpone or even disengage from. Especially in the face of an upcoming ending, when time is precious, wise resource management is needed to get the most out of the remaining time. Using the remaining time by investing one's resources in wishes that can be realized and invest only little, or even refrain from investing in wishes that are unlikely to be fulfilled within the remaining time, should be an effective strategy to achieve the feeling of having done everything that could be done and to find a well-rounded ending. Mental contrasting is a cognitive strategy that fosters selective goal pursuit (Oettingen, 2000, 2012). Thus, mental contrasting may be a suitable strategy to support people to deal with upcoming endings.

Mental Contrasting

In mental contrasting a person identifies a desired future (e.g., having a last family dinner before moving out) and then envisions having attained this wished for future (e.g., feeling happy). Following, this desired future is contrasted with obstacles in the current

reality that may prevent the person from realizing the desired future (e.g., procrastinating). Contrasting the desired future with the obstacles in the here and now connects future and reality and reveals that to reach the desired future, obstacles in the current reality need to be overcome. The question of whether the person can overcome the obstacles arises. This in turn activates a person's expectations of success, as they are based on past experiences and a valid predictor of future success (Bandura, 1997). Following, expectations of success guide subsequent goal commitment and goal pursuit: High expectations lead to strong goal commitment and goal pursuit, low expectations lead to weak goal commitment and goal pursuit or even disengagement (Oettingen, 2000, 2012). Importantly, mental contrasting does not change one's expectations of success but makes it relevant for goal commitment and pursuit (Oettingen, Pak, & Schnetter, 2001).

Besides mental contrasting, fantasy realization theory (Oettingen, 2000, 2012) specifies three other modes of thought: indulging (solely envisioning a desired future), dwelling (solely thinking about the current reality), and reverse contrasting (thinking about the current reality and then thinking about a wished for future).

In indulging, a person identifies the desired future and then envisions having attained this wished for future. Solely indulging in the desired future misleads the person to enjoy the future already in the here and now, concealing that effort is needed to overcome possible obstacles in the current reality to achieve the wished for future. Therefore, expectations of success are not activated, and consequently, goal commitment and goal pursuit is built independently of expectations of success.

In dwelling, a person solely thinks about the current reality. Exclusively reflecting upon obstacles in the current reality dismisses the wished for future and one's actions and effort miss a direction. It is unclear what to strive for. Therefore, one's expectations of success are not taken into account, and goal commitment and goal pursuit stay independent of

expectations of success. Taken together, indulging and dwelling are both one sided strategies that miss revealing the discrepancy between the wished for future and the current reality. Therefore, expectations of success are not taken into account and goal commitment, and consequently, goal pursuit occur independently of people's expectations of success. This leads people with high expectations to invest too little, and people with low expectations to invest too much.

In mental contrasting people first think about a wished for future, and then imagine the current reality. Thereby, the wished for future becomes the reference point for the current reality and can be perceived as standing in the way of the future. In reverse contrasting, people do the same as in mental contrasting, but in reverse order: They first envision obstacles in the current reality and then envision the desired future. Due to the reverse order, the current reality is not imagined in relation to the wished for future and therefore not perceived as standing in the way of the wished for future. Consequently, the current reality and wished for future are not cognitively connected, and expectations of success are not activated. Following, reverse contrasting does not lead to expectancy-dependent goal commitment and goal pursuit (A. Kappes & Oettingen, 2014; Oettingen, 2012).

Mental Contrasting Fosters Expectancy Dependent Goal Commitment and Pursuit

An ample amount of research has shown that whereas mental contrasting leads to expectancy-dependent goal commitment, indulging, dwelling, and reverse contrasting lead to expectancy-*in*dependent goal commitment (for an overview see Oettingen, 2012). For example, in one study (Oettingen et al., 2001), participants were asked to name their current most important interpersonal concern (i.e., wished for future) and to indicate how likely they think it is that they will resolve this concern (i.e., expectations of success). Following, they were randomly assigned to the four different experimental conditions: mental contrasting, indulging, dwelling, or reverse contrasting. In mental contrasting, participants first identified

and elaborated on the best positive outcome, they associate with resolving their concern, and then to identify and elaborate on the most important obstacle in the current reality that may hinder them to solve their concern. Participants in the reverse contrasting condition did the same, but in reverse order, participants in the indulging condition identified and elaborated on the first two best outcomes they associate with solving their concern. Participants in the dwelling condition identified and elaborated on the first two most important obstacles that could hinder them to solve their concern. Subsequently, the first dependent variable, feelings of energization, was assessed: Participants were asked to indicate how energetic, active, eventful, and empty (reverse coded) they felt regarding their concern. The second dependent variable, immediacy of action, was assessed two weeks later: Participants were asked to list all steps they had undertaken to solve their interpersonal concern and to indicate when they had undertaken the two most critical steps. Results revealed that only in the mental contrasting condition, participants felt and acted in line with their expectations of success. Participants with high expectations felt energized towards their interpersonal concern and acted immediately after the experiment towards solving their concern; Participants with low expectations felt only little energized and postponed their actions regarding solving their interpersonal concern. In contrast, participants in the indulging, dwelling, or reverse contrasting condition showed only weak or no expectancy-dependent feelings of energization or goal pursuit.

The effects of mental contrasting on goal commitment and goal pursuit were shown with different indicators for goal commitment and goal pursuit. Studies showed the effect regarding indicators on the cognitive (e.g., creating plans), affective (e.g., felt attachment) and behavioral (e.g., quality of performance) level (for an overview see Oettingen, 2012). Furthermore, the pattern could be replicated in different life domains (e.g., academic, professional, health, interpersonal), for short-term as well as for long-term wishes, and for

younger participants (A. Gollwitzer, Oettingen, Kirby, Duckworth, & Mayer, 2011) as well as for middle aged participants (Sheeran, Harris, Vaughan, Oettingen, & Gollwitzer, 2013).

Indicated by this solid empirical evidence, we hypothesize that mental contrasting could support people in dealing with upcoming endings. By committing only to those wishes that still can be fulfilled within the remaining time, mental contrasting should lead to the feeling of having done everything that could be done, that is, a well-rounded ending. Furthermore, as mental contrasting has been tested in younger as well as in middle-aged participants, it could be a promising strategy to support people to deal with endings throughout their life-span.

Mechanisms of Mental Contrasting

The effects of mental contrasting on goal commitment and goal pursuit can be explained by cognitive and motivational mechanisms as well as regarding the response to negative feedback. On the cognitive level, three different mechanisms mediate the effect of expectations of success on goal commitment and goal pursuit.

Cognitive mechanisms. First, mental contrasting strengthens the association between future and reality, depending on expectations of success: The higher the expectations, the stronger the cognitive link between future and reality (A. Kappes, & Oettingen, 2014). In other words, after mental contrasting, a person whose wish is to eat healthier thinks about their wished for future, the person will automatically also think about their obstacles in the current reality (e.g., their craving for sweets).

Second, mental contrasting strengthens the association between reality and actions to overcome the reality, depending on expectations of success: The higher the expectations, the stronger the cognitive link between reality and actions to overcome the reality (A. Kappes, Singmann, & Oettingen, 2012). In other words, after mental contrasting, a person who thinks

about their obstacle in the current reality (e.g., craving for sweets), will automatically think about ways to overcome their obstacles (e.g., buying fruits instead of candies).

Third, mental contrasting changes the meaning of reality. The higher the expectations, the more is the reality perceived as an obstacle. Additionally, the higher the expectations, the more easily obstacles in the current reality are detected (A. Kappes, Wendt, Reinelt, & Oettingen, 2013). In other words, after mental contrasting, a person who has the wish to eat more healthily will perceive candies not only as desirable snacks anymore but as obstacles standing in the way of the wished for future of following a healthier diet. Importantly, the three mechanisms mediate the effect of expectations of success on goal commitment and pursuit.

In summary, by mentally contrasting future and reality, the reality is perceived in light of the wished for future which leads to a qualitative change in how future and the current reality are perceived. The current reality gets cognitively connected to the wished for future, gets perceived as an obstacle standing in the way of the wished for future, and furthermore, means to overcome the obstacle get connected to the current reality.

Motivational mechanism. On the motivational level, feelings of energization have been identified as a mediator, explaining the connection between expectations of success and goal commitment and pursuit (Oettingen et al., 2009). Mental contrasting leads to an expectancy dependent energization (measured subjectively as well as via systolic blood pressure) what mediates the effect of expectations of success on goal commitment and goal pursuit. In other words, through mental contrasting, energy that is needed to realize one's wishes gets provided dependent on one's expectations of success.

Response to negative feedback. Lastly, mental contrasting changes people's perception of goal relevant negative feedback. People have a bias towards recalling more self-affirming positive feedback instead of self-threatening negative feedback (Sedikides &

Green, 2009). Although, processing the feedback can be beneficial as negative feedback can entail relevant information regarding the process of goal pursuit. Studies have shown, that after mental contrasting (vs. relevant control conditions) people are more receptive to negative feedback and perceive it in a self-protective way (A. Kappes, Oettingen, Pak, 2012).

In summary, mental contrasting leads to expectancy-dependent goal commitment. This effect can be explained by cognitive and motivational mechanisms, and the response to goal relevant negative feedback.

Spontaneous Use of Mental Contrasting

Besides investigating the effect of mental contrasting and its mechanisms, studies have investigated people's spontaneous way of thinking about the future (Sevincer & Oettingen, 2013). The question was: Do people spontaneously engage in mental contrasting or do they rather indulge, dwell or engage in reverse contrasting if they are asked to think freely about a wished for future. For example, participants were asked about a wish they have regarding their academic or professional life and how likely it is that they will fulfill their wish (expectations of success). Next, they were asked to freely think about their wish and then to write down their thoughts. Participants' elaborations were rated by two independent raters. If participants wrote only about their wished for future, their mode of thought was classified as indulging, if they wrote only about the current reality, their mode of thought was classified as dwelling. If they wrote first about their wished for future and then about current reality, their mode of thought was classified as mental contrasting, if they wrote about their wished for future and current reality in reverse order, their mode of thought was classified as reverse contrasting. Results revealed that only a small part of participants spontaneously engaged in mental contrasting (9%, Study 1; 27% Study 2) and that the most frequently used strategy was indulging (36%, Study 1; 51% Study 2). Importantly, spontaneous mental

contrasting, just like induced mental contrasting, lead to an expectancy-dependent goal commitment and pursuit (Sevincer & Oettingen, 2013).

Further studies investigated factors impacting the likelihood of engaging spontaneously in mental contrasting. Sad mood indicates a deficit and the need to regulate one's state. Therefore, it was hypothesized that sad mood increases the spontaneous use of mental contrasting. And indeed, compared to neutral and happy mood, inducing a sad mood led participants to engage more often in mental contrasting (H. B. Kappes, Oettingen, Mayer, Maglio, 2011). Contrary, as mental contrasting is not the default strategy people engage in (Sevincer & Oettingen, 2013) and cognitive demanding (Achtziger, Fehr, Oettingen, Gollwitzer, & Rockstroh, 2009), when people's resources were limited, the spontaneous use of mental contrasting was diminished (Sevincer, Schlier, & Oettingen, 2015).

In summary, when people think about a wished for future, their spontaneous mode of thought is not mental contrasting but rather a one-sided strategy (e.g., indulging, dwelling). Whereas situations, indicating the need for self-regulation (e.g., sad mood) increase the likelihood of engaging spontaneously in mental contrasting, situations which require saving one's resources, lower the likelihood of engaging spontaneously in mental contrasting.

Research has shown that upcoming endings lead people to focus on the here and now and to strive for positive affect (e.g., Carstensen et al., 1999). Striving for positive affect may amplify people's tendency to engage in indulging. Even though engaging in indulging may improve affect in the short term, it is associated with depressive symptoms in the long term (Oettingen, Mayer, & Portnow, 2016). Moreover, missing to act on one's goals is associated with rumination and regret (Savitsky et al., 1997) and indulging did not prove to be an effective strategy for goal attainment (for an overview Oettingen, 2012). Therefore, from an interventional perspective, it should be especially important to introduce people to mental contrasting to enable them to cope with upcoming endings throughout their lives.

Mental Contrasting in Intervention Studies

One way to enable people to use mental contrasting autonomously throughout their lives is to teach the strategy as a metacognitive strategy. For example, teaching mental contrasting (versus indulging) as a metacognitive strategy to health care professionals supported them to improve their time management over the course of two weeks (Oettingen, Mayer, & Brinkmann, 2010).

In intervention studies in which a strong goal commitment and goal pursuit is desirable, participants get instructed to mentally contrast only about *feasible* wishes (i.e., high expectations). Asking for feasible wishes unleashes only the strengthening effect of mental contrasting on goal commitment and goal pursuit. For example, in one study (Johannessen, Oettingen, & Mayer, 2012), students were asked to name a wish they have regarding dieting that is challenging to fulfill, but feasible within the next two weeks. Following, students were randomly assigned to the mental contrasting, indulging, or a no-treatment control condition. Two weeks later, participants reported in a diary their daily calorie intake. Students in the mental contrasting condition reported to have consumed more low calorie foods (e.g., fruits, vegetables, water) and less high calorie foods (e.g., chocolate, ice-cream, chips), and consequently showed a lower overall calorie intake than participants in the control conditions. Other studies showed that mental contrasting (vs. relevant control conditions) supported elementary- and middle-school students learning another language (A. Gollwitzer et al., 2011), overweight fishermen to exercise more (Sheeran et al., 2013), and students to find more integrative solutions (win-win solutions) in a bargaining game (Kirk, Oettingen, & Gollwitzer, 2011).

Following these studies, if finding a well-rounded ending seems feasible, mental contrasting could be directly applied to the wish of ending well-rounded. We hypothesize that

in light of high expectations, mental contrasting should lead to a more well-rounded ending than indulging, dwelling, or reverse contrasting.

Mental Contrasting to Find Well-Rounded Endings

When facing an upcoming ending, mental contrasting should support people in detecting if a wish still can be fulfilled within the remaining time, thereby supporting them to use the remaining time effectively by investing their effort only in feasible wishes. In other words, in light of high expectations, mental contrasting should support people to get the most out of the remaining time and to find a well-rounded ending (Figure 10).

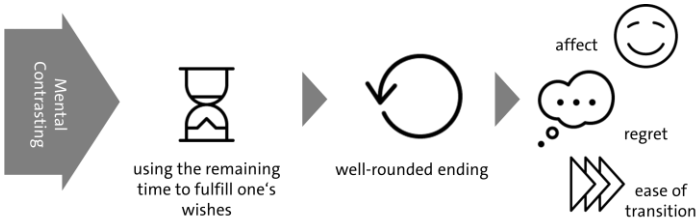


Figure 10. Expected associations between time usage (enhanced via mental contrasting), a well-rounded ending and affect, regret, and ease of transition.

Contrary, engaging in indulging, dwelling or reverse contrasting should lead people to invest their resources independently of their expectations of success. In other words, indulging, dwelling or reverse contrasting should lead people in investing too much when expectations of success are low and in investing too little, when expectations of success are low. Furthermore, if finding a well-rounded ending is feasible, mental contrasting could be directly applied to the wish of finding a well-rounded ending, allowing people to find a more well-rounded ending than when engaging in indulging, dwelling, or reverse contrasting.

Overview of Study-set 2

In Study-set 2, we first tested if the expectancy-dependent goal pursuit of mental contrasting (for an overview see Oettingen, 2012) can also be found in ending situations. Furthermore, we wanted to test if using the remaining time to fulfill one's feasible wishes is

associated with a well-rounded ending. We hypothesized that (1) participants who mentally contrast about a wish they would like to realize to find a well-rounded ending, would use the remaining time to fulfill their wish depending on their expectations of success. And (2) the more participants use the remaining time, the more well-rounded they experience the ending (Figure 11).

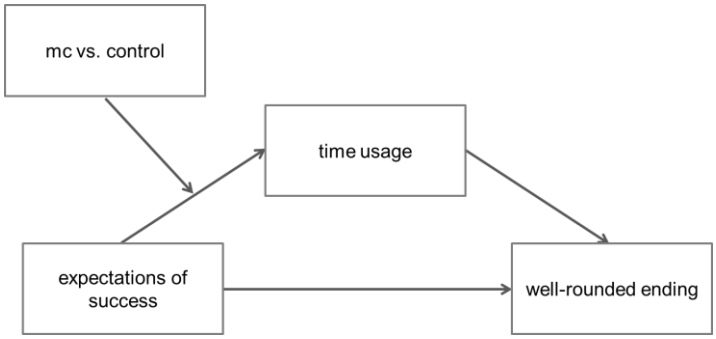


Figure 11. The conceptual model of the expected associations between expectations of success, time usage, and a well-rounded ending.

To test this idea, we asked participants in Study 1 one week before New Year's Eve which wishes they would like to realize to end the year in a well-rounded way. They were then instructed either to mentally contrast or to indulge about their wishes. One week after New Year's Eve, we asked how effectively they had used the remaining time (i.e., how much effort they had put into fulfilling their wish and if they had fulfilled their wish) and measured how well-rounded they had ended their year.

In Study 2, we sought to replicate conceptually Study 1, with another control condition (i.e., reverse contrasting) and with an additional dependent variable (i.e., ease of transition). Adolescents were asked three days before the end of their summer camp which wish they would like to realize to end in a well-rounded way. On the day of the departure we asked how effectively they had used the remaining time (i.e., how much effort they had put into fulfilling their wish and if they had fulfilled their wish) and measured their assessment of a well-rounded ending and ease of transition.

Our second aim of Study-set 2 was to test if mental contrasting can be used as an intervention to support people in finding well-rounded endings. Following Studies 1 and 2 we hypothesized that in light of high expectations, mental contrasting should lead people to make use of the remaining time and to find a well-rounded ending. Therefore, in Study 3, we sought to test this idea by asking participants either to mentally contrast or to indulge about ending a conversation well-rounded. As dependent variables, we measured how effectively they had used the remaining time and how well-rounded they had ended the conversation. Furthermore, in line with our findings of Study-set 1, we also measured participants' affect. As in Study-set 1, in all studies reported in this thesis, we did not want to force participants to answer our items and allowed them to leave single items unanswered, therefore degrees of freedom may vary.

Study 1: Ending a Year

In Study 1, we sought to test if the self-regulatory strategy of mental contrasting can support people in finding a well-rounded ending by fostering selective goal pursuit in the face of an upcoming ending. To test this idea, we asked participants one week before New Year's Eve which wish they would like to realize to end the year in a well-rounded way. Participants were then instructed either to mentally contrast or to indulge about their wish (induction of self-regulatory strategy). In the first week after New Year's Eve the dependent variables *time usage* and *well-rounded ending* were assessed by asking participants how effectively they had used the remaining time (i.e., how much effort they had put into fulfilling their wish and if they had fulfilled their wish) and to indicate how well-rounded they had ended their year.

First, we expected participants in the mental contrasting condition, compared to participants in the indulging condition, to show an expectancy-dependent time usage (i.e., to invest effort and fulfill one's wish dependent on expectations of success). Second, we

expected this expectancy-dependent time usage to be positively associated with a well-rounded ending.

Method

Participants

Participants were recruited via advertisements on the social media platform Facebook (www.facebook.com). A total of 62 participants (out of 73 participants who started the questionnaire) completed both parts of the online questionnaire in return for the offer to take part in a raffle for six 10 Euro Amazon vouchers. Five participants were excluded from the analysis: Two participants did not name a wish for the remaining time, and three participants did not complete the manipulation (two participants in the mental contrasting condition did not name an obstacle, one participant in the indulging condition did not name a second best outcome). Thus, the final sample consisted of 57 participants (77% female, M_{age} = 27.61 years, *SD* = 7.06, *min* = 19, *max* = 47). Most of the participants were students (74%), some were employed or on maternal leave (22%), or currently looking for a job or home keeper (3%). We applied a randomized between-subjects design with two conditions: Participants were randomly assigned to the mental contrasting or indulging condition.

Materials and Procedure

One week before New Year's Eve (T1), participants were asked to fill out the first part of the questionnaire. After consenting to take part in the study, participants were asked to name an important wish they had for the remaining week to end the year in a well-rounded way. For example, one participant named the wish "Enjoy the time with my family."

Expectations of success (T1). Next, participants' expectation of success was measured by asking them (1) "How likely is it that you will fulfill your wish and end the year well-rounded", and (2) "How likely is it that your wish will be fulfilled?". Both items were

answered on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale (α = .85).

Incentive value and baseline commitment (T1). Following past research (Oettingen, 2012) we measured incentive value and baseline commitment. Measuring incentive value allowed us to validate if participants named a wish that is important to them. Measuring baseline commitment allowed us to verify that participants in the two conditions did not differ regarding their baseline commitment. To measure incentive value, participants were asked: "How important is it to you that you will fulfill your wish?". To measure baseline commitment, they were asked: "How disappointed would you feel if you did not fulfill your wish." All items were answered on a 7-point scale (1 = *not at all* and 7 = *very much*).

Manipulation of self-regulatory strategy (T1). Participants were randomly assigned to the mental contrasting condition (*n* = 22) or the indulging condition (*n* = 35). Participants in the mental contrasting condition were asked to name the best outcome of fulfilling their wish. For example, one participant named "inner peace and enjoyment" as the best outcome of fulfilling her wish. After naming the best outcome, they were asked to imagine this best outcome as vividly as possible and to note the associated thoughts and feelings. Next, they were asked to identify an obstacle that could prevent them from fulfilling their wish. One participant named for example "feeling obligated to work" as her obstacle. After naming the obstacle, they were asked to imagine this obstacle as vividly as possible and to note the associated thoughts and feelings.

Participants in the indulging condition were also asked to name the best outcome of fulfilling their wish and to imagine this best outcome as vividly as possible and to note the associated thoughts and feelings. Next, instead of identifying an obstacle, they were asked to identify the second best outcome of fulfilling their wish and to imagine this second best outcome as vividly as possible and to note the associated thoughts and feelings.

Dependent variable: Time usage (T2). During the first three days of the New Year, participants were asked to fill out the second part of the questionnaire. To assess if participants had used the remaining time to fulfill their wish, we assessed their effort and goal attainment. Participants were asked to answer the following three items: "How much effort did you invest to fulfill your wish?" (1 = *very little* and 7 = *very much*), (2) "How close do you feel regarding the fulfillment of your wish?" (1 = *not at all fulfilled* and 7 = *wish fulfilled*), and (3) "Did you fulfill your wish by yourself?" (1 = *not at all* and 7 = *very much*). The three items were combined into the scale *time usage* ($\alpha = .78$).

Dependent variable: Well-rounded ending (T2). To assess how well-rounded participants had ended their year, they were asked to rate the ending regarding eight different adjectives from which four were reversely coded (i.e., unfinished (r), empty (r), hard (r), emotionless (r), positive, encouraging, active, good). All items were answered on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale ($\alpha = .81$). At the end of the questionnaire, participants were thoroughly debriefed and thanked for their participation.

Results

We conducted a one-way MANOVA to test if participants in the mental contrasting condition differed from the indulging condition regarding the baseline measures (i.e., expectations of success, incentive value, and baseline commitment). There was no overall effect of condition $F(3, 53) = 0.11$, $p = .96$, Wilks' $\Lambda = .99$. Participants did not differ regarding their expectation of success $F(1, 55) = 0.26$, $p = .611$, incentive value $F(1,55) < 0.00$, $p = .964$, or baseline commitment $F(1, 55) = 0.02$, $p = .892$ (see Table 25 for means and standard deviations).

Association Between Expectations and Time Usage (T2)

First, we tested our prediction that participants in the mental contrasting condition but not in the indulging condition used the remaining time in line with their expectations of

success. We applied a General Linear Model entering *expectancy of success* and *condition* in the first step and the interaction term of condition and expectancy of success in the second step. We found the expected interaction effect of condition and expectations of success $F(1, 53) = 5.74$, $p = .020$, $\eta_p^2 = .10$. There was a positive association between expectations of success and time usage in the mental contrasting condition $b = 0.73$, $t(20) = 3.72$, $p = .001$, and no association in the indulging condition $b = 0.21$, $t(33) = 1.78$, $p = .085$. We further probed if the two conditions were different for low and high expectations of success. Results revealed that participants in the mental contrasting condition with low expectation had a lower score on time usage ($M = -3.56$, $SE = 0.87$) than in the indulging condition ($M = -0.98$, $SE = 0.64$), $F(1, 53) = 5.71$, $p = .020$, $\eta_p^2 = .10$. Participants in the mental contrasting condition with high expectations ($M = 0.80$, $SE = 0.28$) did not differ from participants in the indulging condition ($M = 0.26$, $SE = 0.20$), $F(1, 53) = 2.44$, $p = .125$, $\eta_p^2 = .04$ (Figure 12). Including the variables incentive value and baseline commitment into the model revealed the same pattern of results.

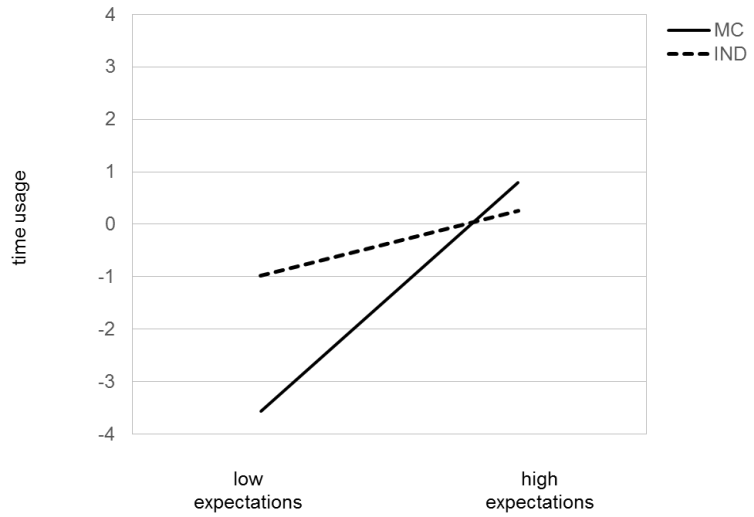


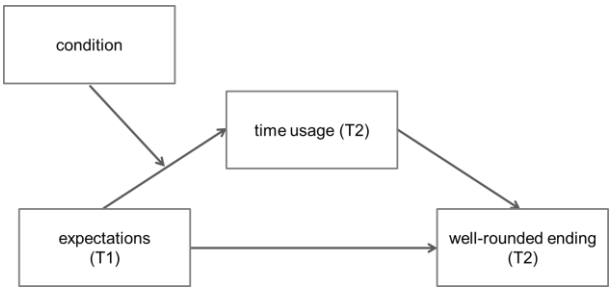
Figure 12. Study 1 Ending a Year: Relationship between expectations of success and time usage.

Association Between Expectations and a Well-rounded Ending via Time Usage (T2)

Second, to test our prediction that the expectancy-dependent time usage is associated with a well-rounded ending, we conducted a moderated mediation analysis (Hayes, 2013;

Model 7 with 10,000 bootstrapped samples for bias-corrected confidence intervals). The model of the tested associations is shown in Figure 13a. We expected that the indirect effect of expectations of success on a well-rounded ending via time usage would appear only in the mental contrasting condition.

a.



b.

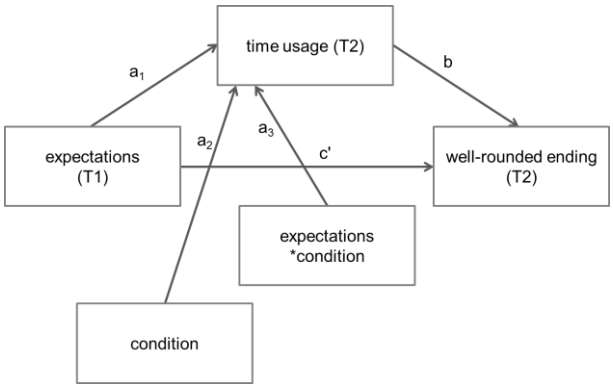


Figure 13. The conceptual model (a) and statistical model (b) of the moderated mediation model estimating the association between expectations of success and a well-rounded ending via time usage, moderated by the condition.

We specified expectations of success as the predictor, well-rounded ending as the outcome variable and time usage as the mediator. The condition was specified as the moderator, qualifying the association between expectations of success and time usage. As expected, the moderated mediation was significant b = -.18, 95% CI [-0.48, <-0.00] (a_3b-path, Figure 13b), and the moderated mediation was only true in the mental contrasting condition b = .25, 95% CI [0.06, 0.54] and not in the indulging condition b = .07, 95% CI [-0.01, 0.30]. See Table 26 for regression coefficients of all paths of the statistical model (Figure 13b). Including the variables incentive value and baseline commitment into the model revealed the same pattern of results.

Discussion

In Study 1, we asked participants one week before New Year's Eve which wish they would like to realize to end the year in a well-rounded way. Results revealed that in line with

the literature (for an overview see Oettingen, 2012), participants in the mental contrasting condition used the remaining time depending on their expectations of success. This means that in the face of an upcoming ending, participants with high expectations of success invested a lot of effort to fulfill their wish and consequently ended the year with a fulfilled wish. Participants with low expectations invested only little effort and ended the year with an unfulfilled wish, but at least did not waste their effort in a wish that was unlikely to be fulfilled. This is contrary to participants in the indulging condition who invested their effort independently of their expectations of success. Even though we found an expectancy-dependent time usage in the mental contrasting condition and not in the indulging condition, the two groups differed only in light of low expectations of success. Based on the literature (for an overview see Oettingen, 2012) we also expected a difference between the two conditions in light of high expectations. Therefore, with Study 2 we sought to replicate conceptually Study 1 to test if the expectancy-dependent time usage in the mental contrasting condition is mainly driven by participants with low expectations.

Importantly, mediation analysis showed that using the remaining time to fulfill one's wishes is associated with a well-rounded ending. This result supports our assumption that using the remaining time to realize one's wishes before it is too late is associated with a well-rounded ending. Furthermore, as participants named idiosyncratic wishes, it indicates that it is not the content of the wish per se that is important, but whether or not the wish is fulfilled within the remaining time.

One limitation of the study is the relatively small sample size of 62 participants. The small sample size makes it difficult to detect small effects and may be the reason why the c-path in the moderated mediation was not significant (Rucker, Preacher, Tormala, & Petty, 2011).

In summary, the findings of Study 1 support our assumptions that using the remaining time to realize one's wishes is associated with a well-rounded ending and that mental contrasting can be helpful in using the remaining time by fostering selective goal pursuit. In Study 2 we sought to replicate conceptually our findings of Study 1 with another control condition (i.e., reverse contrasting) and with an additional dependent variable (i.e., ease of transition). Reverse contrasting is a very strong control condition as participants receive the same instructions as participants in the mental contrasting condition, the only difference is the order. Furthermore, to draw more general conclusions we aimed to replicate the findings in a younger sample.

Study 2: Ending Summer Camp

In Study 2, we tested if the self-regulatory strategy of mental contrasting can support people in finding a well-rounded ending by fostering selective goal pursuit in the face of an upcoming ending. Following Study 1, the study consisted of two parts: We asked adolescents who had spent two weeks in a summer camp three days before the end of the camp (T1) to fill out the first part of the questionnaire. On the day of their departure (T2), they were asked to fill out the second part. In the first part of the questionnaire, adolescents were instructed either to apply mental contrasting or reverse contrasting (induction of self-regulatory strategy) to a wish they wanted to fulfill within the remaining time to end the summer camp well-rounded. As the study was conducted in a summer camp, an environment in which many confounding variables may impact the study results, we assessed one dependent variable directly after the manipulation to test if the induction of the self-regulatory strategies worked as intended. Recent studies have shown that after mental contrasting people see more and better ways to fulfill their wish than people who indulge (Reininger, Riess, Schwörer, & Oettingen, 2016). Therefore, we assessed how clear it was to the adolescents how to fulfill their wish. We expected to find an expectancy-dependent effect on *clarity of wish fulfillment*.

Adolescents' overall well-being (i.e., how comfortable they felt in the summer camp) was assessed as a confounding variable.

In the second part of the questionnaire (day of departure), the dependent variables time usage, well-rounded ending, and ease of transition were assessed. Time usage was assessed following Study 1 by asking adolescents how much effort they had put into fulfilling their wish and if they had fulfilled their wish. To assess how well-rounded adolescents had ended their time in the summer camp, we asked adolescents to rate the final three days as an indicator of a well-rounded ending. As anticipatory ease of transition could not be successfully measured in Study 6 (Study-set 1), we changed the measurement in this study, asking adolescents how they felt regarding the upcoming days (e.g., enthusiastic), instead of asking them how they thought they would feel in the upcoming days.

First, we expected adolescents in the mental contrasting condition, compared to adolescents in the reverse contrasting condition, to report an expectancy-dependent clarity of wish fulfillment. Second, following Study 1, we expected adolescents in the mental contrasting condition, compared to adolescents in the reverse contrasting condition, to show an expectancy-dependent time usage (i.e., invest effort and fulfill one's wish dependent on expectations of success). Third, we expected the expectancy-dependent time usage to be positively associated with a well-rounded ending, and lastly, to be positively related with ease of transition.

Method

Participants

The study was conducted at a German summer camp in southern Germany. The summer camp takes place every year during the summer months and is run by an ecclesiastical organization. Adolescents who took part in the study spent 12 days in the summer camp. A total of 69 adolescents took part in the study and 55 completed both parts of

the study (58% female, two did not indicate their sex, M_{age} = 15.71 years, *SD* = 0.98, *min* = 13, *max* = 18) and were thus included in the analysis. We applied a randomized between-subjects design with two conditions: Participants were randomly assigned to the mental contrasting or reverse contrasting condition.

Materials and Procedure

The informed consent form was sent in advance to adolescents' parents by the summer camp's administration. Data collection was conducted by the team leaders of the summer camp. They were thoroughly briefed how to conduct the study and received an information sheet that outlined the given information (e.g., dates of assessment, adolescents need to fill out the questionnaires by themselves and do it page by page). They were blind to the study's hypotheses and conditions until the end of the study. After filling out the second part of the questionnaire, the main advisor of the camp verbally debriefed the team leaders who then debriefed the adolescents. Three days before summer camp ended, adolescents were given the first part of the two-part questionnaire.

Confounding variable: Well-being. At the beginning of the questionnaire we assessed adolescents' overall well-being in the summer camp with the following five questions: (1) "How much do you like the summer camp so far?", (2) "How much do you enjoy the summer camp?", (3) "How much do you like the other adolescents?", (4)"How bad would you feel if you had to leave today?", (5) "How much do you feel being a part of the summer camp?". All items were answered on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale (α = .76). Following this, adolescents were asked to name an important wish they had for the remaining three days to end the summer camp well-rounded (e.g., "Spend the night with my friends.")

Expectations of success (T1). To measure adolescents' expectation of success they were asked to indicate the likelihood of fulfillment of their wish (i.e., "How likely is it that

you can fulfill your wish?"). The item was answered on a 7-point scale (1 = *not at all* and 7 = *very much*).

Incentive value and baseline commitment (T1). To measure incentive value, they were asked how important it was to them that they would fulfill their wish (i.e., "How important is it to you that you will fulfill your wish?"). Lastly, to measure baseline commitment, they were asked to indicate how disappointed they would feel if they did not fulfill their wish (i.e., "How disappointed would you feel if you did not fulfill your wish"). All items were answered on a 7-point scale (1 = *not at all* and 7 = *very much*).

Manipulation of self-regulatory strategy (T1). Adolescents were randomly assigned to the mental contrasting condition (n = 27) or the reverse contrasting condition (n = 28). Adolescents in the mental contrasting condition were asked to name the best outcome of fulfilling their wish (e.g., "happiness") and then to imagine this best outcome as vividly as possible and to note the associated thoughts and feelings. Next, they were asked to identify an obstacle that could prevent them from fulfilling their wish (e.g., "arguing with my friends") and to imagine this obstacle as vividly as possible and to note the associated thoughts and feelings. Adolescents in the reverse condition did the same but in reverse order: They first named the obstacle and then the best outcome.

Dependent variable: Clarity of wish fulfillment (T1). To verify if the induction of the self-regulatory strategies worked as intended, we assessed one dependent variable directly after the manipulation. The item for measuring the *clarity of wish fulfillment* displayed five manikins, ranging from a clueless manikin without a bulb above its head to an enlightened manikin with a big bulb over its head. The item was answered on a 9-point scale (see supplements for the complete item). The item was inspired by the self-assessment manikins (Bradley & Lang, 1994), a set of three items measuring valence (happy – unhappy), arousal (aroused – unaroused), and dominance (submissive – dominant).

Dependent variable: Time usage (T2). To assess how well adolescents used the remaining time, we assessed their effort and goal attainment. Adolescents were asked on the day of their departure (1) how much effort they invested in fulfilling their wish, (2) how close they felt regarding fulfilling their wish, and (3) if they had fulfilled their wish by themselves. Items (1) and (3) were answered on a 7-point scale ("How much did you do to fulfill your wish?; 1 = *very little* and 7 = *very much;* "Did you fulfill your wish by yourself?"; 1 = *not at all* and 7 = *very much*). Item (2) was answered by making a cross on a line that showed a checkered flag at the right side, indicating "wish fulfilled." The closer adolescents felt towards wish fulfillment, the closer to the checkered flag they were supposed to put the cross (see supplements for the complete item). The three items were z-transformed and combined into one scale ($\alpha = .78$).

Dependent variable: Well-rounded ending (T2). To assess how well-rounded adolescents ended their time at the summer camp we asked them to rate how pleasant they had perceived the final three days of the camp ("How pleasant were the last three days of summer camp?", "How meaningful were the last three days of summer camp"). Both items were answered on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale ($\alpha = .63$).

Dependent variable: Anticipatory ease of transition (T2). To assess ease of transition, adolescents were asked to think about the following days and to indicate how they felt regarding the following days (i.e., "If you think about the next days after the summer camp – how do you feel? Full of energy; strong; enthusiastic"). The three items were answered on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale ($\alpha = .93$). After completing the second questionnaire, adolescents were thoroughly debriefed by their team leaders and received a surprise gift that contained a thank-you note, a keychain, and a small flashlight.

Results

We conducted a one-way MANOVA to test if adolescents in the mental contrasting condition differed from the reverse contrasting condition regarding the baseline measures (well-being, expectations of success, incentive value, and baseline commitment). There was no overall effect of condition $F(4, 48) = 0.80$, $p = .533$, and adolescents did not differ regarding baseline well-being $F(1, 51) = 2.07$, $p = .156$, expectations of success $F(1, 51) = 0.11$, $p = .738$, incentive value $F(1, 51) = 0.77$, $p = .385$, baseline commitment $F(1, 51) = 2.41$, $p = .127$ (see Table 27 for means and standard deviations).

Association Between Expectations and Clarity of Wish Fulfillment (T1)

First, we tested our prediction that adolescents in the mental contrasting condition but not in the reverse contrasting condition would report *clarity of wish fulfillment* in line with their expectations of success. We applied a General Linear Model entering *expectancy of success* and *condition* in the first step, and the interaction term of condition and expectancy of success in the second step. We found the expected interaction effect of condition and expectations of success $F(1, 46) = 12.13$, $p = .001$, $\eta_p^2 = .21$. There was a positive association between expectations of success and *clarity of wish fulfillment* in the mental contrasting condition $b = 1.22$, $t(23) = 6.35$, $p < .001$, and no association in the reverse contrasting condition $b = -0.07$, $t(23) = -0.22$, $p = .827$. We further probed if the two conditions were different for low and high expectations of success. Results revealed that adolescents in the mental contrasting condition with low expectation had a lower score on *clarity of wish fulfillment* ($M = 1.27$, $SE = 1.06$) than in the reverse contrasting condition ($M = 6.38$, $SE = 1.22$), $F(1, 46) = 10.04$, $p = .003$, $\eta_p^2 = 0.18$. Adolescents in the mental contrasting condition with high expectations had a higher score on *clarity of wish fulfillment* ($M = 8.56$, $SE = 0.66$) than in the reverse contrasting condition ($M = 5.94$, $SE = 0.67$), $F(1, 46) = 7.77$, p

= .008, η_p^2 = 0.15 (Figure 14). Including the variables incentive value and baseline commitment into the model revealed the same pattern of results.

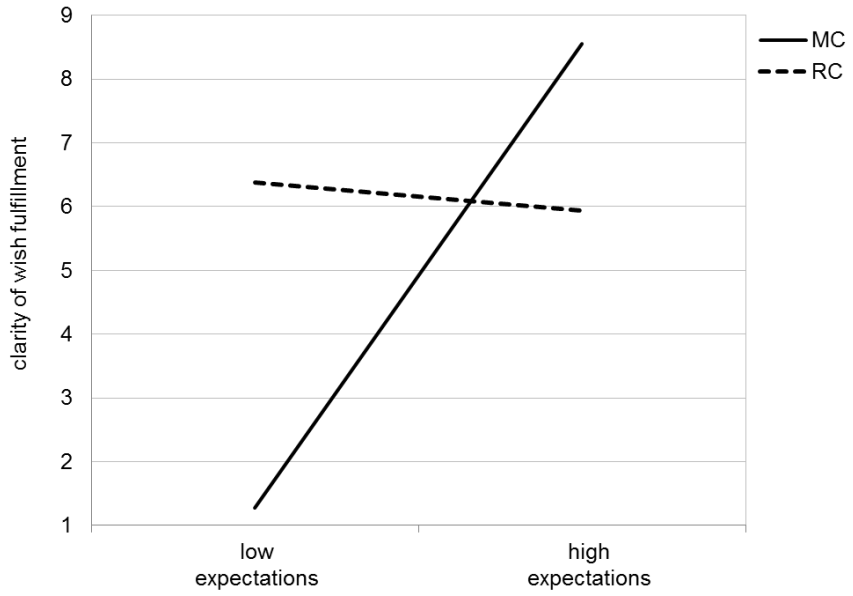


Figure 14. Study 2 Ending summer-camp: Relationship between expectations of success and clarity of wish fulfillment.

Association Between Expectations and Time Usage (T2)

Second, we tested our prediction that adolescents in the mental contrasting condition but not in the reverse contrasting condition would use the remaining time in line with their expectations of success. We applied a General Linear Model entering *expectancy* of *success* and *condition* in the first step and the interaction term of condition and expectancy of success in the second step. We found the expected interaction effect of condition and expectations of success $F(1, 45) = 5.76$, $p = .021$, $\eta_p^2 = .11$. There was a positive association between expectations of success and time usage in the mental contrasting condition $b = 0.41$, $t(23) = 4.12$, $p < .001$, and no association in the reverse contrasting condition $b = 0.04$, $t(22) = 0.28$, $p = .779$. We further probed if the two conditions were different for low and high expectations of success. Results revealed that adolescents in the mental contrasting condition with low expectation had a lower score on time usage ($M = -1.59$, $SE = 0.44$) than

in the reverse contrasting condition (M = -0.14, SE = 0.51), $F(1, 45) = 4.58$, $p = .038$, $\eta_p^2 = 09$. Adolescents in the mental contrasting condition with high expectations had a higher score on time usage (M = 0.89, SE = 0.29) than in the reverse contrasting condition (M = 0.07, SE = 0.29), $F(1, 45) = 4.04$, $p = .050$, $\eta_p^2 = .08$ (Figure 15). Including the variables incentive value and baseline commitment into the model revealed the same pattern of results.

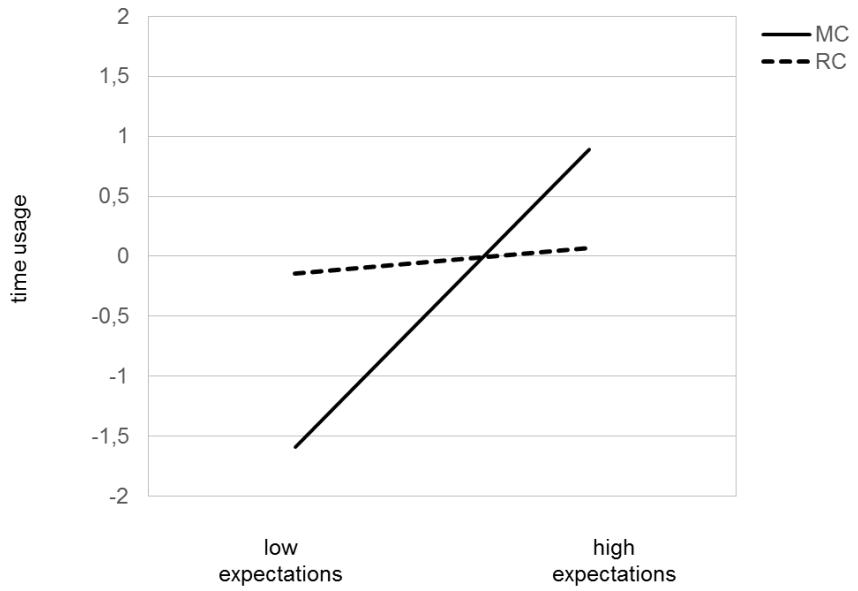


Figure 15. Study 2 Ending summer-camp: Relationship between expectations of success and time usage.

Association Between Expectations and a Well-rounded Ending via Time Usage (T2)

Third, to test our prediction that the expectancy dependent time usage is associated with a well-rounded ending, we conducted a moderated mediation analysis (Hayes, 2013; Model 7 with 10,000 bootstrapped samples for bias-corrected confidence intervals). The model of the tested associations is shown in Figure 16a. We expected that the expectancy-dependent time usage would appear only in the mental contrasting condition. Thus, we expected the indirect effect of expectations of success on a well-rounded ending via time usage would appear only in the mental contrasting condition.

a. b.

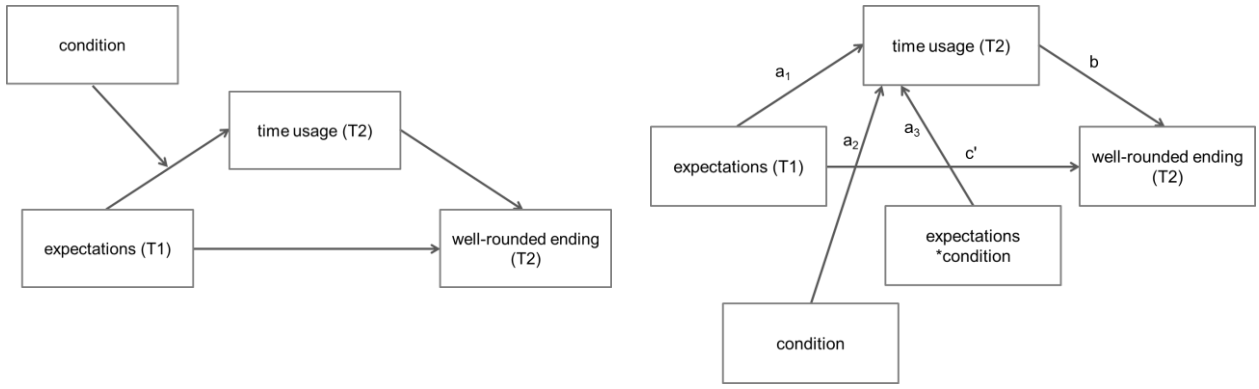


Figure 16. The conceptual model (a) and statistical model (b) of the moderated mediation model estimating the association between expectations of success and a well-rounded ending via time usage, moderated by the condition.

We specified expectations of success as the predictor, well-rounded ending as the outcome variable and time usage as the mediator. The condition was specified as the moderator, qualifying the association between expectations of success and time usage. As expected, the moderated mediation was significant b = -0.32, 95% CI [-0.76, -0.06] (a_3b-path, Figure 16b), and the moderated mediation was only true in the mental contrasting condition b = 0.34, 95% CI [0.12, 0.66] and not in the reverse contrasting condition b = 0.03, 95% CI [-0.26, 0.30]. See Table 28 for regression coefficients of all paths of the statistical model (Figure 16b). Including the variables incentive value and baseline commitment into the model revealed the same pattern of results.

Association Between Expectations and Ease of Transition via Time Usage (T2)

Fourth, to test our prediction that the expectancy dependent time usage is associated with an easy transition into the subsequent phase, we conducted a moderated mediation analysis (Hayes, 2013; Model 7 with 10,000 bootstrapped samples for bias-corrected confidence intervals). The model of the tested associations is shown in Figure 17a. We expected that the expectancy-dependent time usage would appear only in the mental

contrasting condition. Thus, we expected the indirect effect of expectations of success on ease of transition via time usage would appear only in the mental contrasting condition.

a. b.

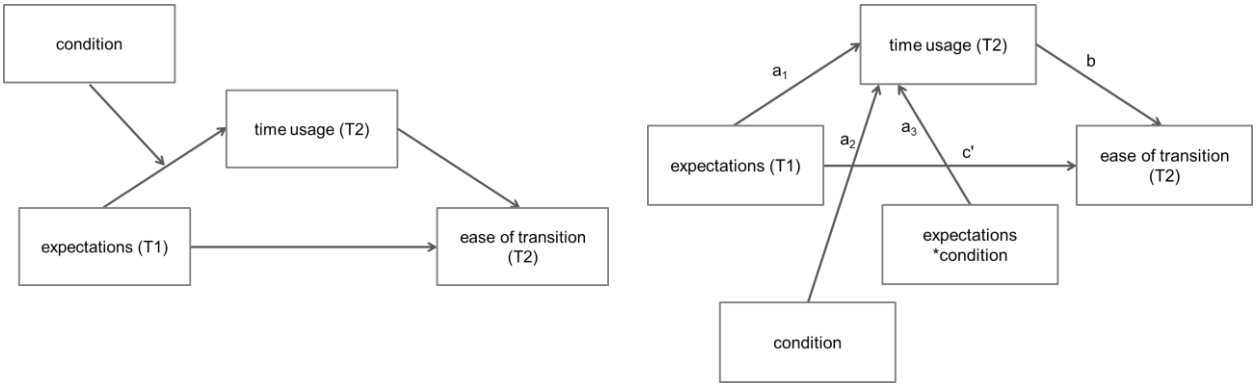


Figure 17. The conceptual model (a) and statistical model (b) of the moderated mediation model estimating the association between expectations of success and ease of transition via time usage, moderated by the condition.

We specified expectations of success as the predictor, ease of transition as the outcome variable and time usage as the mediator. The condition was specified as the moderator, qualifying the association between expectations of success and time usage. As expected, the moderated mediation was significant b = -.19, 95% CI [-0.53, -0.03] (a_3b-path, Figure 17b), and the moderated mediation was only true in the mental contrasting condition b = .22, 95% CI [0.07, 0.46] and not in the reverse contrasting condition b = .03, 95% CI [-0.16, 0.21]. See Table 29 for regression coefficients of all paths of the statistical model (Figure 17b). Including the variables incentive value and baseline commitment into the model revealed the same pattern of results.

Discussion

In Study 2, we asked adolescents three days before the end of summer camp which wish they would like to fulfill to end the summer camp in a well-rounded way. Results revealed that in line with the literature (for an overview see Oettingen, 2012), participants in the mental contrasting condition showed and expectancy-dependent clarity of wish

fulfillment. Furthermore, they used the remaining time depending on their expectations of success. This means, in the face of an upcoming ending, adolescents with high expectations of success had a clear idea of how to fulfill their wish and invested a lot of effort to fulfill their wish and consequently ended the summer camp with a fulfilled wish, whereas adolescents with low expectations of success invested only little effort to fulfill their wishes. This is contrary to adolescents in the reverse contrasting condition who fulfilled their wish independent of their expectations of success. Importantly, in Study 2, adolescents in the mental contrasting condition with low and with high expectations differed from participants in the reverse contrasting condition.

In line with Study 1, mediation analysis showed that using the remaining time to realize one's wishes is associated with a well-rounded ending. Moreover, we observed that time usage is also associated with an easy transition into the subsequent phase. Importantly, the findings were tested against a strong control condition, which is reverse contrasting.

In summary, Study 2 supported our findings of Study 1. By showing that mental contrasting can also be used in the face of an upcoming ending, our findings speak to the generalizability of the effect of mental contrasting. Furthermore, the findings support the assumption that using the remaining time to realize one's wishes before it is too late, is important to find a well-rounded ending and to ease the transition into the next phase. Based on these findings, in Study 3, we sought to test if mental contrasting can also be used as an intervention to support people in coping with upcoming endings. Following intervention studies with mental contrasting (for an overview see Oettingen, 2012), we aimed to foster wish fulfillment in light of high expectations and to avoid disengagement from that particular wish.

Study 3: Ending a Conversation

In Study 3, we sought to test if mental contrasting can be used to support people in finding a well-rounded ending by applying mental contrasting directly to the wish of ending a situation well-rounded. To test this idea, we adapted the paradigm we used in Study 6, Study-set 1. This time, to create a more realistic situation, we did not use a confederate but invited two participants who did not know each other into the laboratory. They were told that this study investigated how people get to know each other. Participants who came into the laboratory were randomly assigned to receive either an intervention (mental contrasting vs. indulging) or not. Participants who did not receive an intervention took the role the confederate had had in Study 6, Study-Set 1: They did not receive an intervention and were only there to create a situation in which two people have a conversation with each other. Participants in the intervention groups were instructed to apply either mental contrasting or indulging to the wish of ending a conversation in a well-rounded way. Following the intervention studies (for an overview see Oettingen, 2012), we wanted all participants to have high expectations regarding their wish fulfillment to avoid disengagement and support participants finding a well-rounded ending. To test if we can presume that participants have high expectations regarding ending a conversation, we asked 20 participants (students from the University of Hamburg, 80% female) in a pilot study about their expectations regarding the task of ending a conversation in a well-rounded way. We could confirm that on average, participants' expectations were high (M = 6.2, min = 4, max = 7).

Following Studies 1 and 2, we assessed time usage and how well-rounded participants had ended the conversation as dependent variables. Compared to Studies 1 and 2, in which participants named idiosyncratic wishes that they would like to fulfill to end in a well-rounded way, in Study 3, all participants were given the same wish (i.e., to end in a well-rounded way). Therefore, we assessed time usage and how well-rounded participants ended the conversation by asking participants directly how well they had used the time and how

well-rounded they had ended the conversation. Previous studies showed that mental contrasting applied in dyads leads participants to find integrative solutions instead of thoughtlessly fulfilling their wish (Kirk, Oettingen, & Gollwitzer, 2011, 2013). To test if we can also find this effect in ending a conversation, we asked participants if they had ended the conversation in a well-rounded way or if they had only ended the conversation well-rounded for themselves. In addition to Studies 1 and 2, we measured affect as a third dependent variable.

Method

Participants

A total of 122 students from the University of Hamburg took part in the study in return for payment. Five participants (and consequently their respective partners) were excluded from the analysis: One participant in the mental contrasting condition did not name an obstacle, three participants answered the complete questionnaire before the second phone call, and one participant was excluded due to low expectations (expectations = 2). The final sample, including the partners, consisted of 112 participants (73% female, M_{age} = 25.50, *SD* = 4.01, *min* = 18, *max* = 37). Participants were randomly assigned to be either in the intervention group or to be a partner. The final sample of the intervention group consisted of 56 participants (82% female, M_{age} = 25.54, *SD* = 3.56, *min* = 19, *max* = 36). We applied a randomized between-subjects design with two conditions: Participants were randomly assigned to the mental contrasting or indulging condition.

Materials and Procedure

Participants were invited in dyads and were seated in separate cubicles. After consenting to take part in the study, participants were randomly assigned to the mental contrasting condition (*n* = 32) or indulging condition (*n* = 24). Participants' gender did not differ across conditions χ^2 (3, N = 112) = 5.50, *p* = .139. Most dyads were same sex dyads

(64%), and the combination did not differ between the mental contrasting and indulging condition χ^2 (1, N = 56) = 0.06, p = .809. Participants were told that the study's aim is to investigate how people get to know each other. Their first task was to talk to each other via Skype (www.skype.de) trying to get to know the other person. They were only connected via audio and could not see each other. They were told that they would have 12 minutes to talk to each other. After eight minutes the conversation was stopped, and participants were asked to proceed with a mental exercise (i.e., mental contrasting or indulging).

Intervention group. Participants in the intervention group were told: "Follwing this mental exercise you will have four more minutes to end the conversation. Most people value ending a conversation well-rounded. By *well-rounded,* we mean the feeling of having done everything that could be done to end the conversation well-rounded".

Expectations of success. To measure participants' expectation of success, they were asked about the likelihood of ending the conversation well-rounded (i.e., "How likely do you think it is that you will end the conversation well-rounded?"). The item was answered on a 7-point scale (1 = *not at all* and 7 = *very much*).

Incentive value and baseline commitment. To measure participants' incentive value to end the conversation well-rounded, they were asked how important it was to them that they would end the conversation well-rounded (i.e., "How important is it to you, that you will end the conversation well-rounded?"). To measure baseline commitment, they were asked to indicate how disappointed they would feel if they did not end the conversation well-rounded (i.e., "How disappointed would you feel, if you did *not* end the conversation well-rounded?"). Both items were answered on a 7-point scale (1 = *not at all* and 7 = *very much*).

Manipulation of self-regulatory strategy. Participants in the mental contrasting condition were first asked to name the best outcome of ending the conversation in a well-rounded way (e.g., "good mood") and then to imagine this best outcome as vividly as

possible and to note the associated thoughts and feelings. Next, they were asked what obstacle could prevent them from ending in a well-rounded way (e.g., “I talk too much”) and to imagine this obstacle as vividly as possible and to note the associated thoughts and feelings.

Participants in the indulging condition were also asked to name the best outcome of ending the conversation in a well-rounded way and to imagine this best outcome as vividly as possible and to note the associated thoughts and feelings. Next, instead of naming an obstacle, they were asked to name the second best outcome of ending the conversation in a well-rounded way and to imagine this second outcome as vividly as possible and to note the associated thoughts and feelings.

Partners. Participants who were assigned the role of the partners were asked to complete the d2-concentration test (Brickenkamp, Schmidt-Atzert, & Liepmann, 2010) to keep them occupied while their partner engaged in the self-regulatory strategy of mental contrasting or indulging.

Following the mental exercise, the conversation was continued for four more minutes and participants in the mental contrasting and indulging condition had the chance to end the conversation well-rounded. The conversation was stopped automatically after four minutes.

Dependent variable: Time usage. To assess how well participants used the remaining time, they were asked to answer the following five items from which two were reversely coded: (1) “I was using the remaining 4 minutes effectively”. (2) “I said what was important to me”, (3)“Several things I wanted to say were left unsaid (r)”, (4) “I have the feeling I missed out on something (r)”, (5)“I am satisfied how I was using the remaining 4 minutes”. All items were answered on a 7-point scale (1 = *not at all* and 7 = *very much*) and combined into one scale ($\alpha = .76$).

Dependent variable: Well-rounded ending. To assess how well-rounded participants ended the conversation with their partners, they were asked how much they agreed with the following statement: "The conversation had a well-rounded ending." To assess if they felt they had ended the conversation well-rounded for themselves, they were asked to answer the following item: "I ended the conversation well-rounded for myself." Both items were answered on a 7-point scale (1 = *not at all* and 7 = *very much*).

Dependent variable: Affect. To measure participants' affect, the self-assessment manikin scale was used (Bradley & Lang, 1994). The scale consists of a set of three items, measuring valence (happy – unhappy), arousal (aroused – unaroused), and dominance (submissive – dominant). The item for measuring valence displays five different manikins ranging from a frowning, sad manikin to a smiling, happy manikin. The item for measuring arousal displays five different manikins ranging from a calm manikin with closed eyes to a wide-eyed, excited manikin. The item for measuring dominance displays five manikins, ranging from a very small, submissive manikin to a very large, dominant manikin. All items were answered on a 9-point scale and analyzed on a single item level. The item measuring valence was used as a dependent variable, whereas the items measuring arousal and valence were used as distractor variables.

Results

We conducted a one-way MANOVA to test if participants in the mental contrasting condition differed from participants in the indulging condition regarding the baseline measures (i.e., expectations of success, incentive value, and baseline commitment). There was no overall effect of condition $F(3, 52) = 1.03$, $p = .388$, Wilks' $\Lambda = .94$. The participants in both condition did not differ regarding their expectation of success $F(1, 54) = 0.03$, $p = .862$, incentive value $F(1, 54) = 0.02$, $p = .902$, or baseline commitment $F(1, 54) = 2.95$, $p = .092$ (see Table 30 for means and standard deviations).

Dependent Variables: Time Usage, Well-rounded Ending, and Positive Affect

We conducted a one-way MANOVA to test if participants in the mental contrasting condition differed from participants in the indulging condition regarding time usage, well-rounded ending, and their affect. There was no overall effect of condition $F(4, 48) = 1.22$, $p = .317$, Wilks' $\Lambda = .91$. There was no effect of condition on time usage $F(1, 51) = 0.99$, $p = .324$, rating of the well-rounded ending in general $F(1, 51) = 0.00$, $p = .994$, rating of the well-rounded ending for themselves $F(1, 51) = 0.21$, $p = .646$, or affect $F(1, 51) = 0.54$, $p = .466$ (see Table 31 for means and standard deviations).

Explorative analysis. Participants in the mental contrasting and indulging condition were paired with partners who were not instructed to mentally contrast or indulge about the ending. To keep the partners' working time similar to the mental contrasting and indulging condition, partners filled out the same questionnaires as participants in the mental contrasting and indulging condition (except for the mental contrasting or indulging part). For explorative purposes, we tested with a one-way MANOVA if partners from the mental contrasting and indulging condition differed regarding the dependent variables time usage, well-rounded ending, and affect.

There was an overall effect of condition $F(4, 49) = 3.06$, $p = .025$, Wilks' $\Lambda = .80$, $\eta_p^2 = .20$. Results revealed that partners from participants in the mental contrasting condition reported a better time usage $F(1, 52) = 4.83$, $p = .032$, $\eta_p^2 = .10$, a more well-rounded ending $F(1, 52) = 4.69$, $p = .035$, $\eta_p^2 = .10$, and a more positive affect $F(1, 52) = 5.87$, $p = .019$, $\eta_p^2 = .10$ than partners from participants in the indulging condition. Partners did not differ regarding their assessment if they ended the conversation well-rounded for themselves $F(1, 52) = 0.88$, $p = .351$, $\eta_p^2 = .02$ (see Table 31 for means and standard deviations).

We further explored what may be the cause for the difference in the partners of the mental contrasting and indulging condition. We probed which variables in the *mental*

contrasting and *indulging condition* correlated with their partners' assessment of a well-rounded ending. The item measuring participants' level of arousal, which was assessed as a distractor variable, correlated negatively with their partners' rating of the well-roundedness of the ending (r = -.44, p = .008): The calmer participants in the mental contrasting and indulging condition were, the more well-rounded their partners perceived the ending of the conversation. In line with our hypothesis that using the remaining time to realize one's wishes is beneficial in ending situations, participants' level of arousal correlated in the mental contrasting condition with time usage (r = -.62, p = .002), but not in the indulging condition (r = .42, p = .073). This means, the more participants in the mental contrasting condition used the remaining time, the calmer they were, which was further associated with their *partners'* assessment of the well-rounded ending. We tested these associations in a moderated mediation analysis.

Association between time usage and well-roundedness of the partners' ending via arousal. To test the effect of time usage, arousal and condition on a well-rounded ending, we conducted a moderated mediation analysis (Hayes, 2013; Model 7 with 10,000 bootstrapped samples for bias-corrected confidence intervals). The model of the tested associations is shown in Figure 18a. We specified time usage as the predictor, partners' rating of the well-roundedness of the ending as the outcome variable, and feeling of arousal as the mediator. The condition was specified as the moderator, qualifying the association between time usage and arousal. As expected, the moderated mediation was significant b = -.40, 95% CI [-0.98, -0.04] (a_3b-path, Figure 18b), and the moderated mediation was only true in the mental contrasting condition b = .19, 95% CI [0.05, 0.37], but not in the indulging condition b = -.21, 95% CI [-0.69, 0.02]. See Table 32 for regression coefficients of all paths of the statistical model (Figure 18b).

a. b.

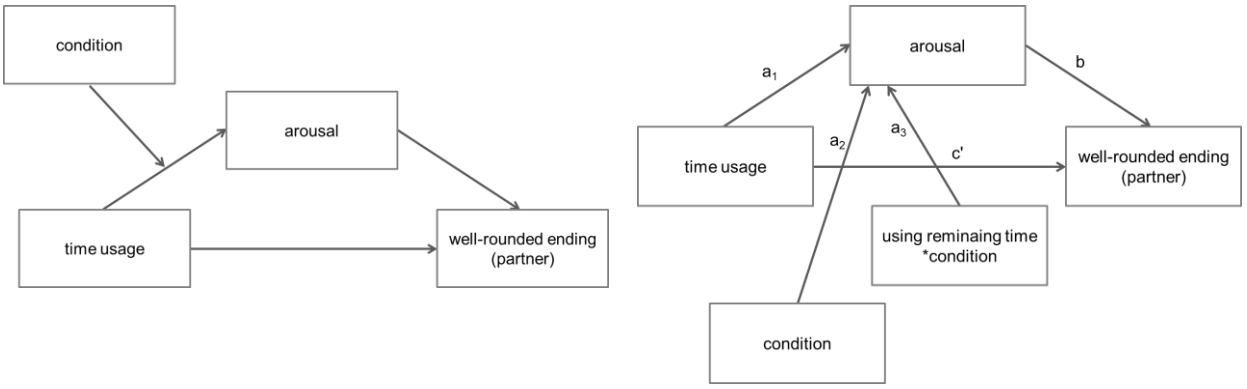


Figure 18. The conceptual model (a) and statistical model (b) of the moderated mediation model estimating the association between time usage and a well-rounded ending (indicated by the partners) via arousal, moderated by the condition.

Discussion

In Study 3, we sought to test if the self-regulatory strategy of mental contrasting can be used to support people in finding a well-rounded ending by applying mental contrasting directly to the wish of ending a conversation in a well-rounded way. We expected participants in the mental contrasting condition, compared to participants in the indulging condition, to use the remaining time more effectively, to end the conversation more well-rounded, and to experience more positive affect. Results revealed no differences between the conditions. One reason that we did not find the expected results may be that participants in the indulging condition overestimated how well-rounded they had ended the conversation. While participants in the mental contrasting condition rated the well-roundedness of the ending similar to their partners, participants in the indulging condition indicated, on a descriptive level, a more well-rounded ending than their partners (Figure 19).

Interestingly, the explorative analysis showed the expected differences in the respective partners: Participants who did not receive a treatment, but had a conversation with a person in the mental contrasting condition reported a better time usage, a more well-

rounded ending, and higher positive affect than participants who had a conversation with a person in the indulging condition. Importantly, partners of participants in the mental contrasting condition did not report that they ended the conversation more well-rounded for themselves, but that the conversation had a more well-rounded ending than partners of participants in the indulging condition. A study by Kirk et al. (2011) in which participants mentally contrasted (versus relevant control conditions) about negotiating with another person supports the idea that mental contrasting in a dyad can have an effect on the result of the interaction. In Kirk et al.'s study, participants in the mental contrasting condition find more integrative solutions than participants in the indulging condition (Kirk et al., 2011). Hence, mental contrasting could allow people in dyads to take their partners' perspective into account and to aim for a common benefit (in this case a well-rounded ending), instead of thoughtlessly fulfilling their wish. However, in Kirk et al.'s study, both negotiation partners were instructed to mentally contrast about the negotiation. Therefore the findings cannot directly be transferred to interpret the present study. Future studies are needed to test possible interpersonal effects.

Looking for possible mechanisms explaining the differences between the two conditions, we found that the more effectively participants in the mental contrasting condition used the remaining time, the less aroused they felt, and the more well-rounded their partners rated the ending of the conversation. The association between time usage and arousal fits the finding that the ideal feeling when having to deal with limited time is a sense of calmness, peacefulness, and serenity (Jiang et al., 2016; Mogilner et al., 2012). It seems like participants in the mental contasting condition were more sensitive to their goal progress: The better they used the remaining time, the calmer they were. Previous research, showing that after mental contrasting, reality is perceived as an obstacle that needs to be overcome to fuflill one's wishes (A. Kappes et al., 2013) and that people see more and better ways to fulfill their

wishes than people who indulge (A. Kappes et al., 2012; Reininger et al., 2016), may support the idea that after mental contrasting, people are more sensitive to their goal progress. As these results are post hoc explanations, they should be interpreted cautiously, and future studies should test these new ideas with a confirmative approach.

In summary, even though we could not find the expected results in Study 3, our explorative analysis delivered interesting insights into possible interpersonal effects of mental contrasting in ending situations that are worthwhile to be investigated in future studies.

General Discussion Study-set 2

In three studies, we examined if mental contrasting can be used to support people in finding a well-rounded ending. In Studies 1 and 2 we showed that in the face of an upcoming ending, mental contrasting could be used to support people to fulfill feasible wishes. Time usage is associated with a well-rounded ending and an easy transition into the subsequent phase. In Study 1, we asked participants one week before New Year's Eve which wish they would like to realize to end the year in a well-rounded way. They were then instructed either to mentally contrast or to indulge their individual wishes. One week after New Year's Eve, participants in the mental contrasting condition reported having used the remaining time effectively by investing effort into fulfilling their wishes, depending on their expectations of success. Participants with high expectations put effort into fulfilling their wishes and were more likely to actually fulfill their wishes, which was further associated with a well-rounded ending. Contrary to this, participants in the indulging condition invested their effort independently of their expectations of success. In Study 2, we tested the idea with another control condition (i.e., reverse contrasting) and with an additional dependent variable (i.e., ease of transition). Adolescents were asked three days before the end of their summer camp which wish they would like to fulfill to end the camp in a well-rounded way. On the day of the departure adolescents in the mental contrasting condition reported having used the

remaining time effectively by investing effort into fulfilling their wishes, depending on their expectations of success. Adolescents with high expectations put a lot of effort into fulfilling their wishes and fulfilled their wishes, which was further associated with a well-rounded ending and an easy transition into the next phase. Participants in the reverse contrasting condition, on the other hand, invested their effort independently of their expectations of success. In Studies 1 and 2, we could replicate the findings reported in the literature (for an overview see Oettingen, 2012) that mental contrasting leads to an expectancy-dependent goal pursuit in the face of an upcoming ending, and yield initial evidence that using the remaining time to realize one's feasible wishes is associated with a well-rounded ending.

In Study 3, we tested if mental contrasting can also be applied directly to the wish of finding a well-rounded ending. To test this idea, we asked participants either to mentally contrast or to indulge about ending a conversation well-rounded. After the conversation was over, they were asked if they had used the remaining time effectively, how well-rounded they had ended the conversation, and to indicate their affect. Contrary to our expectations, participants in the mental contrasting condition did not differ regarding time usage, well-rounded ending, or affect from participants in the indulging condition. However, post hoc analyses showed the expected effects in the partners of the particpants in the two conditions: Participants who did not receive an intervention, but had spoken with a participant that had mentally contrasted about ending the conversation in a well-rounded way, reported that the remaining time was used more effectively, that the conversation had a more well-rounded ending, and to have higher positive affect than participants who had spoken with a participant that had indulged in ending the conversation in a well-rounded way.

In summary, with Study-set 2 we obtained evidence that mental contrasting can be an effective strategy to support people in finding well-rounded endings and that mental

contrasting may have important interpersonal effects in situations where other people are involved in ending in a well-rounded way.

Limitations and Future Research

One limitation throughout the three studies is that we did not use the same measurements for assessing the usage of the remaining time, a well-rounded ending, ease of transition, or affect. We adapted the measurements to the specific situations as we wanted the measurement to suit the situation best, aiming for a conceptual replication rather than an exact replication. To account for this limitation, future studies should aim for exact replications to be able to aggregate the findings and draw more general conclusions.

Future studies should furthermore try to assess not only a well-rounded ending but also the associated variables, i.e. affect, regret, and ease of transition, to test if using the remaining time well leads to a well-rounded ending, leading to high positive affect, low negative affect, little regret, and an easy transition into the next phase.

For intervention studies, future studies should test at which point in time it is best to engage in mental contrasting when facing an upcoming ending. People with high expectations should benefit from mental contrasting, independently of the timing. People with low expectations may also benefit from mental contrasting if there is enough time for them to disengage from wishes that are not feasible and then engage in wishes that are feasible. In this sense, mental contrasting could be taught as a meta-cognitive strategy enabling people to commit to feasible wishes and disengage from unfeasible wishes.

As we did not find the expected effects in Study 3, future studies should validate if mental contrasting can be applied directly to the wish of ending in a well-rounded way. To test this idea, mental contrasting could first be applied to an ending that does not directly involve another person. Possible interpersonal effects of mental contrasting should be examined as a second step.

Implications

Our findings of Study-set 2 suggest that using the remaining time to fulfill one's wishes is associated with a well-rounded ending. We furthermore found that mental contrasting helps people using the remaining time by fulfilling feasible wishes and refraining from investing effort in unfeasible wishes. As mental contrasting is a cost- and time-efficient strategy that can be learned as a meta-cognitive strategy (Oettingen, 2012) it could be a valuable tool with a broad field of application. Learning mental contrasting as a meta-cognitive strategy could empower people to deal with upcoming endings throughout their lives more effectively. Besides empowering people to deal with endings on their own, professionals working as teachers, supervisors, or therapists, could teach mental contrasting to support their protégés in finding well-rounded endings.

Mental contrasting is a cognitive strategy that has been proven to be effective across a variety of different life domains. With our studies, we could show that mental contrasting can also be used in ending situations by supporting people in using the remaining time to fulfill their feasible wishes and thereby to find a well-rounded ending.

Conclusion

Throughout our lifetimes, we deal with endings: educational life, professional life, the time with our children living at home, a vacation or a fun night out with our friends – all those things eventually come to an end. Results of Study-set 1 suggest that finding a well-rounded ending is associated with well-being (i.e., positive affect and little regret) and eases the transition into the subsequent phase. Results of Study-set 2 suggest that mental contrasting can be a strategy that helps people to use the remaining time to fulfill their feasible wishes, which is further associated with a well-rounded ending. In other words, we first showed that finding a well-rounded ending is important for our well-being, and secondly that mental contrasting can be used to find a well-rounded ending. Future studies should

further explore these findings, test the effects of mental contrasting regarding different endings, and investigate the role of possible moderators, such as the importance or replicability of the ending, as well as the role of interpersonal processes. Furthermore, future studies should extend the findings by testing the effects in prospective long-term studies.

In summary, our research suggests that the way we close chapters in our lives impacts the way we begin new chapters. Using mental contrasting in the face of an upcoming ending prepares us for the ending and allows us to use the remaining time effectively and end in a well-rounded way.

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Appendix Preliminary Study

Table 1

Preliminary Study: Emotions Associated With a Well-Rounded Ending (Named by Participants)

positive affect				
pleasant positive affect	active positive affect	mixed affect	negative affect	unclear
1. positive (2) 2. freedom (1) 3. liberation (1) 4. prepared (1) 5. resilience (1) 6. sense of accomplishment (1) 7. power (1)		1. nostalgia/ nostalgic (7) 2. bittersweet (4) 3. bittersweet contentment (1) 4. bittersweet nostalgia (1)	1. sad/sadness (17) 2. anxious (2) 3. a sense of loss (1) 4. bad (1) 5. dissatisfied (1) 6. grief (1) 7. nervousness (1) 8. regret (1) 9. scared (1) 10. shock (1) 11. surrender (1)	1. anticipation (1) 2. coming to terms (1) 3. finality (1) 4. finished (1) 5. stability (1)
1. happy/happiness (48) 2. content/contented/contented ness/contentment (27) 3. satisfied/satisfaction (27) 4. peace/peaceful/peace of mind (20) 5. calm/calmness (13) 6. acceptance (11) 7. relieved/relief (10) 8. closure (5) 9. fulfilled/fulfillment (5) 10. accomplished/ accomplishment (4) 11. complete/completeness/com pletion (4) 12. tranquil/tranquility (4) 13. comfort (3) 14. no regrets (3) 15. completeness (2) 16. ease (2) 17. good (2) 18. growth (2) 19. love (2) 20. pleasure (2) 21. understanding (2) 22. a sense of completion (1) 23. appreciative (1) 24. clarity (1) 25. feeling a whole (1) 26. fondness (1) 27. glad (1) 28. grateful (1)	1. proud/pride (11) 2. excited/excitedness/ excitement (10) 3. joy/joyful (4) 4. confidence (2) 5. determined (2) 6. optimism (2) 7. strength (2) 8. alert (1) 9. cheerful (1) 10. success (1)			

Note. Categorization for pleasant and active positive affect following Smillie, Geaney, Wilt, Cooper, & Revelle, (2013), numbers in parenthesis reflect the total number of named emotions.

Table 2

Preliminary Study: Within Subjects Comparisons Between Different Scales of How Much Participants Associated Predefined Emotions With a Well-Rounded Ending

comparison			
pleasant positive affect	–	negative affect PANAS	$t(120) = 24.95$, $p < .001$ $d = 2.85$
pleasant positive affect	–	active positive affect	$t(120) = 15.07$, $p < .001$ $d = 1.40$
pleasant positive affect	–	positive affect PANAS	$t(119) = 11.54$, $p < .001$ $d = 0.90$
positive affect PANAS	–	negative affect PANAS	$t(120) = 18.12$, $p < .001$ $d = 2.20$
positive affect PANAS	–	active positive affect	$t(120) = 11.52$, $p < .001$ $d = 0.48$
negative affect PANAS	–	active positive affect	$t(120) = 13.59$, $p < .001$ $d = 1.58$

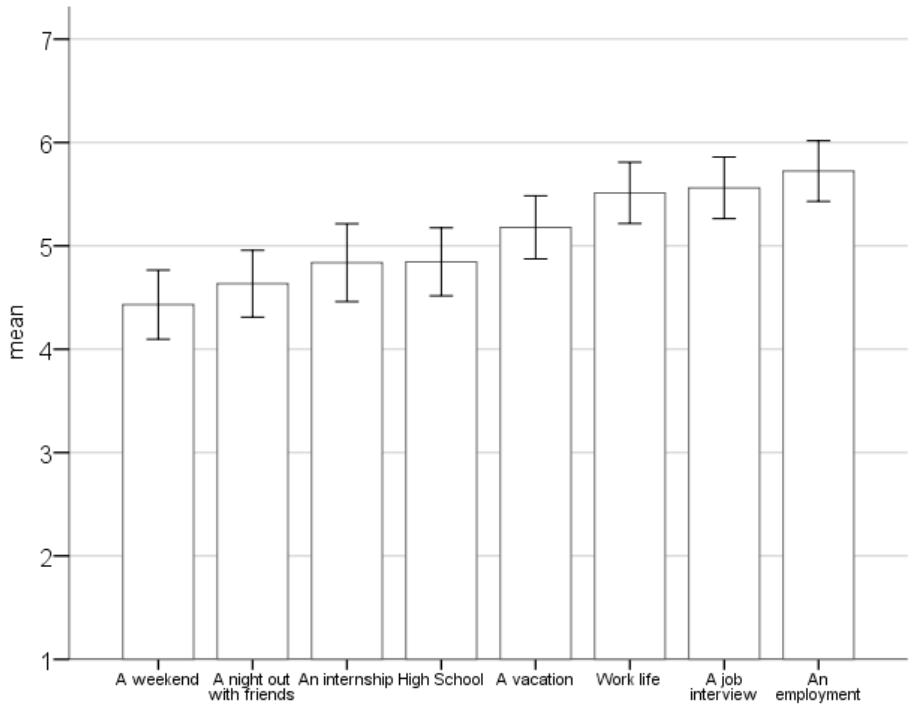


Figure 3. Preliminary Study: Participants' ratings of how important eight different life phases are. Error bars represent +/-2 SE.

Appendix Study-set 1 Study 1

Table 3

Study-set 1, Study 1 Ending a Visit Abroad: Relations Between Temporal Distance (in Months) and Well-Rounded Ending, Affect, Regret, and Eease of Transition

	well-roundedness	pleasant positive affect	positive affect PANAS	negative affect PANAS	regret	ease of transition
temporal distance (in months)	.14	.11	.10	-.10	-.14	.17

Note. All correlations are $p > .05$ (two-tailed).

Table 4

Study-set 1, Study 1 Ending a Visit Abroad: Zero-Order and Partial Correlation Between Participants' Ratings of a Well-Rounded Ending and Affect, Regret and Ease of Transition, Controlled for Rating of the Beginning, Rating of the Overall Stay, Self-Control, Reappraisal, Suppression, Relationship Quality with International, Local, and Friends at Home

well-rounded	pleasant positive affect	positive affect PANAS	negative affect PANAS	regret	ease of transition
zero-order correlation	.52***	.29**	-.20*	-.52**	.18*
controlled for					
rating of the beginning	.51***	.27**	-.22*	-.51***	.19*
rating of the overall experience	.49***	.26**	-.17	-.49***	.22*
self-control	.52***	.28**	-.20*	-.51***	.16
reappraisal	.52***	.28**	-.20*	-.52***	.18
suppression	.52***	.30**	-.19*	-.52***	.16
relationship with international friends	.52***	.29**	-.21*	-.51***	.16
relationship with local friends	.52***	.30**	-.18*	-.52***	.17
relationship with friends at home	.52***	.31**	-.16	-.52***	.16
all confounding variables	.48***	.25**	-.15	-.49***	.18

Note. *$p < .05$ **$p < .01$ ***$p < .001$ (two-tailed).

Table 5

Study-set 1, Study 1 Ending a Visit Abroad: Pleasant Positive Affect Predicted by Participants' Ratings of a Well-rounded Ending

	pleasant positive affect							
	Model 1				Model 2			
	B	*SE B*	*β*	*p*	*B*	*SE B*	*β*	*p*
constant	12.67	3.90		.001	4.63	3.675		.210
beginning	0.19	0.28	0.07	.488	-0.11	0.25	-0.04	.659
overall experience	1.21	0.46	0.27	.009	0.97	0.40	0.22	.018
self-control	-0.05	0.05	-0.10	.306	-0.00	0.05	-0.00	.958
suppression	-0.10	0.08	-0.11	.215	-0.04	0.07	-0.04	.620
reappraisal	-0.00	0.07	-0.00	.980	0.00	0.06	0.00	.981
relationship international friends	0.02	0.35	0.01	.956	-0.20	0.31	-0.05	.530
relationship local friends	-0.06	0.23	-0.02	.809	-0.09	0.20	-0.04	.651
relationship friends at home	0.12	0.28	0.04	.670	-0.10	0.25	-0.03	.694
well-rounded ending					0.35	0.06	0.51	.000
R2	.10							
F	1.59							
ΔR2					.21			
ΔF					35.47***			

Note. *p < .05 **p < .01 ***p < .001.

Table 6

Study-set 1, Study 1 Ending a Visit Abroad: Positive Affect PANAS Predicted by Participants' Ratings of a Well-rounded Ending

	positive affect PANAS							
	Model 1				Model 2			
	B	*SE B*	*β*	*p*	*B*	*SE B*	*β*	*p*
constant	20.81	6.99		.004	13.56	7.27		.065
beginning	0.29	0.48	0.06	.547	0.04	0.48	0.01	.929
overall experience	2.17	0.81	0.27	.009	1.96	0.79	0.240	.015
self-control	-0.13	0.09	-0.13	.142	-0.09	0.09	-0.09	.296
suppression	-0.02	0.15	-0.01	.894	0.04	0.15	0.03	.761
reappraisal	0.18	0.12	0.14	.140	0.19	0.12	0.14	.123
relationship international friends	-0.09	0.62	-0.01	.887	-0.32	0.61	-0.05	.605
relationship local friends	-0.47	0.41	-0.11	.261	-0.51	0.40	-0.12	.209
relationship friends at home	-0.21	0.50	-0.04	.678	-0.39	0.49	-0.07	.424
well-rounded ending					0.32	0.12	0.26	.006
R2	.12							
F	2.06*							
ΔR2					.06			
ΔF					7.86**			

Note. *$p < .05$ **$p < .01$ ***$p < .001$.

Table 7

Study-set 1, Study 1 Ending a Visit Abroad: Negative Affect PANAS Predicted by Participants' Ratings of a Well-rounded Ending

	negative affect PANAS							
	Model 1				Model 2			
	B	*SE B*	*β*	*p*	*B*	*SE B*	*β*	*p*
constant	23.28	5.36		.000	26.62	5.68		.000
beginning	0.40	0.38	0.10	.288	0.53	0.38	0.14	.170
overall experience	-1.31	0.64	-0.21	.042	-1.19	0.63	-0.19	.062
self-control	0.01	0.07	0.01	.946	-0.02	0.07	-0.02	.811
suppression	0.16	0.11	0.13	.158	0.13	0.11	0.11	.239
reappraisal	0.01	0.10	0.01	.925	0.01	0.09	0.01	.930
relationship international friends	0.60	0.48	0.12	.216	0.69	0.48	0.14	.154
relationship local friends	-0.18	0.32	-0.05	.579	-0.17	0.32	-0.05	.600
relationship friends at home	-0.88	0.38	-0.22	.021	-0.79	0.38	-0.20	.039
well-rounded ending					-0.15	0.09	-0.16	.099
R2	.12							
F	2.00							
ΔR2					.02			
ΔF					2.76			

Note. *$p < .05$ **$p < .01$ ***$p < .001$.

Table 8

Study-set 1, Study 1 Ending a Visit Abroad: Regret Predicted by Participants' Ratings of a Well-rounded Ending

	regret							
	Model 1				Model 2			
	B	*SE B*	*β*	*p*	*B*	*SE B*	*β*	*p*
constant	17.09	4.04		.000	24.27	3.95		.000
beginning	-0.42	0.28	-0.13	.132	-0.19	0.26	-0.06	.462
overall experience	-1.45	0.47	-0.27	.003	-1.23	0.43	-0.23	.005
self-control	0.15	0.05	0.22	.006	0.11	0.05	0.17	.027
suppression	0.37	0.08	0.35	.000	0.31	0.08	0.28	.000
reappraisal	-0.00	0.07	-0.00	.970	-0.00	0.07	-0.00	.962
relationship international friends	-0.62	0.36	-0.14	.089	-0.40	0.33	-0.09	.231
relationship local friends	0.02	0.24	0.01	.946	0.07	0.22	0.02	.754
relationship friends at home	-0.24	0.29	-0.07	.405	-0.07	0.26	-0.02	.786
well-rounded ending					-0.32	0.06	-0.38	.000
R2	.30							
F	6.45***							
ΔR2					.12			
ΔF					25.41***			

Note. *$p < .05$ **$p < .01$ ***$p < .001$.

Table 9

Study-set 1, Study 1 Ending a Visit Abroad: Ease of Transition Predicted by Participants' Ratings of a Well-rounded Ending

	ease of transition							
	Model 1				Model 2			
	B	*SE B*	*β*	*p*	*B*	*SE B*	*β*	*p*
constant	52.55	10.19		.000	44.57	10.78		.000
beginning	0.15	0.70	0.02	.827	-0.10	0.71	-0.01	.884
overall experience	-3.73	1.19	-0.31	.002	-3.98	1.18	-0.33	.001
self-control	-0.05	0.13	-0.03	.719	-0.01	0.13	-0.00	.968
suppression	-0.20	0.21	-0.08	.354	-0.13	0.21	-0.05	.559
reappraisal	-0.09	0.18	-0.05	.629	-0.09	0.18	-0.05	.627
relationship international friends	1.57	0.91	0.16	.088	1.33	0.91	0.14	.146
relationship local friends	0.70	0.60	0.11	.249	0.64	0.59	0.10	.287
relationship friends at home	0.69	0.72	0.09	.340	0.50	0.71	0.06	.483
well-rounded ending					0.36	0.17	0.19	.042
R2	.11							
F	1.90							
ΔR2					.03			
ΔF					4.23*			

Note. *$p < .05$

Table 10

Study-set 1, Study 1 Ending a Visit Abroad: Correlations Between the Outcome Variables Affect, Regret, and Ease of Transition and the Confounding Variables Rating of the Beginning, Rating of the Overall Stay, Self-Control, Reappraisal, Suppression, Relationship Quality with International, Local, and Friends at Home

	beginning	overall experience	self-control	reappraisal	suppression	relationship international friends	relationship local friends	relationship friends at home
pleasant positive affect	.13	.26**	-.08	.06	-.08	-.10	.07	.08
positive affect PANAS	.15	.26**	-.11	.21*	.01	.08	-.02	-.04
negative affect PANAS	.04	-.16	.03	.03	.15	.05	-.15	-.24**
regret	-.19*	-.30**	.23*	-.10	.30**	-.20*	-.11	-.15
ease of transition	-.06	-.24**	-.07	-.08	-.11	.04	.07	.12

Note. *$p < .05$ **$p < .01$ (two-tailed).

Table 11

Study-set 1, Study 1 Ending a Visit Abroad: Intercorrelations Among the Outcome Variables Affect, Regret, and Ease of Transition

	1	2	3	4	5
1 pleasant positive affect	-				
2 positive affect PANAS	.66***	-			
3 negative affect PANAS	-.31**	<-.00	-		
4 regret	-.29**	-.11	.34***	-	
5 ease of transition	.15	-.08	-.36***	-.25**	-

Note. $^{**}p < .01$ $^{***}p < .001$ (two-tailed).

Appendix Study-set 1 Study 2

Table 12

Study-set 1, Study 2 Ending High School: Zero-Order and Partial Correlation between Participants' Ratings of a Well-Rounded Ending and Affect, Regret and Ease of Transition, Controlled for Self-Control, Final Course Grade, Final Course Grade Expectation, Final Course Grade Satisfaction, Relationship Quality with Best Friends, Classmates, and Teachers

well-rounded	pleasant positive affect	positive affect PANAS	negative affect PANAS	regret	ease of transition
zero-order correlation	.49***	.54***	-.36***	-.35***	.48***
controlled for					
self-control	.47***	.50***	-.32**	-.30**	.46***
final course grade	.48***	.50***	-33***	-.30***	.44***
final course grade expectation	.46***	.52***	-.32***	-.31**	.45***
final course grade satisfaction	.43***	.51***	-.28**	-.24**	.43***
relationship quality with best friends	.46***	.52***	-.35***	-.35***	.46***
relationship quality with classmates	.50***	.54***	-.36***	-.35***	.48***
relationship quality with teachers	.47***	.53***	-.33***	-.33**	.48***
all confounding variables	.43***	.43***	-.30**	-.18	.37***

Note. $^{**}p < .01$ $^{***}p < .001$ (two-tailed).

Table 13

Study-set 1, Study 2 Ending High School: Pleasant Positive Affect Predicted by Participants' Ratings of a Well-rounded Ending

	pleasant positive affect							
	Model 1				Model 2			
	B	*SE B*	*β*	*p*	*B*	*SE B*	*β*	*p*
constant	-4.32	5.42		.437	-6.49	4.96		.194
self-control	0.09	0.06	0.16	.123	0.02	0.06	0.03	.748
final course grade	0.81	0.83	0.11	.331	1.61	0.77	0.23	.040
final course grade expectations	0.16	0.27	0.06	.543	0.01	0.25	0.00	.970
final course grade satisfaction	0.61	0.24	0.28	.012	0.51	0.22	0.23	.021
relationship friends	0.80	0.53	0.15	.130	0.12	0.50	0.02	.819
relationship classmates	0.63	0.29	0.21	.030	0.74	0.26	0.24	.006
relationship teachers	0.37	0.36	0.10	.314	0.55	0.34	0.15	.105
well-rounded ending					0.45	0.10	0.43	.000
R2	.24							
F	4.73***							
ΔR2					.13			
ΔF					22.18***			

Note. *$p < .05$ **$p < .01$ ***$p < .001$.

Table 14

Study-set 1, Study 2 Ending High School: Positive Affect PANAS Predicted by Participants' Ratings of a Well-rounded Ending

	positive affect PANAS							
	Model 1				Model 2			
	B	*SE B*	*β*	*p*	*B*	*SE B*	*β*	*p*
constant	5.20	9.07		.567	1.54	8.29		.853
self-control	0.16	0.10	0.16	.111	0.04	0.10	0.03	.712
final course grade	-2.90	1.39	-0.23	.039	-1.55	1.29	-0.12	.234
final course grade expectations	1.05	0.45	0.22	.020	0.79	0.41	0.17	.056
final course grade satisfaction	-0.22	0.40	-0.06	.579	-.39	0.36	-0.10	.287
relationship friends	2.67	0.88	0.29	.003	1.51	0.84	0.16	.075
relationship classmates	-0.22	0.48	-0.04	.647	-0.04	0.44	-0.01	.930
relationship teachers	0.86	0.61	0.14	.160	1.16	0.56	0.19	.040
well-rounded ending					0.75	0.16	0.43	.000
R2	.27							
F	5.38***							
ΔR2					.13			
ΔF					22.61***			

Note. *$p < .05$ **$p < .01$ ***$p < .001$.

Table 15

Study-set 1, Study 2 Ending High School: Negative Affect PANAS Predicted by Participants' Ratings of a Well-rounded Ending

	negative affect PANAS							
	Model 1				Model 2			
	B	*SE B*	*β*	*p*	*B*	*SE B*	*β*	*p*
constant	42.60	8.60		.000	45.05	8.29		.000
self-control	-0.07	0.10	-0.08	.454	0.01	0.10	0.01	.894
final course grade	-1.15	1.32	-0.10	.386	-2.05	1.29	-0.18	.116
final course grade expectations	-0.37	0.42	-0.09	.378	-0.20	0.41	-0.05	.622
final course grade satisfaction	-0.92	0.38	-0.27	.016	-0.81	0.36	-0.24	.028
relationship friends	0.43	0.84	0.05	.607	1.21	0.84	0.14	.153
relationship classmates	-0.96	0.46	-0.20	.037	-1.08	0.44	-0.23	.015
relationship teachers	-1.37	0.58	-0.24	.020	-1.57	0.56	-0.27	.006
well-rounded ending					-0.50	0.16	-0.31	.002
R2	.22							
F	4.23***							
ΔR2					.07			
ΔF					10.08**			

Note. *$p < .05$ **$p < .01$ ***$p < .001$.

Table 16

Study-set 1, Study 2 Ending High School: Regret Predicted by Participants' ratings of a Well-rounded Ending

	regret							
	Model 1				Model 2			
	B	*SE B*	*β*	*p*	*B*	*SE B*	*β*	*p*
constant	21.82	5.98		.000	22.83	5.94		.000
self-control	-0.08	0.07	-0.12	.216	-0.05	0.07	-0.07	.489
final course grade	0.29	0.92	0.03	.750	-0.09	0.93	-0.01	.928
final course grade expectations	-0.46	0.29	-0.15	.120	-0.39	0.29	-0.12	.188
final course grade satisfaction	-0.97	0.26	-0.39	.000	-0.93	0.26	-0.37	.001
relationship friends	-0.40	0.58	-0.06	.492	-0.08	0.60	-0.01	.896
relationship classmates	0.34	0.32	0.10	.288	0.29	0.31	0.08	.362
relationship teachers	-0.26	0.40	-0.06	.525	-0.34	0.40	-0.08	.398
well-rounded ending					-0.21	0.11	-0.18	.068
R2	.30							
F	6.28***							
ΔR2					.02			
ΔF					3.40			

Note. *$p < .05$ **$p < .01$ ***$p < .001$.

Table 17

Study-set 1, Study 2 Ending High School: Ease of Transition Predicted by Participants' Ratings of a Well-rounded Ending

	ease of transition							
	Model 1				Model 2			
	B	*SE B*	*β*	*p*	*B*	*SE B*	*β*	*p*
constant	4.40	5.73		.444	2.42	5.39		.654
self-control	0.07	0.06	0.10	.298	-0.00	0.06	-0.00	.977
final course grade	-1.57	0.88	-0.21	.076	-0.84	0.84	-0.11	.320
final course grade expectations	0.66	0.28	0.23	.021	0.52	0.27	0.19	.053
final course grade satisfaction	0.19	0.25	0.09	.450	0.10	0.24	0.05	.674
relationship friends	1.03	0.56	0.19	.068	0.40	0.55	0.07	.462
relationship classmates	0.07	0.30	0.02	.821	0.17	0.29	0.05	.559
relationship teachers	-0.41	0.39	-0.11	.293	-0.25	0.36	-0.07	.502
well-rounded ending					0.41	0.10	0.39	.000
R2	0.19							
F	3.37**							
ΔR2					0.11			
ΔF					15.55***			

Note. **$p < .01$ ***$p < .001$.

Table 18

Study-set 1, Study 2 Ending High School: Correlations Between the Outcome Variables Affect, Regret, and Ease of Transition and the Confounding Variables Self-Control, Final Course Grade, Final Course Grade Expectation, Final Course Grade Satisfaction, Relationship Quality with Best Friends, Classmates, and Teachers

	self-control	final course grade	final course grade expectation	final course grade satisfaction	relationship quality best friends	relationship quality classmates	relationship quality teacher
pleasant positive affect	.18	-.11	.22*	.34***	.27**	.28**	.22*
positive affect PANAS	.28**	-.27**	.26**	.22*	.26**	.09	.32**
negative affect PANAS	-.18	.17	-.24*	-.34***	-.09	-.24*	-.31**
regret	-.24*	.27**	-.32**	-.50**	-.07	.03	-.23*
ease of transition	.14	-.23*	.30**	.30**	.18	.12	.07

Note. *$p < .05$ **$p < .01$ (two-tailed).

Table 19

Study-set 1, Study 2 Ending High School: Correlations Between the Outcome Variables Affect, Regret, and Ease of Transition

	1	2	3	4	5
1 pleasant positive affect	-				
2 positive affect PANAS	.64***	-			
3 negative affect PANAS	-.49**	-.28**	-		
4 regret	-.19*	-.14	.45***	-	
5 ease of transition	.54***	.45***	-.49***	-.38***	-

Note. *$p < .05$ **$p < .01$ ***$p < .001$ (two-tailed).

Appendix Study-set 1 Study 3

Table 20

Study-set 1, Study 3 Ending a Life Event: Means and Standard Deviations for the Manipulation Check and Dependnet Variables Affect, Regret and Ease of Transition

	well-rounded *M* (*SD*)	not well-rounded *M* (*SD*)
manipulation check	23.52 (5.49)	13.00 (6.05)
pleasant positive affect	17.73 (5.80)	08.13 (5.11)
positive affect PANAS	31.42 (9.79)	23.13 (9.80)
negative affect PANAS	14.13 (6.15)	19.29 (8.43)
regret	09.19 (5.21)	15.26 (4.08)
ease of transition	17.31 (3.98)	12.42 (3.69)

Table 21

Study-set 1, Study 3 Ending a Life Event: Means and Standard Deviations for the Confounding Variables Importance of Ending, Emotion Regulation Strategies, Self-Control and Tenacious and Flexible Goal Pursuit.

		well-rounded *M* (*SD*)	not well-rounded *M* (*SD*)	
importance of ending		6.27 (1.01)	5.71 (1.33)	$F(1, 88) = 5.11$, $p = .026$
emotion regulation strategy				
	reappraisal	29.46 (7.25)	31.76 (6.88)	$F(1, 88) = 2.31$, $p = .132$
	suppression	14.75 (5.44)	14.42 (6.14)	$F(1, 88) = 0.07$, $p = .789$
self-control		43.02 (11.06)	44.32 (10.38)	$F(1, 88) = 0.32$, $p = .574$
tenacious goal pursuit		17.52 (3.91)	18.16 (4.16)	$F(1, 88) = 0.56$, $p = .458$
flexible goal pursuit		15.69 (4.07)	16.13 (4.39)	$F(1, 88) = 0.24$, $p = .626$

Appendix Study-set 1 Study 4 and 5

Table 22

Study-set 1, Studies 4 and 5 Moving Away: Means and Standard Deviations for the Manipulation Check and Dependent Variables Affect, Regret, and Ease of Transition

	Study 4		Study 5	
	well-rounded *M* (*SD*)	not well-rounded *M* (*SD*)	well-rounded *M* (*SD*)	not well-rounded *M* (*SD*)
manipulation check	24.28 (3.08)	09.44 (4.77)	--	--
pleasant positive affect	18.79 (4.59)	08.58 (4.37)	18.61 (4.12)	10.21 (5.17)
positive affect PANAS	34.91 (8.62)	23.32 (9.02)	39.30 (7.99)	28.64 (10.78)
negative affect PANAS	13.09 (3.71)	20.25 (6.71)	15.94 (5.12)	21.79 (6.85)
regret	06.09 (3.13)	16.86 (3.33)	07.39 (4.30)	15.34 (4.03)
ease of transition	18.42 (2.62)	10.26 (3.73)	18.07 (3.17)	11.49 (3.95)

Appendix Study-set 1 Study 6

Table 23

Study-set 1, Study 6 Ending a Party: Means and Standard Deviations for the Manipulation Check and Dependent Variables

	well-rounded condition *M* (*SD*)	not well-rounded condition *M* (*SD*)
manipulation check	16.70 (4.07)	10.98 (5.41)
pleasant positive affect	19.46 (3.61)	14.37 (4.97)
positive affect PANAS	24.04 (8.43)	17.31 (7.33)
negative affect PANAS	12.72 (4.81)	18.52 (8.13)
regret	04.86 (3.24)	11.24 (6.26)
ease of transition		
likelihood of sending a message	03.98 (2.24)	05.78 (1.66)
number of words	14.25 (10.50)	21.79 (13.73)
analysis of text message		
past focus	4.69 (6.41)	8.36 (5.79)
positive emotions	15.18 (11.94)	9.42 (7.93)
negative emotions	1.01 (6.25)	4.11 (5.10)
cognitive processes	5.47 (8.58)	7.79 (7.28)
first person singular	4.87 (5.95)	9.69 (7.20)

Appendix Study-set 1 Study 7

Table 24

Study-set 1, Study 7 Ending a Conversation: Means and Standard Deviations for the Dependent Variables

	well-rounded condition *M* (*SD*)		not well-rounded condition *M* (*SD*)	
pleasant positive affect	14.87	(3.21)	12.69	(3.51)
positive affect PANAS	31.00	(7.94)	25.81	(7.25)
negative affect PANAS	12.53	(4.13)	12.59	(3.30)
regret *anticipated*	5.93	(2.07)	5.75	(2.36)
ease of transition				
anticipated	8.40	(2.44)	8.41	(2.01)
RTCV	0.33 ms	(0.06)	0.39 ms	(0.09)
RT	810.53 ms	(124.96)	918.82 ms	(246.69)

Appendix General Discussion Study-set 1

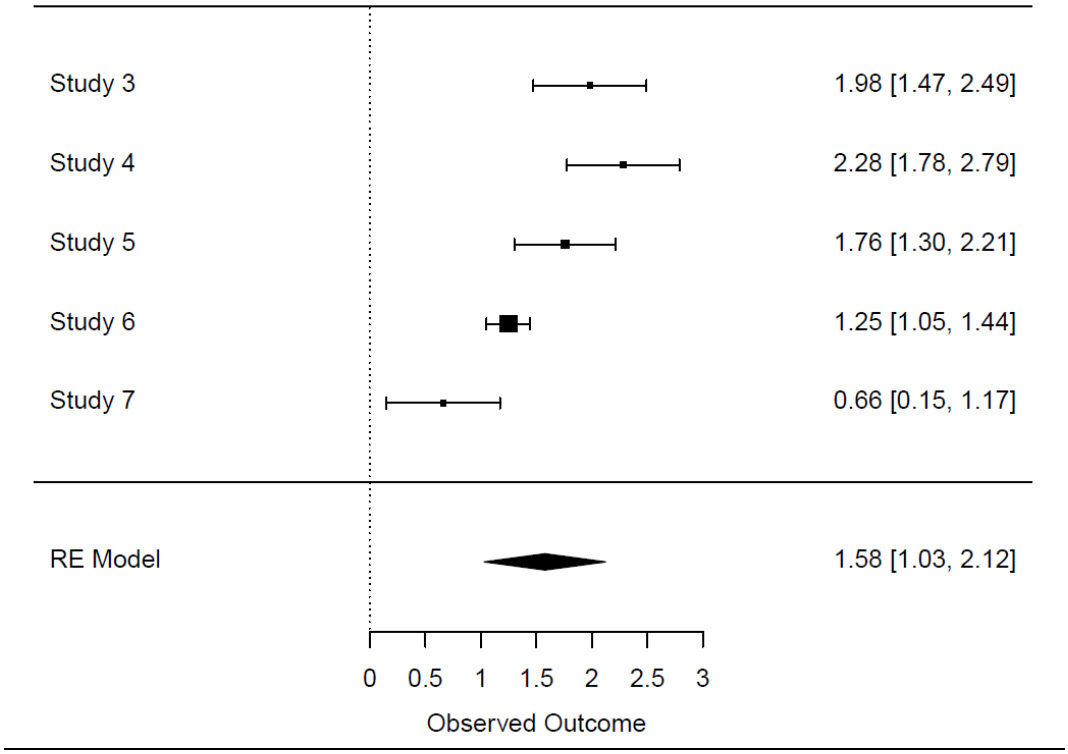


Figure 5. Forest plot, random effects model for the variable pleasant positive affect.

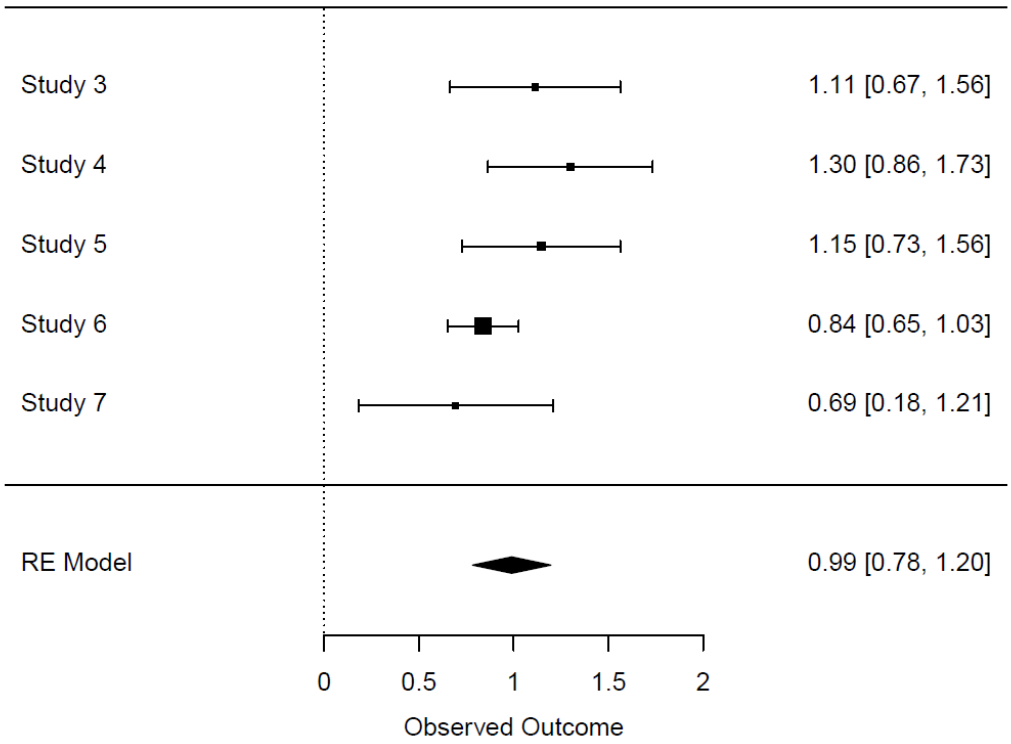


Figure 6. Forest plot, random effects model for the variable positive affect PANAS.

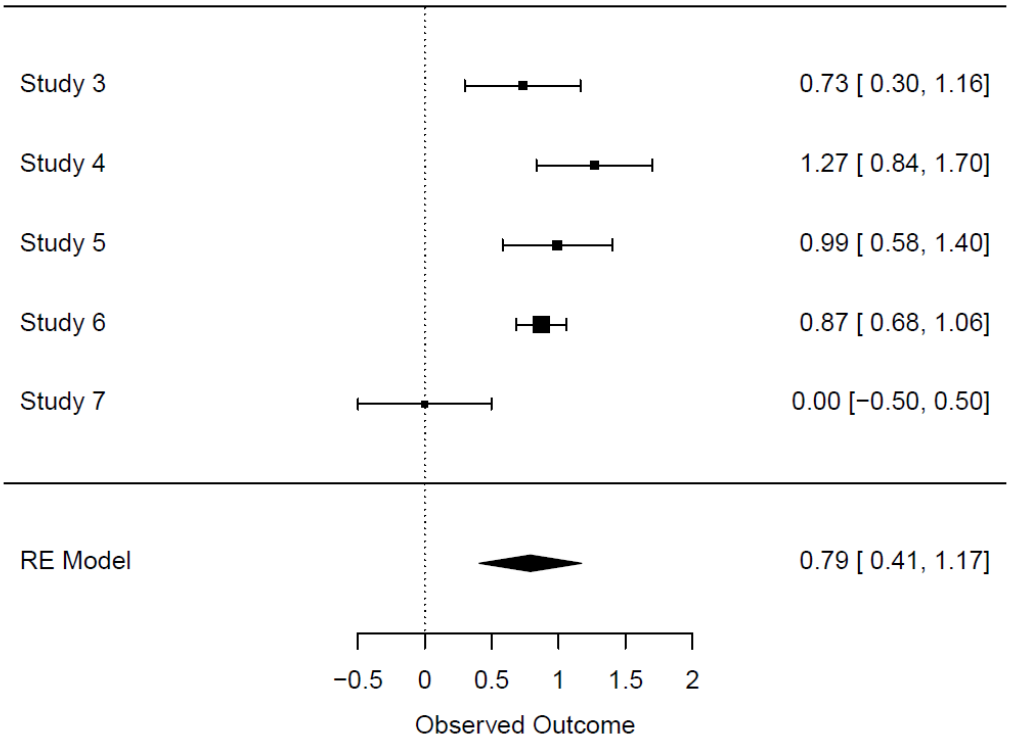


Figure 7. Forest plot, random effects model for the variable negative affect PANAS.

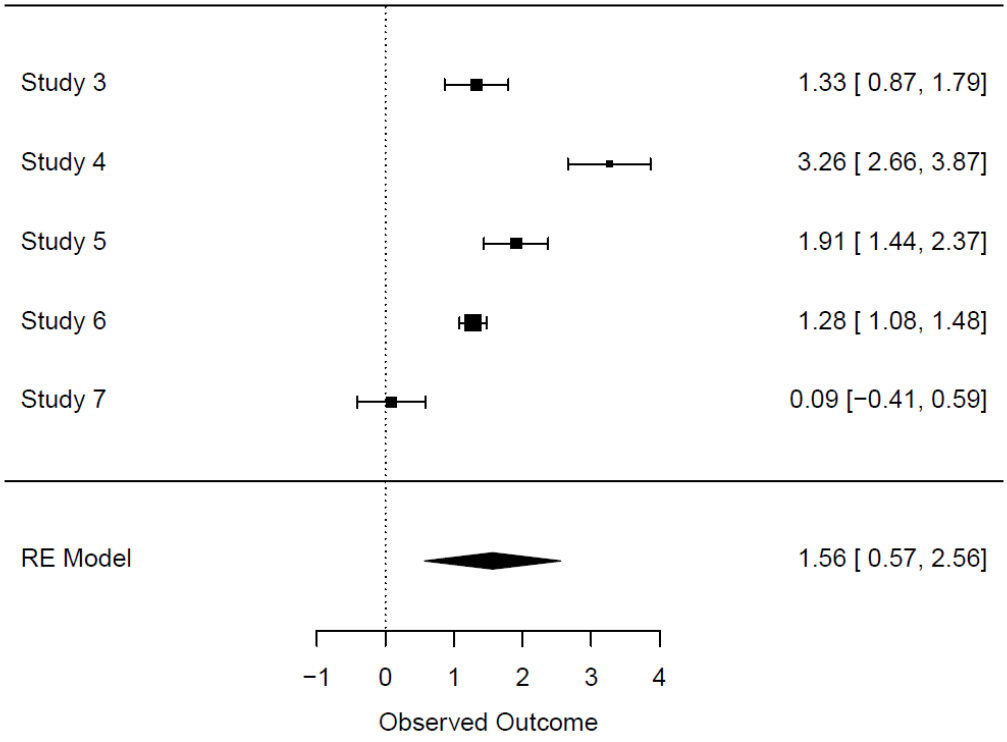


Figure 8. Forest plot, random effects model for the variable regret.

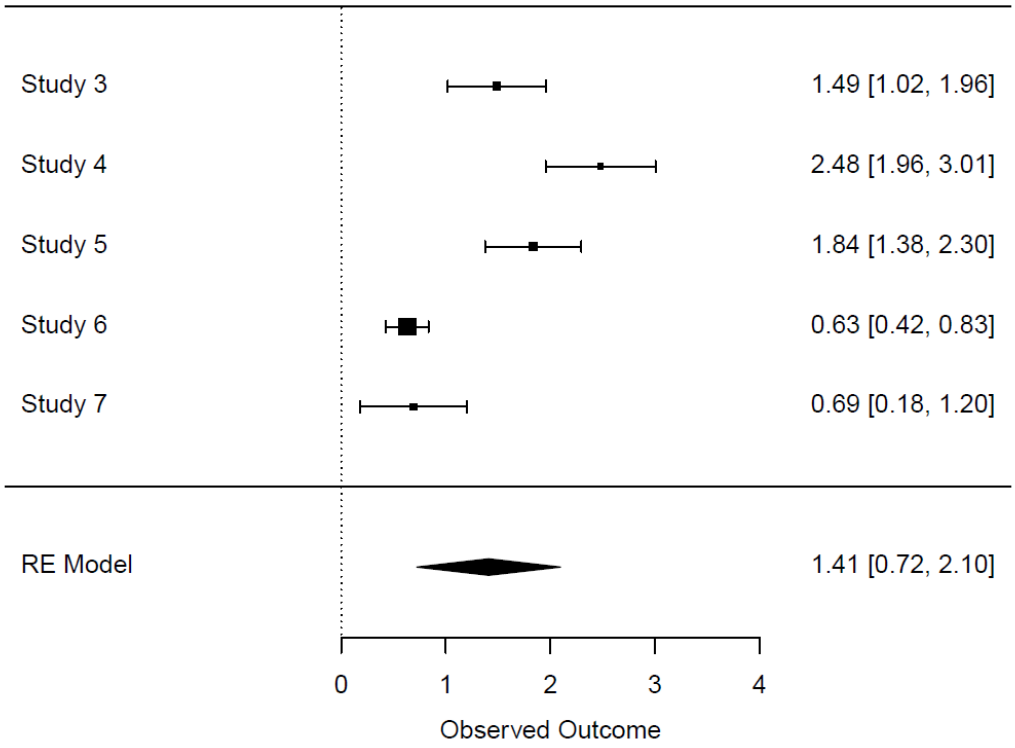


Figure 9. Forest plot, random effects model for the variable ease of transition.

Appendix Study-set 2 Study 1

Table 25

Study-set 2, Study 1 Ending a Year: Means and Standard Deviations for the Variables Expectations, Incentive Value, and Baseline Commitment

	mental contrasting condition *M* (*SD*)	indulging condition *M* (*SD*)
expectations	5.80 (1.10)	6.00 (1.21)
incentive value	5.95 (1.29)	5.97 (1.40)
baseline commitment	4.95 (1.65)	4.89 (1.97)

Table 26

Study-set 2, Study 1 Ending a Year: Z-Standardized OLS Regression Coefficients (Standard Errors in Parentheses) with 95% Confidence Intervals Estimating Time Usage and a Well-Rounded Ending.

		time usage (mediator)			well-rounded ending (outcome variable)	
		b	95% CI		b	95% CI
expectations	a_1	1.44 (0.43)	0.57, 2.31	c'	0.18 (0.14)	-0.09, 0.46
time usage				b	0.30 (0.14)	0.02, 0.57
condition	a_2	0.03 (0.24)	-0.45, 0.52			
expectations*condition	a_3	-0.60 (0.25)	-1.10, -0.10			
constant		-0.04 (0.40)	-0.85, 0.77		0.00 (0.12)	-0.25, 0.25
		$R^2 = 0.27$			$R^2 = 0.17$	
		$F(3, 53) = 6.57$, $p < .001$			$F(2, 54) = 5.49$, $p = .007$	

Note: Number of bootstrap samples for bias-corrected bootstrap confidence intervals: 10,000.

Appendix Study-set 2 Study 2

Table 27

Study-set 2, Study 2 Ending Summer-Camp: Means and Standard Deviations for the Variables Baseline Well-Being, Expectations, Incentive Value, Baseline Commitment

	mental contrasting condition *M* (*SD*)	reverse contrasting condition *M* (*SD*)
baseline well-being	5.20 (0.90)	5.58 (1.00)
expectations	4.92 (1.74)	5.07 (1.52)
incentive value	5.42 (2.00)	5.85 (1.54)
baseline commitment	4.27 (2.07)	5.15 (2.05)

Table 28

Study-set 2, Study 2 Ending Summer-Camp: Z-Standardized OLS Regression Coefficients (Standard Errors in Parentheses) with 95% confidence Intervals Estimating Time Usage and Well-rounded Ending.

		time usage (mediator)			well-rounded ending (outcome variable)	
		b	95% CI		b	95% CI
expectations	a_1	1.28 (0.39)	0.49, 2.07	c'	-0.21 (0.14)	-0.50, 0.08
time usage				b	0.52 (0.15)	0.22, 0.81
condition	a_2	-0.07 (0.26)	-0.58, 0.45			
expect*condition	a_3	-0.61 (0.26)	-1.13, -0.10			
constant		0.13 (0.40)	-0.68, 0.94		<-0.00 (0.13)	-0.27, 0.26
		$R^2 = 0.25$			$R^2 = 0.21$	
		$F(3, 45) = 5.14$, $p = .004$			$F(2, 46) = 6.19$, $p = .004$	

Note: Number of bootstrap samples for bias-corrected bootstrap confidence intervals: 10,000.

Table 29

Study-set 2, Study 2 Ending Summer Camp: Z-Standardized OLS Regression Coefficients (Standard Errors in Parentheses) with 95% Confidence Intervals Estimating Time Usage and Ease of Transition.

		time usage (mediator)			ease of transition (outcome variable)	
		b	95% CI		b	95% CI
expectations	a_1	1.25 (0.39)	0.47, 2.03	c'	0.16 (0.14)	-0.12, 0.44
time usage				b	0.33 (0.14)	0.04, 0.62
condition	a_2	-0.02 (0.26)	-0.53, 0.50			
expect*condition	a_3	-0.58 (0.25)	-1.09, -0.07			
constant		0.08 (0.40)	-0.73, 0.89		-0.01 (0.13)	-0.26, 0.25
		$R^2 = 0.27$			$R^2 = 0.19$	
		$F(3, 44) = 5.30$, $p = .003$			$F(2, 45) = 5.33$, $p = .008$	

Note: Number of bootstrap samples for bias-corrected bootstrap confidence intervals: 10000.

Appendix Study-set 2 Study 3

Table 30

Study-set 2, Study 3 Ending a Conversation: Means and Standard Deviations for the Variables Expectations, Incentive Value, and Baseline Commitment

	mental contrasting condition *M* (*SD*)	indulging condition *M* (*SD*)
expectations	5.56 (1.34)	5.63 (1.31)
incentive value	5.03 (1.60)	5.08 (1.50)
baseline commitment	3.28 (1.67)	4.04 (1.60)

Table 31

Study-set 2, Study 3 Ending a Conversation: Means and Standard Deviations for the Dependent Variables

			partners	
	mental contrasting condition *M* (*SD*)	indulging condition *M* (*SD*)	mental contrasting partner *M* (*SD*)	indulging partner *M* (*SD*)
time usage	25.93 (7.47)	24.08 (5.69)	26.07 (3.78)	23.46 (4.94)
well-rounded ending	3.38 (1.97)	3.38 (1.93)	3.53 (1.72)	2.58 (1.44)
well-rounded ending for myself	3.45 (1.96)	3.71 (2.14)	3.43 (1.55)	3.04 (1.49)
affect	6.90 (1.95)	7.25 (1.45)	7.67 (1.06)	6.83 (1.46)

Table 32

Study-set 2, Study 3 Ending a conversation: Unstandardized OLS regression coefficients (standard errors in parentheses) with 95% confidence intervals estimating arousal and rating of well-rounded ending by the partners.

		arousal (mediator)			partner well-rounded ending (dependent variable)	
		b	95% CI		b	95% CI
time usage	a_1	0.49 (0.15)	0.18, 0.80	c'	>0.00 (0.15)	-0.30, 0.30
arousal				b	0.38 (0.15)	0.06, 0.70
condition	a_2	>0.00 (0.28)	-0.56, 0.57			
using remaining time*condition	a_3	-1.05 (0.31)	-1.69, -0.42			
constant		-.07 (0.19)	-0.46, 0.32		-0.04 (0.15)	-0.35, 0.26
		$R^2 = 0.28$			$R^2 = 0.14$	
		$F(3, 36) = 4.78$, $p = .007$			$F(2, 37) = 3.06$, $p = .059$	

Note: Number of bootstrap samples for bias-corrected bootstrap confidence intervals: 10000.

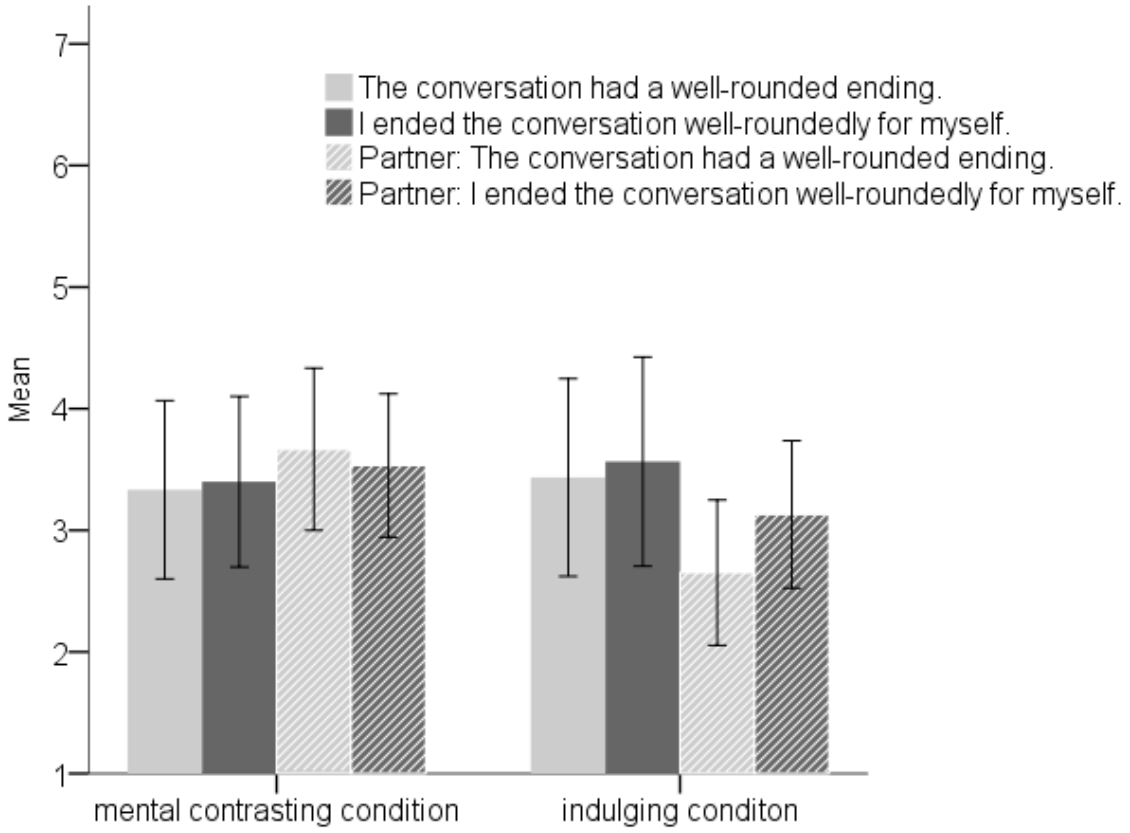


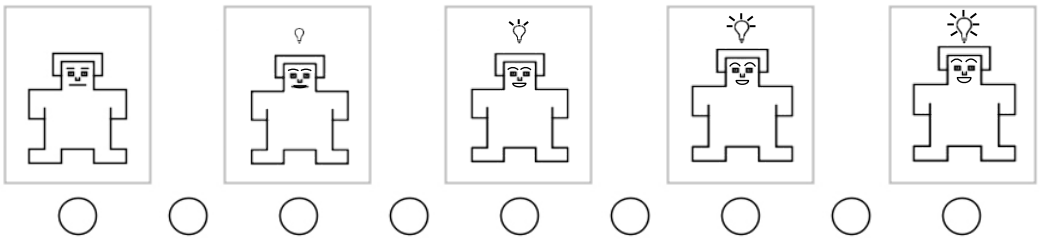
Figure 19. Participants' ratings of how well-rounded the conversation had ended. Error bars represent +/-2 SE

Supplements Study-set 2 Study 2

Study 2: Ending Summer Camp

Measuring clarity of wish fulfillment

Wie gut weißt Du, wie Du Dir Deinen Wunsch erfüllen kannst?



Supplements Study-set 2 Study 2

Study 2: Ending Summer Camp

Measuring usage of the remaining time

Wie viel hast Du gemacht um Dir Deinen Wunsch zu erfüllen?

sehr wenig sehr viel

○ ○ ○ ○ ○ ○ ○

Wie nahe fühlst Du Dich der Erfüllung von Deinem Wunsch? Mache ein Kreuz auf der Linie:

Hast Du Dir Deinen Wunsch selbst erfüllt?

gar nicht sehr

○ ○ ○ ○ ○ ○ ○

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