

Feeling good and bad about the past and future self

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Prior research has shown that memories of feeling good about the self often focus on achievement themes, whereas memories of feeling bad about the self often focus on interpersonal themes. This study examined whether a similar relationship would be evident for imagined future events. Young adults in the United States and Denmark provided memories and imagined future events that are associated with positive or negative self-regard. Across cultures, achievement themes were prominently represented in memories of positive self-regard and interpersonal themes were prominently represented in memories of negative self-regard. In contrast, relationships between the emotional valence and thematic content of imagined future events were weak and inconsistent. Our results raise new questions for the theory that imagined future episodes are constructed primarily from recombinations of past episodes.

Keywords: Autobiographical memory; Future thought; Self esteem; Cultural differences.

Over the past two decades, memory researchers have shown increasing interest in the potential adaptive significance of remembering past episodes (e.g., Baddeley, 1988; Bluck, 2003; Bruce, 1989; Pillemer, 1992, 2009; Wilson & Ross, 2003). These functional analyses appear to share the assumption that memories represent self-relevant goals, plans, motives, desires, and beliefs (e.g., Conway & Pleydell-Pearce, 2000; Pillemer, 1998; Singer & Salovey, 1993), which then guide or direct present and future intentions and behaviours (e.g., Bluck & Gluck, 2004; Pillemer, 2003; Schacter, Addis, & Buckner, 2007; Sutin & Robins, 2008).

Potential connections between self, memory, and goals are revealed in studies of "self-esteem memories" (Ivcevic, Pillemer, & Brackett, 2010; Ivcevic et al., 2008; Pillemer, Ivcevic, Gooze, & Collins, 2007). Research participants provided specific memories of instances when they felt especially good or especially bad about the self.

Memories of positive self-esteem experiences frequently focused on achievement themes, whereas memories of negative experiences focused instead on interpersonal themes. The present research addresses a new question: Are thematic differences between positive and negative memories also evident in positive and negative imagined future scenarios?

In our review of prior research, we first describe studies of self-esteem memories, and we detail methodological improvements that were introduced for the current study. Then, we describe relevant research on possible connections between remembering the past and imagining the future. Finally, we review prior research suggesting that people living in Denmark and the US may differ with respect to the emphasis placed on personal achievement and interpersonal relationships. Finding a similar pattern of results in cultures that differ in their achievement orientations would strengthen the generalisability of our findings.

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RESEARCH ON SELF-ESTEEM MEMORIES

Pillemer et al. (2007) asked participants to describe a specific memory of a time when they felt especially good about themselves and a time when they felt especially bad about themselves. Memories were coded for the presence or absence of achievement themes and interpersonal themes (memories could contain both themes). Most positive memories but only a minority of negative memories contained an achievement theme. In contrast, negative memories were far more likely than positive memories to portray an interpersonal theme. This general pattern of results was apparent for male and female college students, for middle-aged adults, and when using memory cues targeting different life periods (ages 8-18, ages 10-15, ages 34-44, earliest childhood memories).

Ivcevic et al. (2008) examined positive and negative self-esteem memories described by college students in the US, Croatia, and China. Memory cues targeted both recent events (occurring during the previous 4 weeks) and remote events (occurring during ages 10-15). Across cultures, content analyses of remote memories replicated the findings of Pillemer et al. (2007)... In contrast, content differences between positive and negative self-esteem memories were mostly absent for recent memories. These findings are consistent with the idea that recent memories organise ongoing everyday activities, whereas remote memories reflect overarching self-relevant goals and motivations (Conway, 2005; Conway, Singer, & Tagini, 2004).

The contrasting themes apparent in positive and negative self-esteem memories appear to reflect two basic sets of human motives: personal achievement, competence, agency, or "getting ahead" on the one hand and interpersonal connection, affiliation, communion, relatedness, or "getting along" on the other hand (Abele & Wojciszke, 2007; Deci & Ryan, 2000; McAdams, 1982, 2001; Wolfe, Lennox, & Cutler, 1986). Highly negative self-esteem memories may frequently focus on interpersonal themes because of the dramatic effect that relationship difficulties have on self-esteem and well-being. Researchers have identified a powerful human need for belonging and connection (DeWall & Bushman, 2011), in which the desire to avoid negative interpersonal interactions or social exclusion is

more powerful than the desire to create pleasant social connections (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Baumeister & Leary, 1995; Leary, Tambor, Terdal, & Downs, 1995; Rook, 1984). As such, highly negative memories of social discord should be more salient and viewed as more consequential than highly positive memories of social engagement.

In contrast, achievement themes may be highly prevalent in positive self-esteem memories because the motive to achieve (e.g., Deci & Ryan, 2000; Elliot, McGregor, & Thrash, 2002; McClelland, Atkinson, Clark, & Lowell, 1953) inspires activities that have the potential to enhance feelings of self-worth. Positive memories of achievement success provide models for future self-esteem enhancement (Sutin & Robins, 2008).

In our previous studies, thematic content was identified solely by researchers' coding of memory narratives. Because thematic coding may fail to fully capture participants' own interpretations or beliefs, participants in the present studies provided their own quantitative ratings of the degree to which the reported events reflected an achievement or interpersonal focus.

REMEMBERING THE PAST AND IMAGINING THE FUTURE

Research has identified important correspondences between remembering the past and imagining the future, including the possibility that similar brain regions support both types of mental activity (Addis, Wong, & Schacter, 2008; D'Argembeau, in press; Schacter et al., 2007). Addis et al. (2008) proposed the "constructiveepisodic-simulation hypothesis" to explain the connection between remembering past events and envisioning the future: "simulation of future episodes requires a system that can flexibly recombine details from past events" (p. 33). In support of this hypothesis, memories and imagined future events share important temporal and phenomenological properties (e.g., Addis et al., 2008; D'Argembeau & Van der Linden, 2004; Spreng & Levine, 2006). Despite these similarities, representations of future events tend to be less detailed, specific, and vivid than past events (Anderson & Dewhurst, 2009; Addis et al., 2008; Berntsen & Bohn, 2010; D'Argembeau & Van der Linden, 2004).

Comparisons of memories of past events and imagined future events have focused primarily on neurological, temporal, structural, and phenomenological qualities, whereas systematic comparisons based on thematic content are rare. If episodic memories are flexibly recombined in an effort to construct possible future scenarios (Addis et al., 2008; Schacter & Addis, 2007), then one would expect themes represented in memories to be evident in the imagined future. Consistent with this idea, D'Argembeau and Mathy (2011) found that personal goals guide the construction of episodic future scenarios. Accordingly, we expected the consistent thematic differences between positive and negative memories of self-worth demonstrated in earlier studies (Ivcevic et al., 2008; Pillemer et al., 2007) to be apparent for future events.

We also predicted a stronger effect of emotional valence on thematic content for distant than for close memories and future events. Remote events are more likely than recent events to capture persistent beliefs and goals, whereas recent memories may simply reflect mundane everyday activities (Addis et al., 2008; Berntsen & Bohn, 2010; Ivcevic et al., 2008; Wakslak, Nussbaum, Liberman, & Trope, 2008).

Our prediction that findings for imagining the future will parallel findings for recalling the past is qualified by potential difficulties that participants typically experience when asked to predict negative future events. Previous research has shown a positivity bias in future thinking: imagined future events are more positive than memories of past events (Berntsen & Bohn, 2010; Shao, Yao, Ceci, & Wang, 2010); participants take less time to imagine positive than negative future events (D'Argembeau & Van der Linden, 2004); and people are more likely to endorse positive than negative possible selves (Markus & Nurius, 1986). If negative personal memories serve as emblematic markers of situations to be avoided (Pillemer et al., 2007; Rasmussen & Berntsen, 2009), then predicted negative future scenarios would not feature details and themes marking past disappointments and failings. Instead, negative memories may be influential in redirecting future behaviours, and direct correspondences between the themes of negative past and future events could be attenuated accordingly.

CROSS-CULTURAL COMPARISONS: DENMARK AND THE UNITED STATES

To examine whether content differences between positive and negative memories and imagined future events are consistent across cultures, we compared the performance of college students living in the US and Denmark. These two countries share important similarities: both are individualistic cultures (Nelson & Shavitt, 2002: Thomsen, Sidanius, & Fiske, 2007) with modern and successful economies and educational systems. Nevertheless, Americans and Danes express differing values and beliefs concerning personal achievement and interpersonal connection. US culture promotes individual success and competition, and places a high premium on self-promotion and self-enhancement. Danes embrace a contrasting cultural view that prescribes adherence to a moral code of social modesty (Duina, 2011; Nelson & Shavitt, 2002). Americans are more likely than Danes to identify personal achievement "as an enduring value and life-guiding principle" (Nelson & Shavitt, 2002, p. 454).

These differences in cultural values may be reflected in the thematic content of memories and imagined future events: Achievement themes should be more prominent, and interpersonal themes less prominent, in Americans' than in Danés' descriptions of positive past and future events. Our prediction of cross-cultural thematic differences focuses on positive events because Americans' negative memories usually feature interpersonal themes and describe achievement themes only rarely (Ivcevic et al., 2008). Despite these potential differences in achievement orientation, we expected to find similar effects of emotional valence on thematic content in both cultures.

HYPOTHESES

We tested several hypotheses. First, achievement themes should be more prominent in positive than negative memories and interpersonal themes should be more prominent in negative than positive memories. Second, we expected to find a parallel effect of emotional valence on the thematic content of imagined future events. Third, we expected a strong relationship between emotional valence and thematic content to be

evident for distant rather than recent memories and future events. Fourth, even though we expected to find cultural differences in achievement orientation, relationships between emotional valence and thematic content should be consistent across cultures.

METHOD

Participants

The original US sample consisted of 167 students attending the University of New Hampshire. Participants received credit in psychology courses. The original Danish sample consisted of 140 psychology students attending the University of Aarhus. They participated as a part of a research methods course (during their fifth term at university). The original Danish and US samples differed in several important respects. Danish students tended to be older than American students (Danish students typically complete upper secondary education at age 20 and many take substantial time off working or travelling before entering university) and they were more likely to be married and have children. Because differences in age and life status could be related to primary study outcomes (e.g., thematic content of memories), we omitted students who were over age 30, were married, had children, failed to provide demographic information, or had incomplete data. In addition, we omitted participants who failed to follow directions by describing near past events that had occurred over 3 months ago, or near future events that were expected to occur over 3 months into the future. The final US sample included 151 students (123 females) with a mean age of 18.78 years. Most students were freshmen or sophomores and 93% were Caucasian. The final Danish sample included 112 students (97 females) with a mean age of 23.24 years. Most were in their third year in university and 96% were Caucasian. The somewhat older mean age for the Danish sample is typical for comparisons involving US and Danish college students (Nelson & Shavitt, 2002; Rubin, Berntsen, & Hutson, 2009; Thomsen et al., 2007).

Questionnaire

Participants completed a written questionnaire. First, they provided background information,

including current age, gender, year in college, mother's education (high school degree, college degree, graduate degree, or other), father's education, ethnicity, marital status, and whether or not they had children. Then, they provided event descriptions in response to eight prompts. The prompts targeted either a past or future event, an event that is associated either with positive or negative feelings about the self, and an event that is temporally close (an event that occurred during the past few weeks or could realistically occur in the next few weeks) or distant (an event that occurred during the past few years or could realistically occur in the next few years). These temporal cues were similar to cues used by Addis et al. (2008). Memory probes asked participants to "describe a memory of a specific one-time event when you can remember feeling especially good [bad] about yourself. Your memory should be of an event that occurred during the past few weeks [past few years]. Please describe your memory in as much detail as possible." Future event probes asked participants to "describe a specific one-time event that could make you feel especially good [bad] about yourself in the future. The future event should be something that could realistically occur in the next few weeks [next few years]. Please describe the imagined future event in as much detail as possible." Participants described either memories or future events first (counterbalanced); within the memories or future events conditions, they described either recent (past or next few weeks) or remote (past or next few years) events first (counterbalanced); within the recent or remote conditions, they described either positive events or negative events first (counterbalanced).

After describing a memory or a future event, students indicated how long ago or how far in the future the event occurs, and they rated on 5-point scales (1 = "not at all" to 5 = "extremely") the clarity of their visual image of the event; their level of emotionality at the time; the difficulty they experienced remembering or imagining the event; how strongly the remembered or future event focused on personal achievement success (positive memory) or failure (negative memory); and how strongly the event focused on relationships with other people. Because our hypotheses targeted achievement and relationship themes in students' memories, analyses involving rating scales focused only on these two dimensions.

Procedure

In the US, participants were given up to 1 hour to complete the written questionnaire in small groups of less than 30 people. In Denmark, participants were tested in groups of 20–28. Most Danish participants took between 1 and 1.5 hours to complete the questionnaire.

Data coding

Memory and future event narratives were coded for the presence or absence of a prominent achievement theme, and the presence or absence of a prominent interpersonal theme (Ivcevic et al., 2008; Pillemer et al., 2007). These two coding categories are not mutually exclusive and a narrative could portray both an achievement and an interpersonal theme (or neither theme). Positive achievement themes include success and accomplishment; negative themes include failure to achieve a goal or defeat. Positive interpersonal themes include friendship, love, intimacy, acceptance, or enjoyable social experiences; negative themes include rejection, betrayal, dishonesty, or social misunderstanding.

An American researcher and a Danish researcher conducted the primary coding of all memories and imagined future events. They were trained in the assignment of memories to achievement and interpersonal categories using a data set that was not part of the current study. After the initial training, the researchers coded memories/future episodes of 12 randomly selected questionnaires from the current US sample; intercoder agreement for the 96 past or future episodes was 92% (Kappa = .813) for presence or absence of an achievement theme and 94% (Kappa = .875) for the presence or absence of an interpersonal theme. Two naïve coders were then trained following the same procedures used with the primary coders (training using an unrelated data set followed by coding 12 randomly selected questionnaires from the current study). After training, formal reliability for the US sample was evaluated by randomly selecting 30% of the US questionnaires. For the presence or absence of an achievement theme, intercoder agreement between the primary and naïve coder was 96% (Kappa = 916); for the presence or absence of an interpersonal theme, intercoder agreement was 93% (Kappa = .865). Reliability for the Danish

sample was similarly evaluated using a random sample of 30% of the Danish questionnaires. Intercoder agreement for achievement themes was 91% (Kappa = .825); agreement for interpersonal themes was 93% (Kappa = .841).

RESULTS

Preliminary analyses

The hypothesis that achievement themes are more prominent in positive than in negative memories and future events, and that interpersonal themes are more prominent in negative than in positive memories and future events, was tested using both researchers' thematic coding and students' ratings. These two measures produced a similar pattern of results. In addition, analyses of close and distant memories revealed a similar pattern of findings but, consistent with expectations, effects were somewhat stronger for distant memories. For economy of presentation, only analyses of students' ratings of distant memories and future events are presented in Table 1 (complete statistical analyses are available upon request).

Emotional valence and thematic content

All statistically significant effects in Table 1 have p-values less than the Bonferroni-corrected critical value (.05/8 = .006). For US students, achievement ratings were significantly higher in positive than in negative memories and imagined future events, although the size of the effect was smaller for future events. Interpersonal ratings were significantly higher for negative than for positive memories but not for future events. For Danish students, achievement ratings were significantly higher for positive than for negative memories but not for future events. Interpersonal ratings were significantly higher for negative than for positive memories but not for future events.

Although our hypotheses focused on group comparisons, we also examined relationships between individuals' ratings of predominant themes portrayed in their distant memories and imagined future events. For the Danish and United States samples, we computed correlations between achievement ratings of positive past and future episodes, achievement ratings of negative

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TABLE 1
Students' mean ratings of achievement and interpersonal themes in distant positive and negative memories and imagined future events: United States (US) and Denmark (DK)

	Positive (SD)	Negative (SD)	t	p	ES
US achievement					
Memories	4.38 (0.96)	3.07 (1.43)	9.86	<.001	1.08
Future events	4.48 (0.95)	4.05 (1.32)	3.22	.002	0.37
US interpersonal					
Memories	3.16 (1.45)	3.78 (1.43)	3.99	<.001	-0.43
Future events	3.09 (1.43)	3.13 (1.58)	0.22	.830	-0.03
DK achievement					
Memories	3.54 (1.40)	2.96 (1.37)	3.20	.002	0.42
Future events	3.71 (1.21)	3.55 (1.34)	0.99	.323	0.13
DK interpersonal					
Memories	3.36 (1.36)	3.92 (1.16)	3.28	.001	-0.44
Future events	3.37 (1.36)	3.48 (1.45)	0.61	.541	-0.08

Effect sizes were computed using Cohen's d.

past and future episodes, interpersonal ratings of positive past and future episodes, and interpersonal ratings of negative past and future episodes. Correlations were modest; only the correlation between interpersonal ratings of positive memories and imagined future scenarios in the US sample reached statistical significance, r = .266, p = .001.

Cross-cultural comparisons

Between-culture analyses focused on distant memories and future events. US students' achievement ratings were significantly higher than Danish students' achievement ratings for positive memories and positive and negative future events (*p*-values <.004). Cultural differences in interpersonal ratings did not reach statistical significance.

DISCUSSION

Prior research on self-esteem memories identified a strong association between emotional valence and thematic content: Memories of events that produce positive feelings of self-worth prominently represent achievement themes, whereas memories of events that produce negative feelings of self-worth prominently represent interpersonal themes (Ivcevic et al., 2008; Pillemer et al., 2007). The present study examined the connection between emotional valence and thematic content for imagined future events as well as memories in two cultures. We discovered that the markedly

consistent thematic differences found for positive and negative self-esteem memories were not readily apparent for imagined future events. This raises new questions for the theory that imagined future scenarios are constructed directly from details of past episodes (e.g., Addis et al., 2008).

Our predictions of a stronger emphasis on achievement themes in positive than in negative memories, and a stronger emphasis on interpersonal themes in negative than in positive memories, were strongly confirmed. The results support the idea that people feel especially bad about the self when interpersonal connections are disturbed, possibly because of a universal need to belong. Although enhancing social connections above a baseline of support may be pleasurable and desirable, the motive to belong appears to focus more intensely on avoiding negative feelings about the self resulting from interpersonal disharmony (Baumeister et al., 2001; Baumeister & Leary, 1995; Leary et al., 1995; Pillemer et al., 2007).

Our findings also confirm the strong association between positive memories of self-worth and themes of achievement (Pillemer et al., 2007), suggesting that self-esteem is enhanced by personal accomplishment (Elliot et al., 2002; Sutin & Robins, 2005). Although students' ratings of achievement content in positive memories were lower for Danish than for American students, the predicted association between positive memories and achievement themes was present in both cultures.

An important qualification is the relatively high educational level of our college student participants, for whom achievement may be an especially salient life theme. Future research should explore self-esteem memories in samples representing a broader range of educational and socioeconomic levels. In addition, both samples were composed primarily of females. Although prior research failed to identify gender differences in memory content (Ivcevic et al., 2008), new studies that include a more equal balance of males and females and a wider range of ages and life situations are necessary to evaluate the generalisability of the present findings.

In light of recent research suggesting a direct connection between remembering the past and imagining the future (e.g., Addis et al., 2008; D'Argembeau, in press; Schacter et al., 2007), we expected to find a parallel effect of emotional valence on the thematic content of remembered past events and imagined future events. Because positive self-esteem memories frequently focus on achievement themes and negative self-esteem memories focus on interpersonal themes, imagined future episodes of positive and negative self worth should represent recombinations of event details corresponding to these same themes. Empirical support for this hypothesis was mixed and weak. The pattern of results for achievement themes in future events echoed findings for memories only in the US sample, where students' ratings of achievement themes were more prominent in positive than in negative future event descriptions. Importantly, there was no evidence in either sample that social themes are more prominent in negative compared to positive future events.

The lack of thematic consistency for negative memories and future episodes could be due in part to the relative difficulty people experience when asked to imagine the negative future (D'Argembeau & Van der Linden, 2004). Students' ratings (Table 1) showed a stronger emphasis on interpersonal themes in negative memories than in negative future events and a correspondingly stronger emphasis on achievement themes in negative future events than in negative memories. Future negative interpersonal events (e.g., a relationship break-up) may be harder to predict or anticipate than future negative achievement events (e.g., doing poorly on a particular chemistry exam), which could help to explain the more prominent representation of achievement themes in the negative future.

Despite an absence of thematic consistency between negative memories and imagined negative future events, memories of past episodes could nevertheless form the building blocks for negative future scenarios in line with the constructive-episodic-simulation hypothesis proposed by Addis et al. (2008). For example, an imagined negative future event with an achievement focus rather than the predicted interpersonal focus—such as failing a particular exam—could build on episodic memories of past experiences with exams. In this way, the student avoids basing a future prediction on the more prevalent and salient negative self-esteem memories that convey troubling interpersonal themes.

Even if specific memory details are not evident in the content of future scenarios, the remembered past could shape future life plans in a less direct, but no less important, fashion. The memories may symbolise positive goals to be pursued or negative outcomes to be avoided (Bluck & Gluck, 2004; Pillemer, 2003; Sutin & Robins, 2008), without requiring that future event representations build directly on specific episodic details of distant memories. D'Argembeau and Mathy (2011) discovered that explicit links between particular past episodes and imagined future episodes are uncommon. Instead, general personal goals are especially influential in the process of constructing future scenarios: "the imagination of future events not only involves episodic memory but also involves more general personal knowledge structures that provide a context for retrieving, integrating, and interpreting episodic details" (p. 268).

In summary, our findings provide evidence for a strong and pervasive connection between extreme feelings of positive self worth and past achievements, and also between extreme feelings of negative self worth and past interpersonal difficulties. In contrast, the predicted pattern of findings for imagined future scenarios was clearly evident for positive events only in the US sample and for negative events in neither sample. Research on possible connections between remembering the past and imagining the future should expand its focus to include thematic continuities and discontinuities. Researchers should also be mindful of the strong potential influence of emotional valence and include this variable in new studies whenever possible. Important differences are likely to exist in the ways that people remember and forecast their positive and negative selves.

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