

The contextual and systematic nature of life satisfaction judgments[☆]

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Abstract

Five studies were conducted to examine the nature of life satisfaction judgments. When the category of “excitement” was made accessible experimentally, individuals based their life satisfaction judgments more heavily on the frequency of excitement, in comparison to a “peaceful” condition in Study 1 and to both “neutral priming” and “no-priming” conditions in Study 2. A 7-day diary study (Study 3) showed that as “excitement” became naturally more accessible on weekends, the correlations between excitement and daily satisfaction also increased significantly. Study 3 thus illustrated a systematic contextual shift in the bases of life satisfaction judgments. Study 4 showed that high sensation seekers, for whom “excitement” should be chronically accessible, based their life satisfaction judgments more heavily on the frequency of excitement than did low sensation seekers. Finally, Study 5 demonstrated that the chronic accessibility of “excitement” measured at Time 1 predicted the degree to which individuals based their life satisfaction judgments on the frequency of excitement at Time 2. Altogether, these five studies highlight the contextually sensitive, yet systematic nature of life satisfaction judgments.

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When the legendary North Carolina basketball coach Dean Smith announced his retirement in 1997, he explained his decision as follows: “I examine every October if I am excited about coaching, and I wasn’t this year.” As Schwarz and Clore (1996) maintain, answers to such questions as “Am I excited about this job?” and “Am I satisfied with my life?” can provide crucial information pertinent to significant life decisions (see also Clore, Schwarz, & Conway, 1994; Schwarz & Strack, 1999 for review). The dependability of such judgments is questionable, however. For instance, Midwesterners may decide to move to California because they believe that the better climate would make them happier there (Schkade & Kahneman, 1998). Similarly, assistant professors may work hard because they believe that not getting tenure would be devastating (Gilbert, Pinel, Wilson, Blumberg, & Wheatley,

1998). But Californians are not happier than Midwesterners (Schkade & Kahneman, 1998), and faculty who fail to get tenure are not as unhappy as people might think (Gilbert et al., 1998). Midwesterners tend to overestimate the role of climate in California, and assistant professors tend to overestimate the role of tenure in their well-being. These phenomena are called the focusing illusion (Schkade & Kahneman, 1998) and focalism (Gilbert et al., 1998), because people weigh salient (focal) information disproportionately when forecasting future affective states or judging the life satisfaction of others.

A judgment model of subjective well-being (SWB)

These biases, however, are not limited to affective forecasting and life satisfaction judgments about others. Salient information has a large impact on one’s own life satisfaction judgments as well (see Schwarz & Strack, 1999 for a review). In seminal experiments, Strack, Martin, and Schwarz (1988) found that making a life domain temporarily accessible influenced global life satisfaction judgments. When respondents reported

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their life satisfaction before reporting their happiness with dating, the correlation between life satisfaction and dating was merely .16, suggesting that respondents did not base their life satisfaction judgments on their happiness with dating. But when respondents reported their happiness with dating immediately before their life satisfaction, the correlation increased to .55, suggesting that respondents in this condition did base their life satisfaction judgments on dating happiness. Schwarz, Strack, and Mai (1991b) found similar effects of another temporarily accessible domain (marital satisfaction) on global life satisfaction judgments. Accordingly, Schwarz and Strack (1999) have argued that life satisfaction judgments are often dominated by temporarily accessible information.

Schwarz and Strack (1999) speculated that people also use current affective states as bases for life satisfaction judgments. Using an ingenious misattribution manipulation, Schwarz and Clore (1983, Exp. 2) found that respondents reported being happier and more satisfied with their lives on a sunny day than on a rainy day. However, when they were reminded of the weather first, there was no difference in life satisfaction between sunny and rainy days. In other words, people based their life satisfaction judgments on their moods, unless those moods were explicitly attributed to the weather.

Based on these findings, Schwarz and Strack (1999) proposed a judgment model of SWB. That model describes two distinctive strategies for life satisfaction judgments: the current mood strategy and the comparison strategy. Unless affective states are weak, or the informational value of such states is discredited, individuals base global life satisfaction judgments on their current moods. This is the default strategy for global life satisfaction judgments. When the current mood strategy is not appropriate, a comparison strategy is used, and individuals draw on temporarily accessible information. There are a few limitations, however, to the role of temporarily accessible information. First, when a category is blatantly primed, temporarily accessible information tends to be discounted and there may be contrast effects (see Martin, 1986). Second, when the information made temporarily accessible is not relevant for evaluating a target, that information is not always used in later evaluations of the target (e.g., Banaji, Hardin, & Rothman, 1993).

Life satisfaction judgments: Are they arbitrary?

When current affective states and temporarily accessible information are determined by such factors as the weather, or the order in which people answer questions, life satisfaction judgments can seem arbitrary and unstable. But are they? Although previous research on such judgments has focused on the effects of extraneous

factors, Schwarz and Strack (1999) suggest that people often base life satisfaction judgments on chronically accessible information. As various researchers have noted (Higgins, 1996; Schwarz & Strack, 1999; Srull & Wyer, 1986), chronically accessible information reflects people's daily concerns (Klinger, 1977), life tasks (Cantor & Kihlstrom, 1987), personal strivings (Emmons, 1986), needs (Bruner, 1957), and values (Oishi, Schimack, Diener, & Suh, 1998; Rokeach, 1973).

To the extent that goals and values differ across individuals (Emmons, 1989; Oishi et al., 1998) and cultures (e.g., Hahn et al., 2001), the particular information that is accessible when life satisfaction judgments are made could differ across individuals and cultures. For instance, self-esteem and freedom are more prominent values, and thus more chronically accessible concepts, in individualist nations (e.g., the US) than in collectivist nations (e.g., China, India), so these concepts should be more strongly correlated with global life satisfaction judgments in individualist nations than in collectivist nations. In fact, Diener and Diener (1995) and Oishi, Diener, Lucas, and Suh (1999a) found support for exactly this prediction. And because people's values reflect their goals, value-congruent domains should be more closely associated with global life satisfaction judgments than value-incongruent domains. Indeed, Oishi, Diener, Suh, and Lucas (1999b) found that daily life satisfaction was more strongly associated with daily achievement satisfaction among students high in achievement values than among those low in achievement values. These findings do not mean that chronically accessible information is more pervasive or stronger than temporarily accessible information, but rather that chronically accessible information is just as important as temporarily accessible information in life satisfaction judgments (cf., Bargh, 1982; Bargh & Pratto, 1986; Higgins, King, & Mavin, 1982; Markus, 1977; see Higgins, 1996; Wyer & Srull, 1989).

Our research

Despite the wide range of evidence showing the effects of temporarily and chronically accessible information on life satisfaction judgments (e.g., Oishi et al., 1999a, 1999b; Schwarz et al., 1991b; Strack et al., 1988), no one has yet examined temporarily and chronically accessible information in the same studies. This lack of integration creates some ambiguity regarding the accessibility model. Demonstrating an effect of temporarily accessible information in one domain (e.g., dating, marriage), and an effect of chronically accessible information in another (e.g., the self, achievement), makes it unclear whether these effects will span domains. For instance, dating may have a temporary accessibility effect on life satisfaction judgments, but not a chronic accessibility effect. Or maybe the experimental priming of

achievement does not increase its effect on life satisfaction judgments, even though individual differences in the chronic accessibility of achievement can affect life satisfaction judgments. Studying both temporary and chronic accessibility effects for a single category of information would provide a more complete test of the accessibility model of life satisfaction judgments. Conducting such a test was the first goal of our research.

Our second goal was to conduct a more stringent test of the accessibility theory than previous researchers have done. For instance, information about the same aspect of a participant's life (e.g., marriage) was often brought to mind through direct questions in previous priming research on life satisfaction judgments (e.g., Schwarz et al., 1991b; Strack et al., 1988). But in our experiments, such information was made accessible more subtly, without directly asking about a participant's own life, thus providing a more stringent test. Of course, many studies of person perception and social judgment have used subtle priming procedures, such as the scramble sentence task or subliminal priming (see Higgins, 1996 for a review). Most of these studies, however, showed only that accessible information either increased or decreased evaluations of the target along the primed dimension. Aside from a few studies conducted by Strack, Schwarz, and their colleagues (e.g., Schwarz et al., 1991b; Strack et al., 1988), and by us (Oishi, Wyer, & Colcombe, 2000), there is no evidence that accessible information affects subsequent evaluations of self-relevant attributes. When assertiveness is primed, for example, do participants' judgments about their self-esteem become more strongly linked to their own assertiveness? Would unassertive people rate themselves low in self-esteem, and assertive people rate themselves high in self-esteem? Our research will extend the existing literature by testing whether the subtle activation of a category in a non-self-relevant context can affect the *basis* of personal life satisfaction judgments.

Finally, there is an important theoretical issue concerning the impact of situational factors on life satisfaction judgments. Previous research (e.g., Schwarz & Clore, 1983; Strack et al., 1988) stressed the arbitrary nature of that impact, studying how random situational factors such as weather, or the outcome of a soccer game, determine temporarily accessible information, which in turn affects life satisfaction judgments (e.g., Schwarz & Clore, 1983; Schwarz, Strack, Kommer, & Wagner, 1987). In these studies, therefore, unpredictable, external events made key information salient. Some researchers have thus recommended that these situational factors be statistically or procedurally controlled (see Eid & Diener, 1999; Schwarz, 1999). Because the effects of situational factors on life satisfaction have been viewed as random, however, the possibility of more systematic situational impacts on life satisfaction judgments

(e.g., weekdays vs. weekend, Spring Break vs. Finals Week) has never been tested. We want to emphasize that temporarily accessible information can be the result of systematic situational factors, and that although life satisfaction judgments are context-dependent, they are not random.

Five studies were conducted to see whether life satisfaction judgments are indeed made in a context-dependent yet systematic manner. We focused on the role of a particular type of emotional experience in life satisfaction judgments. Excitement was chosen in this regard because: (a) excitement is included in most emotion scales, and indeed is a core component of the Positive and Negative Affect Schedule (PANAS: Watson, Clark, & Tellegen, 1988); (b) rigorous research has been conducted on sensation seeking, revealing stable individual differences in the degree to which people seek excitement (see Zuckerman, 1979, 1994 for a review); and (c) unlike most other positive emotions, such as happiness, or love, the desirability of excitement varies across situations. These characteristics provided us with a unique opportunity to test the accessibility model of life satisfaction judgments using multiple methods.

Study 1: An obituary study

Study 1 was designed to test how the temporarily accessible category of "excitement" might affect life satisfaction judgments. Participants read an obituary of Carol Smith (pseudonym), an obituary that was ostensibly taken from the *Chicago Tribune*. Participants in an excitement condition then rated how exciting they thought Carol's life was, while participants in a peaceful condition rated how peaceful they thought Carol's life was. We hypothesized that later judgments of personal life satisfaction would be more heavily influenced by the frequency of excitement in the excitement condition than in the peaceful condition.

Method

Participants

Participants were 75 students enrolled in an introductory psychology course at the University of Illinois. No data on age and gender were collected. Students participated in order to meet a course research requirement.

Procedure

Participants were told that they would participate in two studies. The first study was described as a study of beliefs about a "good life." The second study was described as a study on life satisfaction and emotional

experiences. All participants were asked to read the following obituary, ostensibly taken from the *Chicago Tribune*.

Carol Smith (pseudonym), Homemaker

Carol Smith, 73, a homemaker and longtime Elmhurst resident, died Monday in Lake Forest hospital. Born in Chicago, Carol met her husband of 52 years in the 8th grade. The couple married when he returned from World War II, and they raised eight children in Elmhurst. Mrs. Smith devoted herself to her children, and helped with bake sales, fundraisers, drama productions, and Boy Scout activities, said her daughter, Mary. She also volunteered at a local shelter and was an avid bridge player. Mrs. Smith is survived by her husband, George, four other daughters and three sons.

After reading this passage, participants in the excitement condition rated whether Carol's life was "thrilling," "challenging," "active," "provocative," and "stimulating," on 7-point scales (1 = strongly disagree, 4 = neither agree nor disagree, and 7 = strongly agree). Participants in the peaceful condition rated whether Carol's life was "easy," "comfortable," "restful," "relaxed," and "peaceful," using the same 7-point scales. Then, everyone completed a questionnaire designed for the "second study." This questionnaire included the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). The SWLS consists of five items (e.g., "In most ways my life is close to my ideal" "I am satisfied with my life."). Participants rated these items on 7-point scales (1 = strongly disagree, 4 = neither agree nor disagree, and 7 = strongly agree). Scores on the SWLS thus ranged from 5 to 35. Cronbach's α was .81 for this sample. Next, participants rated how often they had felt each of 16 emotions during the past month, again on 7-point scales (1 = never, 4 = about half of the time, and 7 = always). These emotions, sampled from Larsen and Diener's (1992) circumplex, were "content," "dull," "annoyed," "excited," "happy," "relaxed," "sluggish," "nervous," "enthusiastic," "sad," "cheerful," "unhappy," "calm," "elated," "bored," and "anxious." According to Larsen and Diener, "excited," "enthusiastic," and "elated," are three forms of pleasant affect that involve high arousal. Cronbach's α for these three items was .55. Although this was rather low, the average inter-item correlation was .29 ($p = .01$). Rather than relying on any one of the items, we thus combined "excited," "enthusiastic," and "elated" to form an excitement scale by computing the mean of the three items.

At the end of the experiment, participants were asked if they found any part of the experiment strange. The majority said that they did not. Among those who found some part of the experiment strange, some mentioned that reading an obituary was weird, while others mentioned that they grew up in Elmhurst (where the target character, Carol, supposedly lived). But none of them said that rating the obituary was strange in itself.

Results and discussion

Descriptive statistics

Mean life satisfaction in the excitement condition was 24.38 ($SD = 5.52$), whereas mean life satisfaction in the peaceful priming condition was 26.29 ($SD = 4.72$), $t(73) = 1.61$, *ns*. The mean excitement scale score in the excitement condition was 4.42 ($SD = .80$), whereas the mean scale score in the peaceful condition was 4.36 ($SD = 1.01$), $t(73) = -.32$, *ns*. Thus, the priming manipulation did not affect the mean levels of life satisfaction or excitement.

Hypothesis testing

The key question was whether priming "excitement" would lead participants to base personal judgments of life satisfaction on their excitement. We conducted a multiple regression analysis to answer this question. Participants' life satisfaction scores was regressed on priming condition (coded as 0 = peaceful and 1 = excitement condition), their excitement scores, and the interaction between the priming condition and the excitement scores. Following Aiken and West (1991), we standardized excitement scores around the grand mean and formed the interaction terms using those standardized scores.

Overall, the regression model explained 28.6% of the variance, $F(3, 74) = 9.47$, $p < .001$. There was a marginally significant main effect of excitement scores, $B = 1.24$, $\beta = .23$, $p = .07$. Participants who experienced more excitement during the past month were somewhat more satisfied with their lives than were those who experienced less excitement. Unexpectedly, there was also a marginally significant main effect of the priming condition, $B = -1.93$, $\beta = -.19$, $p = .07$. Given the same level of excitement, participants who rated the obituary for peacefulness tended to evaluate their lives more positively than did those who rated the obituary for excitement. Finally, and central to our hypothesis, there was a significant interaction between the priming condition and excitement scores, $B = 2.77$, $\beta = .32$, $p = .01$.

To interpret the interaction more clearly, we computed the correlation between excitement scores and life satisfaction scores separately for each condition. As expected, the correlation in the excitement condition was significant, $r(37) = .63$, $p < .01$. That is, the life satisfaction of participants in that condition was well predicted by the excitement they experienced in their lives. In contrast, the correlation was non-significant in the peaceful condition, $r(38) = .29$, *ns*, suggesting that the life satisfaction of participants in that condition was not predicted by the excitement in their lives. We also tested whether the two correlations differed significantly from each other. There was indeed a significant difference in the size of the correlations, $z = 1.83$, $p < .05$

(because the direction of comparison was predetermined, one-tailed tests were used here and in all later analyses comparing correlation coefficients).

Was the effect specific to excitement?

Although we found the expected difference between conditions, it was unclear whether the priming effect was specific to excitement-related emotions. Thus, we tested whether the priming led to differential correlations between generally positive emotions (a composite score involving “happiness” and “cheerfulness,” Cronbach’s $\alpha = .82$) and life satisfaction. Another multiple regression was conducted, predicting life satisfaction scores from the priming condition, positive emotions, and the interaction term. The regression model explained 28.4% of the variance overall, $F(3, 71) = 9.41$, $p < .001$. There was a main effect of positive emotions, $B = 2.38$, $\beta = .46$, $p < .01$. That is, participants who experienced more happiness and cheerfulness in the past month were more satisfied than others with their lives. There was no main effect of priming condition, $B = -1.08$, $\beta = -.10$, *ns*. And there was no interaction between the priming condition and general positive emotions, $B = .78$, $\beta = .15$, *ns*.

In sum, Study 1 demonstrated that the priming of “excitement” vs. “peacefulness” led to differential correlations between the experience of excitement and life satisfaction. Furthermore, it showed that the priming effect was specific to positive emotions involving excitement.

Study 2: A scrambled sentence study

Study 1 provided initial evidence for the effect of a temporarily accessible emotion on life satisfaction judgments. There were, however, two limitations of that study. First, “peaceful” and “exciting” are opposites and may thus be linked in people’s minds. So it is not clear whether the concept of “excitement” was deactivated in the “peaceful” condition. Was the significant difference in correlations with life satisfaction due to the activation of “excitement” in the excitement condition, or the deactivation of “excitement” in the peaceful condition? To address this issue, we introduced neutral priming and no priming control conditions in Study 2. Second, the priming in Study 1 may not just have activated the concepts of “exciting” vs. “peaceful,” but also implied that a “good life” is either “exciting” or “peaceful” (see Higgins, 1998 for the “aboutness” principle). That is, participants may have been led to believe that a “good life is all about excitement.” In Study 2, we thus used a more subtle priming procedure, the Scrambled Sentence Task (Srull & Wyer, 1979). We hypothesized that judgments of personal life satisfaction would be more heavily influenced by the frequency of

excitement in the excitement priming condition than in the neutral priming or no-priming conditions.

Method

Participants

Participants were 135 students (62 males, 71 females, and 1 unknown) enrolled in an introductory psychology course at the University of Illinois. Students participated in order to meet a course research requirement. Approximately half of the participants ($n = 73$) were randomly assigned to the no-priming condition, and approximately one-fourth of the participants were assigned to either the excitement priming condition ($n = 31$) or the neutral priming condition ($n = 31$).

Procedure

Participants in the no priming condition were told that they would be participating in a study on life satisfaction and emotional experiences. Participants in the excitement and neutral priming conditions were told that they would be participating in a study that had two parts, namely a word task and a questionnaire on life satisfaction and emotional experiences. Participants in the excitement and neutral priming conditions first completed a scrambled sentence task similar to Srull and Wyer (1979). For each of 20 items, participants were asked to use the words listed to construct a grammatically correct three-word sentence. The words for a given test item were in scrambled order, such as “goes sees he bee.” Participants were then given two examples.

There were 20 stimulus sentences in total. In the “excitement” condition, the sentences included such words as “adventurous,” “reckless,” “risky,” “gamble,” “fearless,” “journey,” “skydiving,” and “new car.” In the “neutral” condition, the sentences only included words unrelated to “excitement,” such as “sees,” “bee,” “work,” “door,” “find,” “pencil,” “clever,” and “fall.” To make sure that words in the “excitement” condition activated that concept, while words in the “neutral” condition did not, 12 independent judges (undergraduate students at the University of Minnesota) rated the 16 words listed above on 7-point scales (1 = not at all related to “excitement” to 7 = very strongly related to “excitement”). As expected, words in the excitement priming condition were rated as significantly more related to “excitement” ($M = 5.17$) than were words in the neutral priming condition ($M = 2.46$), $t(11) = 11.91$, $p < .01$.

After the scrambled sentence task, participants completed a short questionnaire, in which they first evaluated their satisfaction with the past week on three items (“I am satisfied with the past one week of my life.” “The conditions of my life during the last week were excellent.” and “The last week was . . .”). The first two items were rated on 7-point scales with the same format

(1 = strongly disagree, 4 = neither agree nor disagree, and 7 = strongly agree). The last item, from the modified Delighted-Terrible scale (Andrew & Withey, 1976), was rated on a different 7-point scale (1 = terrible, 4 = mixed, and 7 = delightful). Cronbach's α for the three items was .90. Life satisfaction scores were computed by calculating the mean response to these items, so scores ranged from 1 to 7. Next, participants were asked to rate how often during the past week they experienced each of the same 16 emotions used in Study 1, again on 7-point scales (1 = never, 4 = about half of the time, and 7 = always). The responses to "excited," "enthusiastic," and "elated" were again combined to form an excitement scale, with a Cronbach's α of .69 (the average inter-item correlation was .43, $p < .01$). Participants in the no priming condition simply completed the weekly satisfaction scale, followed by the emotions scale.

Results and discussion

Descriptive statistics

The mean excitement score was 4.10 ($SD = 1.14$) in the excitement priming condition, 3.96 ($SD = 1.12$) in the neutral priming condition, and 3.70 ($SD = .90$) in the no priming condition. Consistent with Study 1, these means did not differ from one another, $F(2, 133) = 1.93$, *ns*. The mean life satisfaction was 4.19 ($SD = 1.57$) in the excitement priming condition, 3.91 ($SD = 1.32$) in the neutral priming condition, and 4.23 ($SD = 1.41$) in the no priming condition. As in Study 1, these means did not differ either, $F(2, 133) = .54$, *ns*. Mean week satisfaction was 4.25 ($SD = 1.52$) among male participants and 4.07 ($SD = 1.35$) among female participants. This sex difference was not significant, $t(131) = .70$, *ns*.

Hypothesis testing

We again conducted a multiple regression analysis to test our hypothesis. Because we expected the excitement priming condition to differ from the other two conditions, which we did not expect to differ from one another, we used two sets of contrast codes (Contrast 1: 2, -1, -1; Contrast 2: 0, 1, -1 for the excitement priming, the neutral priming, and no priming conditions), following Cohen and Cohen (1983). We predicted life satisfaction scores from these two contrasts, excitement scores, and interaction terms involving each contrast and excitement. Following Aiken and West (1991), we standardized the excitement scores around the grand mean to form all the interaction terms.

The overall regression model explained 14.7% of the variance, $F(5, 129) = 4.46$, $p < .01$. There was a main effect of excitement on satisfaction, $B = .50$, $\beta = .35$, $p < .01$. Participants who experienced more excitement during the previous week reported having a more satisfying week than did others. There was no main effect of

Contrast 1, $B = -.03$, $\beta = -.02$, *ns*. The excitement priming condition thus did not differ from the two other conditions in satisfaction. Similarly, there was no main effect of Contrast 2, $B = -.20$, $\beta = -.12$, *ns*. The neutral priming condition thus did not differ from the no priming condition in satisfaction. Finally, as predicted, there was an interaction between Contrast 1 and excitement, $B = .16$, $\beta = .15$, $p = .04$, indicating that the relation between excitement and satisfaction differed between the excitement priming condition and two other conditions. Also as predicted, there was no interaction between Contrast 2 and excitement, $B = -.09$, $\beta = -.06$, *ns*, indicating that the relation between excitement and satisfaction did not differ between the neutral priming and no priming conditions.

To clarify the interaction between excitement and Contrast 1, we computed the correlation between excitement and satisfaction separately for each condition. Confirming our prediction, excitement was more strongly correlated with satisfaction in the excitement priming condition, $r(31) = .58$, $p < .01$, than in the neutral priming condition, $r(31) = .20$, *ns*, $z = 1.81$, $< .05$. Excitement was also more strongly correlated with satisfaction in the excitement priming condition than in the no priming condition, $r(73) = .27$, $p < .05$, $z = 1.72$, $p < .05$. In contrast, the correlations for the neutral priming and no priming conditions did not differ, $z = .36$, *ns*. And there were no sex differences in the correlation between excitement and life satisfaction in any of the conditions ($ps > .10$).

Was the effect specific to excitement?

We tested whether the priming of "excitement" affected positive emotions more generally by substituting those emotions for excitement in the multiple regression analysis. A positive emotions scale was created by averaging ratings to the words "happy" and "cheerful." Cronbach's α for this scale was .63. The overall regression model explained 17.2% of the variance in scale scores, $F(5, 129) = 5.37$, $p < .001$. There was a main effect of general positive emotions on week satisfaction, $B = .27$, $\beta = .19$, $p < .05$. There was no main effect of Contrast 1, $B = .03$, $\beta = .03$, *ns*, or of Contrast 2, $B = -.02$, $\beta = -.00$, *ns*. There was a significant interaction between positive emotions and Contrast 1, but in the opposite direction from before, $B = -.30$, $\beta = -.28$, $p < .01$. Positive emotions had stronger effects on satisfaction in the neutral priming and no priming conditions than in the excitement priming condition. And there was a marginally significant interaction between positive emotions and Contrast 2, $B = -.27$, $\beta = -.16$, $p = .07$, suggesting that positive emotion tended to affect satisfaction more strongly in the no priming condition than in the neutral priming condition. In short, the interactions between the contrasts and positive emotions were quite different from the interactions

involving excitement. These analyses thus indicate some specificity in the priming effect of excitement.

Study 3: A daily diary study

Using different priming procedures, the first two experiments demonstrated that random, extraneous factors at the time of judgment can change the bases for life satisfaction judgments. As discussed earlier, however, systematic, extraneous factors might also change the bases for such judgments. Specific days of the week present one such factor, because weekends tend to involve more exciting activities (“party time” “fun time”) than do weekdays. Study 3 was designed to test the systematic effect of days of the week on life satisfaction judgments. Because the notion of “excitement” should be more accessible on weekends than on weekdays, we hypothesized that daily excitement would be more strongly correlated with daily life satisfaction on weekends than on weekdays.

Method

Participants

Participants were 134 students (41 males, 93 females) enrolled in a course on personality and well-being at the University of Illinois. Students participated in order to complete a course research requirement.

Procedure

Students were told that they would be participating in a study on daily moods. They completed a short daily satisfaction form every night for seven consecutive days. To ensure compliance, they had to turn in each daily form on the following day. The form included one item on daily satisfaction (“How good or bad was today?”) that required a rating on a 6-point scale (1 = terrible, 2 = very bad, 3 = bad, 4 = good, 5 = very good, and 6 = excellent). The form also included items regarding daily emotional experiences. These required ratings on

8-point scales for a number of emotional adjectives (1 = never, 2 = very slightly, 3 = some of the time, 4 = less than half, 5 = more than half, 6 = large amount, 7 = almost always, and 8 = always). The adjectives were “happy,” “proud,” “affectionate,” “calm,” “pleasant,” “active,” “excited,” “guilty,” “afraid,” “angry,” “sad,” “tense,” “bored,” and “unpleasant.” The responses to “active” and “excited” were combined to form a daily excitement score. Cronbach’s α for this score was computed for each day, and ranged from .55 to .77, with a mean of .63. Although this was somewhat weak, it again seemed better to use scale scores for our analyses rather than rely on single items. The responses to “happy,” “proud,” “affectionate,” “calm,” and “pleasant,” were combined to form a daily general positive emotion scale score. Cronbach’s α for this score was computed for each day, and ranged from .72 to .79, with a mean of .77.

Results and discussions

Descriptive statistics

To see whether weekends really are more exciting than weekdays, we obtained independent ratings of “how exciting typically is each day of the week?” from 12 undergraduate students at the University of Minnesota. These ratings, which were made on 7-point scales, are summarized in the far right column of Table 1. As expected, Thursday, Friday, and Saturday were rated as more exciting than Monday, Tuesday, Wednesday, and Sunday, overall $F(6, 11) = 17.86, p < .001$. This confirmed our assumption that the concept of “excitement” was more likely to be accessible to students on Thursday, Friday, and Saturday than on other days.

Table 1 provides descriptive statistics for the daily excitement and satisfaction scores from the regular sample. There was no sex difference in daily excitement or daily satisfaction on any day ($ps > .10$). A repeated measures ANOVA on excitement revealed a significant effect for day of the week, exact $F(6, 103) = 5.93, p < .01$. As recommended by Cohen (1994) and

Table 1
Descriptive statistics, correlations between excitement and daily satisfaction, and independent ratings of excitement for days of the week

Day of the week	Excitement M (SD)	Satisfaction M (SD)	Correlation R	Independent excitement ratings
Monday	3.88 ^a (1.25)	3.87 ^c (.76)	.32**	2.92 ^a
Tuesday	3.68 ^a (1.29)	3.89 ^c (.76)	.33**	2.92 ^a
Wednesday	3.78 ^a (1.35)	3.92 (.77)	.37**	3.58 ^a
Thursday	3.62 ^a (1.30)	3.91 (.85)	.44**	4.58 ^b
Friday	3.80 ^a (1.27)	4.07 ^b (.97)	.47**	5.92 ^c
Saturday	3.86 ^a (1.34)	4.28 ^a (1.01)	.58**	6.00 ^c
Sunday	3.33 ^b (1.41)	4.07 ^b (.84)	.33**	3.25 ^a

Note. Independent ratings of excitement were made by 12 judges, who evaluated how exciting each day of the week typically is on 7-point scales (1 = not at all exciting to 7 = extremely exciting). Means and correlation coefficients with different superscripts are statistically different from one another with an α level of at least .05.

** $p < .01$.

Schmidt (1996), we computed 95% confidence intervals for each mean excitement score to understand the differences among days. The 95% confidence intervals for the daily excitement scores on Sunday (3.04, 3.57) did not overlap with the daily excitement scores on any other day, indicating that excitement on Sunday was significantly lower than on any other day. A repeated measures ANOVA on satisfaction also revealed a significant effect of the day of the week, exact $F(6, 104) = 2.39, p < .05$. We computed 95% confidence intervals for each mean satisfaction score, as recommended by Cohen (1994) and Schmidt (1996), to understand the differences among days. The confidence interval for Saturday (4.08, 4.45) did not overlap with those for the other days, indicating that satisfaction was significantly higher on Saturday than on any other day. Similarly, the confidence intervals for Friday (3.91, 4.24) and Sunday (3.91, 4.27) did not overlap with those for Monday and Tuesday, indicating that satisfaction on Friday and Sunday was significantly higher than on Monday and Tuesday.

Hypothesis testing

We computed the correlation between excitement and satisfaction separately for each day. The results generally confirmed our prediction. As Table 1 shows, the correlation was lowest on Monday, $r(127) = .32, p < .01$, then gradually increased as the week progressed, reaching a peak on Saturday, $r(125) = .58, p < .01$, and then dropping on Sunday, $r(125) = .33, p < .01$, back to the same level as on Monday. There was no sex difference in the correlations between excitement and satisfaction on any day of the week ($ps > .10$). We also tested whether the independent judges' ratings of excitement could predict the sizes of the correlations between daily excitement and satisfaction. We first converted those correlations to Fisher's z -scores, and then computed the correlation between the ratings and the z -scores. The degree to which daily excitement was related to daily satisfaction was almost perfectly predicted by the judges' independent ratings of how exciting each day was, $r(7) = .94, p < .01$.

To test this trend formally, we conducted a hierarchical linear modeling analysis (HLM: Bryk & Raudenbush, 1992), using the HLM 5 program. This analysis included two components. First, a regression analysis was performed at the within-day level. In this study, that meant that daily life satisfaction was predicted from daily excitement for each day. The within-day model we tested was thus

$$LS_t = b_0 + b_1 \text{Excite}_t + e_t,$$

where LS_t was life satisfaction on day t ; Excite_t was excitement on day t ; b_0 was the intercept (the average daily life satisfaction for day t); b_1 was the slope for day t excitement (the degree to which day t excitement was

associated with day t life satisfaction); and e_t was a random component of day t life satisfaction.

A second, between-day level of the model tested whether the regression slopes obtained from the within-day analysis differed across days. Particularly relevant to our hypothesis was whether b_1 , or the slope for day t excitement predicting day t life satisfaction, differed across days in a way that reflected the independent judges' ratings of excitement (see Table 1). The between-day level model was:

$$b_0 = \gamma_{00} + \gamma_{01} \text{IR}_i + u_i,$$

$$b_1 = \gamma_{10} + \gamma_{11} \text{IR}_i + u_i,$$

where γ_{00} and γ_{10} were intercepts; γ_{01} and γ_{11} indicated the degree to which the within-day intercept b_0 and slope b_1 were associated with the judges' independent ratings; and u_i was a random component of slope b_0 and b_1 .

The analysis revealed that on the average, daily life satisfaction was significantly different from zero (unstandardized coefficient, $\gamma_{00} = 4.00, t[5] = 84.86, p < .01$), but did not differ across days (unstandardized coefficient, $\gamma_{01} = .06, t[5] = 1.64, ns$). On the average, daily excitement was positively associated with daily life satisfaction (unstandardized coefficient, $\gamma_{10} = .27, t[5] = 13.45, p < .01$). Most important, as predicted, there was a greater association between daily excitement and daily life satisfaction on the days that the independent judges rated as more exciting (unstandardized coefficient, $\gamma_{11} = .07, t[5] = 4.46, p < .01$).

We also used hierarchical linear modeling to test whether the correlation between daily excitement and daily satisfaction was stronger on Saturday than on other days. For each of these comparisons, such as Saturday vs. Monday, we used the contrast codes 1 and -1 in the between-day portion of the analysis. Consistent with our prediction, the correlation was stronger on Saturday than on Monday, $\gamma_{11} = .12, t(5) = 2.27, p < .05$, Tuesday, $\gamma_{11} = .12, t(5) = 2.27, p < .05$, Wednesday, $\gamma_{11} = .11, t(5) = 1.99, p < .05$, or Sunday, $\gamma_{11} = .13, t(5) = 2.28, p < .05$. But the correlation did not differ between Saturday and Thursday, $\gamma_{11} = .08, t(5) = 1.10, ns$, or between Saturday and Friday, $\gamma_{11} = .04, t(5) = .56, ns$.

Was the effect specific to excitement?

We computed the correlation between daily general positive emotions (rather than excitement) and satisfaction to test the specificity of the excitement effect. Again, we used hierarchical linear modeling to test whether the correlation was stronger on Saturday than on other days. The correlation between general positive emotions and satisfaction on Saturday ($r = .68, p < .01$) differed from that for Tuesday ($r = .45, p < .01$), $\gamma_{11} = .13, t(5) = 2.05, p < .05$. However, the correlation on Saturday did not differ from those for Monday ($r = .48, p < .01$),

$\gamma_{11} = .13$, $t(5) = 1.93$, *ns*, Wednesday ($r = .60$, $p < .01$), $\gamma_{11} = .08$, $t(5) = 1.02$, *ns*, Thursday ($r = .46$, $p < .01$), $\gamma_{11} = .11$, $t(5) = 1.51$, *ns*, Friday ($r = .59$, $p < .01$), $\gamma_{11} = .02$, $t(5) = .19$, *ns*, or Sunday ($r = .47$, $p < .01$), $\gamma_{11} = .13$, $t(5) = 1.97$, *ns*. Thus, the Saturday excitement effect was indeed specific.

Study 4: A sensation seeker study

Study 3 was designed to show that systematic changes in the accessibility of “excitement” could influence life satisfaction judgments. Study 4 was designed to extend that study by exploring a different kind of systematic factor, namely individual differences. Previous research (see Zuckerman, 1979, 1994 for a review) shows that sensation seekers chronically desire such arousing experiences as loud parties and reckless driving. Because “excitement” should be chronically accessible for sensation seekers, they should base their life satisfaction judgments on the frequency of excitement. Thus, we hypothesized that the correlation between excitement and life satisfaction would be higher among sensation seekers than non-sensation seekers. Because the completion of a sensation seeking scale might inadvertently activate the concept of “excitement” and thus ruin efforts to test the effect of its chronic accessibility (see Schwarz et al., 1991b; Strack et al., 1988), we measured sensation seeking one week after participants evaluated their life satisfaction and the frequency of excitement in their lives. As a disposition, sensation seeking is assumed to be stable over time, and there is some evidence (Zuckerman, Eysenck, & Eysenck, 1978) to support that assumption.

Method

Participants

Participants were 151 students (41 male, 110 females) enrolled in another (different) course on personality and well-being at the University of Illinois. Students participated in order to complete a course research requirement.

Procedure

Students were told at the beginning of the semester that they would be participating in a series of studies related to well-being. In the first week of the semester, they completed the SWLS (Diener et al., 1985) and an emotion scale. The SWLS, scored as described earlier, had a Cronbach's α of .85. To measure the frequency of excitement, we asked participants to indicate how often they had felt “excited” and “enthusiastic” (and other positive and negative emotions) during the past month, on 5-point scales (1 = *very slightly or not at all*, 2 = *a little*, 3 = *moderately*, 4 = *quite a bit*, and 5 = *extremely*).

Cronbach's α for these two items was .79. The mean excitement score was 3.44 ($SD = .92$). Other emotions measured were “happiness,” “joy,” “contentment,” “pride,” “affection,” “love,” “caring,” “fondness,” “fear,” “worry,” “anxiety,” “nervous,” “anger,” “irritation,” “disgust,” “rage,” “shame,” “guilt,” “regret,” “embarrassment,” “sadness,” “loneliness,” “unhappiness,” and “depression.” “Happiness,” “joy,” “contentment,” “pride,” “affection,” “love,” “caring,” and “fondness” were combined to form a general positive emotion scale score. Cronbach's α for this scale was .85. The mean positive emotions score was 4.56 ($SD = .95$). One week after measuring life satisfaction and the frequency of excitement, we measured sensation seeking using part of the extraversion scale in the NEO Personality Inventory (NEO-PI; Costa & McCrae, 1989). This part of the scale consists of eight items assessing the degree to which individuals crave excitement and want to be part of “the action.” Participants responded on 5-point scales, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Sensation seeking scores were computed by summing ratings on these scales. Cronbach's α was .67, again rather weak. The mean sensation seeking score was 20.19 ($SD = 4.40$).

Results and discussion

The mean SWLS score was 22.83 ($SD = 6.07$) for male participants, and 22.37 ($SD = 6.87$) for female participants, $t(149) = .38$, *ns*. Initial analyses indicated that sex had no significant main effect of its own, or interactions with excitement and sensation seeking ($ps > .10$). As a result, we did not include it in our final analyses. In the first of those analyses, satisfaction scores were regressed on sensation seeking scores, excitement scores, and their interaction. As outlined by Aiken and West (1991), we centered each predictor around the mean first, then formed the interaction terms by multiplying the centered sensation seeking and excitement.

The overall regression model explained 28% of the variance, $F(3, 146) = 18.70$, $p < .01$. There was no effect of sensation seeking on satisfaction, $B = -.37$, $\beta = -.06$, *ns*, which is consistent with previous findings (e.g., Oishi, Schimmack, & Diener, 2001). And consistent with Studies 1–3, there was an effect of excitement on satisfaction, $B = 3.41$, $\beta = .51$, $p < .01$ —the more excitement participants experienced, the more satisfied they were. Finally, central to our hypothesis, we found the predicted interaction between sensation seeking and excitement, $B = 1.26$, $\beta = .17$, $t = 2.44$, $p < .05$.

To clarify this interaction, we generated two simple regression equations for participants who were high (+1 SD , or 24.59) and low (–1 SD , or 15.79) in sensation seeking, following the guidelines proposed by Aiken and West (1991). Fig. 1 shows the results. In that figure, –1 excitement corresponds to 2.42, 0 corresponds to 3.44,

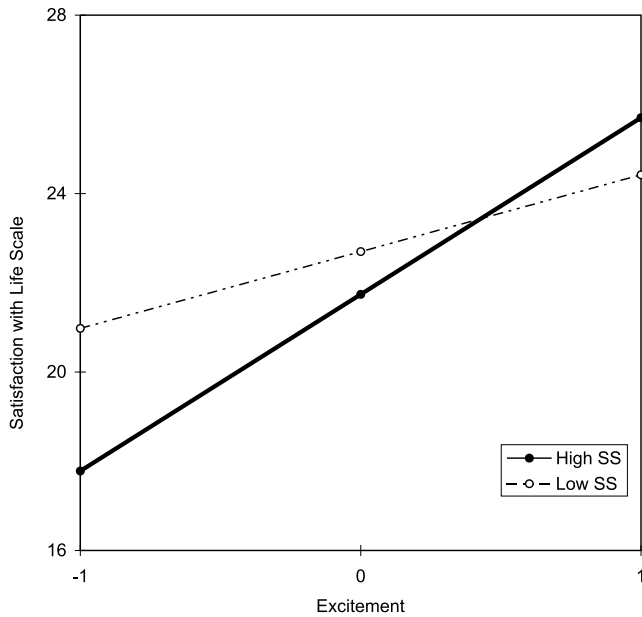


Fig. 1. The impact of excitement on satisfaction with life scale score among participants high or low in sensation seeking.

and 1 corresponds to 4.36 on the original excitement scale. Among high sensation seekers, those who experienced more excitement during the past month were considerably more satisfied with their lives (SWLS = 25.57) than were those who experienced less excitement (SWLS = 18.23). But among low sensation seekers, those who experienced more excitement during the past month were only a little more satisfied with their lives than were those who experienced less excitement (SWLS = 24.79 vs. 20.49). For high sensation seekers, the difference in satisfaction was 7.34 points, but for low sensation seekers, it was only 4.30 points.

Was the effect specific to excitement?

As before, we substituted general positive emotions for excitement in the analysis. The overall regression model explained 27% of the variance, $F(3, 146) = 17.67$, $p < .01$. The new analysis again revealed no effect of sensation seeking on satisfaction, $B = -.92$, $\beta = -.14$, ns , but there was an effect of positive emotions, $B = 3.53$, $\beta = .53$, $p = .00$. Obviously, participants who had experienced more positive emotions during the past month were more satisfied with their lives. There was no interaction between sensation seeking and positive emotions, $B = -.42$, $\beta = -.06$, ns . Thus, the effect of sensation seeking on satisfaction was specific to excitement.

Study 5: Life satisfaction judgments over time

Study 4 revealed that excitement was more strongly associated with general life satisfaction among high sensation seekers than among low sensation seekers.

Because Study 4 used a concurrent design and measured long-term excitement and life satisfaction, the covariance between excitement and general life satisfaction might have been due to the shared temperamental factor associated with sensation seeking. In other words, it is possible that among high sensation seekers, sensation seeking, life satisfaction, and excitement were all influenced by a common temperamental factor. Thus, the findings from Study 4 can be interpreted from the temperament model of well-being (Diener & Lucas, 1999), without utilizing the judgmental model of well-being (Schwarz & Strack, 1999). Study 5 was designed to address this issue. First, we focused on weekly well-being as opposed to long-term well-being. This change was made because short-term well-being is much less influenced by temperamental factors than is long-term well-being (e.g., Schimmack, Diener, & Oishi, 2002). Second, we used a longitudinal design as opposed to a concurrent design to control for the shared variance among sensation seeking, excitement, and general life satisfaction. By employing a longitudinal design, Study 5 provided a more stringent test of the judgmental model of well-being than did Study 4. Our hypothesis was that weekly satisfaction would increase or decrease, depending on the amount of excitement experienced during the week, to a greater degree among high sensation seekers than among low sensation seekers.

Method

Participants

Participants were 140 students (65 male, 75 female) enrolled in an introductory psychology course at the University of Illinois. Students participated in order to meet a course research requirement. Out of the original sample, 116 people (83%) completed the study. Participants who did not complete the study tended to be less satisfied than others with their lives during the week prior to Time 1 ($M = 3.56$, $SD = 1.30$ vs. $M = 4.11$, $SD = 1.36$), $t(138) = 1.80$, $p < .10$. They did not, however, differ from others in their excitement at Time 1 ($M = 3.81$, $SD = 1.11$ vs. $M = 4.03$, $SD = 1.22$), $t(138) = .81$, ns , or in their levels of sensation seeking ($M = 4.50$, $SD = 1.11$ vs. $M = 4.59$, $SD = 1.11$), $t(138) = .39$, ns . Fifteen of the original 66 male participants (23%) did not complete the study, compared to 9 of the original 73 female participants (12%). This sex difference was not significant, $\chi^2 = 2.62$, $p > .10$.

Measures and procedure

Students participated in small groups. They were told that they would be participating in a study on personality and well-being. At Time 1, everyone completed an emotional experience scale containing the adjectives "content," "excited," "happy," "relaxed," "proud,"

“enthusiastic,” “cheerful,” “calm,” “dull,” “annoyed,” “nervous,” “sad,” “unhappy,” “bored,” “anxious,” and “sluggish.” Participants were asked to rate how frequently they had experienced these emotions during the past week, on 7-point scales (1 = *not at all*, 4 = *moderately*, 7 = *almost, and always*). The responses to “excited” and “enthusiastic” were combined to form an excitement score. Cronbach’s α was .67 at Time 1. The mean excitement score was 3.99 ($SD = 1.21$). The responses to “happy” and “cheerful” were combined to form a general positive emotions score. Cronbach’s α for this score was .74 at Time 1. The mean positive emotions score was 4.26 ($SD = 1.24$). Participants then completed the same three-item weekly life satisfaction scale used in Study 2. We computed overall satisfaction scores by computing the mean rating across items. Cronbach’s α was .89. The mean satisfaction score was 3.99 ($SD = 1.36$). Finally, participants completed a 10-item sensation seeking scale consisting of items from the International Personality Item Pool (IPIP; Goldberg, 1997). The IPIP was designed to assess the same construct as the NEO-PI (Costa & McCrae, 1989), so the sensation seeking scale was designed to assess the same aspect of extraversion as the NEO-PI. Participants rated each item on a 7-point scale. Sample items include “I am willing to try anything once,” and “I seek adventure.” We computed sensation seeking scores by averaging ratings across the 10 items. Cronbach’s α was .86. The mean sensation seeking score was 4.59 ($SD = 1.09$).

One week later (Time 2), participants completed the same emotional experience items. This time, Cronbach’s α was .78 for excitement and .85 for general positive emotions. The mean excitement score was 4.18 ($SD = 1.17$), and the mean positive emotions score was 4.51 ($SD = 1.48$). Life satisfaction, for the week just past, was again measured reliably, with a Cronbach’s α of .92. The mean satisfaction score was 4.47 ($SD = 1.35$).

Results and discussion

Preliminary analyses again revealed no significant main effect of sex, nor any significant interactions between sex and the other variables ($ps > .10$), so sex was not included in any of the other analyses. We began those analyses by regressing Time 2 satisfaction on Time 1 satisfaction, sensation seeking, Time 1 excitement, Time 2 excitement, and interaction terms involving sensation seeking and excitement. As outlined by Aiken and West (1991), we centered predictors around the respective means before forming the interaction terms.

The results are shown in Table 2. The overall regression model explained 47% of the variance, $F(6, 109) = 15.87$, $p = .00$. First, there was an effect of Time 1 satisfaction on Time 2 satisfaction, $B = .36$, $\beta = .36$, $t = 4.36$, $p < .00$. Participants who were more satisfied with their lives at Time 1 were also more

Table 2

Predicting Time 2 satisfaction from Time 1 satisfaction, sensation seeking, Time 1 excitement, Time 2 excitement, and their interactions

Predictor	Coefficient		<i>t</i> Ratio
	Unstandardized	Standardized	
Constant	2.87		8.10**
Time 1 satisfaction	.36	.36	4.36**
Sensation seeking (SS)	-.02	-.01	-.17
Time 1 excitement	-.13	-.10	-1.04
Time 2 excitement	.71	.51	6.24**
SS \times Excitement 1	-.10	-.09	-1.06
SS \times Excitement 2	.34	.24	2.86**

Note. All coefficients are from the analysis with all the variables in the regression equation. Sensation seeking and Excitement 1 and 2 were standardized around their respective means.

** $p < .01$.

satisfied at Time 2. There was no effect of sensation seeking, $B = .02$, $\beta = .01$, $t = .17$, *ns*, or Time 1 excitement on Time 2 satisfaction, $B = -.13$, $\beta = -.10$, $t = -1.04$, $p = .30$. But there was an effect of Time 2 excitement on Time 2 satisfaction, $B = .71$, $\beta = .51$, $t = 6.24$, $p < .00$. As in the earlier studies, participants who experienced more excitement were more satisfied with their lives. There was no interaction between Time 1 excitement and sensation seeking, $B = -.11$, $\beta = -.09$, $t = -1.06$, $p = .26$, but as we expected, there was an interaction between sensation seeking and Time 2 excitement, $B = .34$, $\beta = .24$, $t = 2.86$, $p < .01$.

As in Study 4, we generated two simple regression equations for participants who were high (+1 *SD*, or 5.68) or low (-1 *SD*, or 3.50) in sensation seeking. When calculating these simple regression equations, we used mean Time 1 satisfaction (3.99) and mean Time 1 excitement (3.99) scores for the entire sample. The results are shown in Fig. 2. On the excitement axis of that figure, -1 corresponds to 3.01, 0 corresponds to 4.18 and 1 corresponds to 5.35 on the original excitement scale. As the figure shows, high sensation seekers who experienced more excitement at Time 2 (5.35, or 1.36 more excitement than at Time 1) became more satisfied (5.34, or 1.35 more satisfaction than at Time 1), whereas low sensation seekers who experienced more excitement at Time 2 were only somewhat more satisfied at Time 2 (4.66 or .67 more satisfied than at Time 1). In contrast, high sensation seekers who experienced less excitement at Time 2 (3.01 or .98 less excitement than at Time 1) became less satisfied (3.28 or .71 less satisfied than at Time 1), whereas the satisfaction of low sensation seekers who experienced less excitement at Time 2 was almost unchanged (3.92 or only .07 less satisfaction than at Time 1). The difference between less and more excitement at Time 2 thus made 2.06 points difference in Time 2 satisfaction among high sensation seekers, but made only .74 points difference among low sensation seekers.

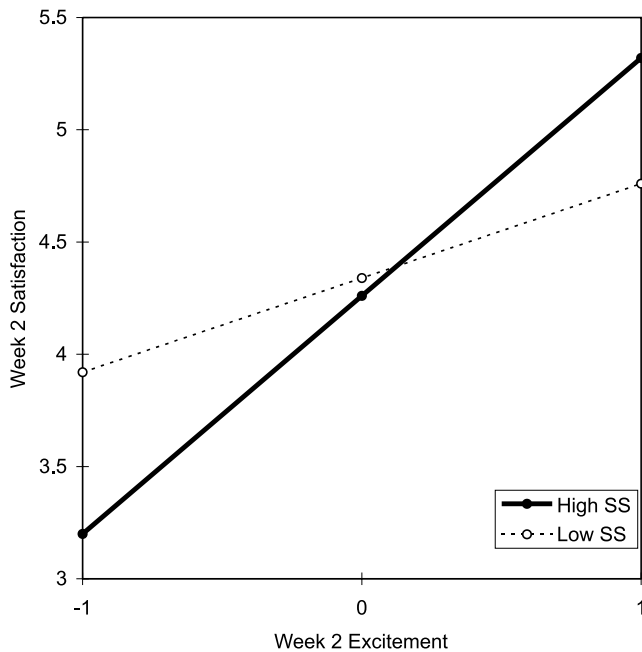


Fig. 2. The impact of Week 2 excitement on Week 2 satisfaction among participants high or low in sensation seeking.

Was the effect specific to excitement?

As in the other studies, we substituted general positive emotions for excitement in the analysis. The overall regression model explained 34% of the variance, $F(6, 109) = 9.42$, $p = .00$. There was no effect of sensation seeking, $B = .06$, $\beta = .04$, *ns*. There was also no effect of Time 1 general positive emotions, $B = .09$, $\beta = .01$, *ns*. There was an effect of positive emotions at Time 2 on Time 2 satisfaction, $B = .69$, $\beta = .39$, $p < .01$. Participants who experienced more positive emotions at Time 2 also felt more satisfied with their lives at that time. And again, there was an effect of Time 1 satisfaction on Time 2 satisfaction, $B = .35$, $\beta = .34$, $p < .01$. However, there were no interaction between Time 1 general positive emotions and sensation seeking, $B = -.02$, $\beta = -.01$, *ns*, or between Time 2 general positive emotions and sensation seeking, $B = .05$, $\beta = .03$, *ns*. Thus, the interaction between sensation seeking and excitement was again specific to excitement.

General discussion

We began our research with the following question in mind: “What is the nature of life satisfaction judgments?” Existing evidence already shows the transient nature of such judgments (Schwarz & Strack, 1999 for review). Specifically, the effects of preceding questions (e.g., Schwarz et al., 1991b; Strack et al., 1988), weather, and moods (e.g., Schwarz & Clore, 1983) indicate that life satisfaction judgments can be affected by contextual factors. However, other evidence also reveals stable in-

dividual (e.g., Oishi et al., 1999a, 1999b) and cultural (e.g., Diener & Diener, 1995) differences in how life satisfaction judgments are made.

How can one reconcile these different images of life satisfaction judgments? We argue that the notion of accessibility is helpful in this regard. Indeed, two priming studies (Studies 1 and 2) showed that when “excitement” was made accessible experimentally, it was more likely to affect subsequent life satisfaction judgments. And Study 3 showed that some contextual effects on accessible categories are systematic and predictable—people based their daily satisfaction judgments more heavily on excitement on Friday and Saturday (when life is more exciting) than on Monday, Tuesday, or Wednesday. Study 4 showed that the chronic accessibility of excitement could be important, because sensation seekers based their life satisfaction judgments more heavily on the frequency of excitement than did non-sensation seekers. Finally, Study 5 showed that the chronic accessibility of excitement at one point in time predicted the degree to which people used excitement as a basis for life satisfaction judgments at a later time. The five studies as a whole reveal the true nature of life satisfaction judgments, namely that they are contextually sensitive, yet systematic.

One implication of these findings is that although the effects of transient contextual factors should still be taken into consideration in well-being research, these factors do not always negate the reliability and validity of life satisfaction judgments. It should also be noted, however, that the stability of life satisfaction at the mean level does not always mean that the bases of life satisfaction judgments are stable too. In Study 3, for example, the mean level of daily satisfaction was exactly the same on Friday and Sunday, yet satisfaction on Friday was affected much more strongly by the frequency of excitement than was satisfaction on Sunday. In the past, much research attention has focused on the stability in the *mean* level of life satisfaction (see Diener, Suh, Lucas, & Smith, 1999; Pavot & Diener, 1993 for review), but stability in the *bases* of life satisfaction judgments has rarely been examined. In fact, Study 5 provides some of the first evidence on that issue (see Schimmack et al., 2002, for another recent effort). We must continue to study stability and change in the bases of life satisfaction judgments to gain a better understanding of those judgments.

As stated earlier, previous research on SWB (e.g., Lucas, Diener, & Suh, 1996) has focused on the role of emotional experiences at the global level (positive or negative affect). An implicit assumption in that research was that specific emotional experiences are not critical in life satisfaction judgments. In contrast, our findings showed that not all positive emotions are equally related to life satisfaction, and that the informational value of specific emotional experiences can vary substantially

across situations (Studies 1, 2, and 3) and individuals (Studies 4 and 5). Treating various positive emotions as a unitary category at the global level makes sense for building a meaningful link between extraversion and emotions (Diener & Lucas, 1999; Rusting, 1998; Watson & Clark, 1997) or developing a parsimonious theory of the link between emotion and cognition (Schwarz, 1990). A broad approach to emotions, however, should not obscure the importance of specific emotions in the context of life satisfaction judgments. As suggested by Studies 4 and 5, excitement seems to be a crucial component of the “good life” for sensation seekers. For these individuals, positive emotional experiences, such as feeling “calm” and “relaxed,” may not be viewed as signs of satisfying life. Similarly, pride is a critical emotional experience for a satisfying life for European Americans, but not for Japanese (Kitayama, Markus, & Kurokawa, 2000). In short, chronically accessible categories are “middle level units” (Buss & Cantor, 1989; Emmons, 1995), like life tasks (Cantor, 1994) and personal strivings (Emmons, 1986), that determine the types of emotional experiences that are central to life satisfaction judgments. Instead of treating all positive emotions as equal, it would be better in the future to identify more specific, contextually meaningful emotional indicators of well-being.

Another important implication of our findings involves the affect-as-information model of social judgments (Schwarz, 1990; Schwarz & Clore, 1996). As we have shown, an answer to the question “How do I feel about my life?” may be influenced by accessible information. In Studies 1 and 2, the answer was heavily influenced by the frequency of excitement when “excitement” was an accessible category. In Study 3, experiences of excitement influenced the answer on Friday and Saturday, but not on Monday or Tuesday. And in Studies 4 and 5, the question “How do I feel about my life?” was actually “Is my life exciting?” for sensation seekers, but “Is my life peaceful?” for non-sensation seekers. In sum, the “How do I feel” heuristic (Schwarz & Clore, 1996) may be a general guide to making life satisfaction judgments, but there are also important situational and chronic variations in how that heuristic is used. Both temporarily and chronically accessible constructs shape life satisfaction judgments, often in powerful ways.

Limitations and future directions

We have argued that accessibility is the key factor underlying all our findings. However, those findings may have been obtained not because of how accessible “excitement” was, but because of the perceived importance and relevance of “excitement” for life satisfaction judgments. When people perceive something, they often assume that it is about something; Higgins (1998) calls

this the “aboutness principle.” According to that principle, participants in the “excitement” condition in Study 1 may have formed an implicit theory that “life is all about excitement.” Similarly, in Study 3, participants may have assumed that “weekends are all about fun” on weekends. In Studies 4 and 5, sensation seekers may have theorized that “the good life is an exciting life.” Although it is difficult to explain the results of Study 2 in this way, it is conceivable that simply activating the category of “excitement” in that study strengthened the perceived relevance of excitement for life satisfaction judgments. In a related vein, Schwarz (1998) has argued that accessible content influences social judgments only to the extent that it seems relevant to those judgments (see also, Banaji et al., 1993; Rothman & Schwarz, 1998; Schwarz et al., 1991a). In our research, we never manipulated the perceived relevance of accessible information. To learn more about the processes governing life satisfaction judgments, it will be important in the future to: (a) study the linkages among accessible information, its perceived importance, and implicit theories about the “good life,” and (b) distinguish the effects of accessible content and accessible experience on life satisfaction judgments. For instance, we should see whether changes in implicit theories about life satisfaction are necessary for the activated concepts to influence life satisfaction judgments.

Similarly, although independent ratings confirmed our choices of words that could be used to prime “excitement,” we did not verify with the actual participants that the priming indeed made “excitement” more accessible than other constructs. Traditionally, an experimental manipulation of priming is verified by a word fragment completion task, or some similar method. We did not include this task, because the timing of a manipulation check would have been difficult in our research. If we had inserted a word fragment completion task after the manipulation, but before the life satisfaction and emotion ratings, then that might have made participants conscious of what we were trying to prime and created demand characteristics. And if the manipulation check had been inserted after the ratings of life satisfaction and emotions, it would have been unclear whether the results of the manipulation check were due to the manipulation or to ratings of excitement-related words. Nevertheless, efforts should be made in future research to include a direct check of any priming manipulation.

Next, although our findings help to integrate the results from experimental (e.g., Schwarz & Clore, 1983; Strack et al., 1988) and correlational research on life satisfaction judgments (e.g., Lucas et al., 1996), an important difference still exists between these two approaches. Schwarz (2000) argues that life satisfaction judgments (and attitudes in general) are constructed on the spot, based on information accessible at the time of

judgment, and that stability in judgments reflects stability of inputs rather than outputs. In contrast, Diener et al. (1999) assume that reports of well-being reflect internal states (e.g., temperament, beliefs) that are relatively stable over time. Unfortunately, our research does not help to resolve this difference. A recent study by Schimmack et al. (2002) may be more helpful in this regard. They showed that the inputs to life satisfaction judgments were stable over several domains, and that the link between personality traits (e.g., extraversion, neuroticism) and life satisfaction was mediated by the domain satisfactions that participants reported using when making their life satisfaction judgments. In other words, personality traits (stable internal states) affected the type of information (health, family, and excitement) that people paid attention to when they made satisfaction judgments, and to the extent that this information was stable over time, life satisfaction was stable. As Schwarz argues, however, life satisfaction judgments may not be very stable when the type of information accessible at the time of judgments is changing. Another possibility, of course, is that regardless of what information is accessible, happy people may view it more positively than unhappy people (Lyubomirsky & Ross, 1999; Oishi & Diener, 2001), and so they may consistently report being more satisfied with their lives. If this is the case, then life satisfaction judgments should be stable under all conditions. Future research that includes measures of individual difference in temperament (e.g., positive affectivity) should explore this issue.

Finally, our research did not address the important issue of assimilation vs. contrast effects (Higgins, 1996). Previous research has identified two conditions for contrast effects: (1) blatant priming (Martin, 1986) and (2) irrelevance of the information that is made accessible (Banaji et al., 1993). Because our studies used subtle priming, and excitement is normatively one of many important conditions for a good life (Chiasson, Dube, & Blondin, 1996), we expected an assimilation effect of “excitement” on life satisfaction judgments. In some contexts (e.g., the lives of corporate lawyers or stock brokers), however, “excitement” might be associated with such negative concepts as fatigue and exhaustion, and so priming “excitement” might lead to contrast effects. This is another issue that deserves future research attention.

Concluding remarks

Well-being research in a personality (correlational) tradition developed relatively independently from the well-being research in a social psychological (experimental) tradition (see Diener et al., 1999 for a review). However, researchers have recently begun to integrate different approaches to research on well-being, as documented by the recent publication of “Well-Being: The

Foundations of Hedonic Psychology” (Kahneman, Diener, & Schwarz, 1999). The five studies reported in this article represent such an effort. They prove the utility of both experimental and correlational methods (cf. Cronbach, 1957), and offer a new perspective on life satisfaction judgments; namely that they are contextually sensitive, yet systematic in nature. This perspective may help to guide a wide range of investigations on situational, individual, developmental, and cultural variations in the bases of life satisfaction judgments, and enhance our understanding of specific emotional signatures in such judgments.

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