

## Events and Subjective Well-Being: Only Recent Events Matter

Eunkook Suh and Ed Diener  
University of Illinois at Urbana–Champaign

Frank Fujita  
Indiana University at South Bend

The effect of life events on subjective well-being (SWB) was explored in a 2-year longitudinal study of 115 participants. It was found that only life events during the previous 3 months influenced life satisfaction and positive and negative affect. Although recent life events influenced SWB even when personality at Time 1 was controlled, distal life events did not correlate with SWB. SWB and life events both showed a substantial degree of temporal stability. It was also found that good and bad life events tend to covary, both between individuals and across periods of the lives of individuals. Also, when events of the opposite valence were controlled, events correlated more strongly with SWB. The counterintuitive finding that good and bad events co-occur suggests an exciting avenue for explorations of the structure of life events.

Despite the claims of astrologers, psychologists are keenly aware of their limited ability to predict and control the occurrences of various life events. Scientists have instead focused their attention on the psychological consequences of life events and how individuals cope with the stresses created by these “exogenous shocks” (e.g., Dohrenwend & Dohrenwend, 1981; Rabkin & Struening, 1976; Selye, 1976; Vaillant, 1977). Negative events in particular have received a great amount of attention, largely because of their threatening potential impact on one’s well-being. Decades of research show that individuals’ cognitive interpretation styles (Davis, Lehman, Wortman, Silver, & Thompson, 1995; Peterson & Seligman, 1987; Taylor, 1983; Thompson, 1981), coping patterns (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Lazarus & Folkman, 1984; Zeidner & Hammer, 1990), and personality factors (Bolger, 1990; Kobasa, 1979; Kobasa, Maddi, & Kahn, 1982; Mullen & Suls, 1982; Ormel, Sanderman, & Stewart, 1988) can mediate the ways in which these stressful life events will be experienced. Despite the large volume of life events research, the potential influence of events on positive outcomes, such as subjective well-being (SWB), remains relatively unexplored.

Although recent studies have shown that most people are happy (Diener & Diener, in press) and consider positive emotions more normative than negative emotions (Sommers, 1984), the extent to which life events influence individual levels of SWB is not fully understood. In addition to the prominent influence of coping models on life events research, several SWB research findings may have unintentionally discouraged further research on this topic. For instance, the effects of objective life circumstances, such as income (Diener, Sandvik, Seidlitz, &

Diener, 1992), health (Okun & George, 1984), years of education (Diener, 1984), and physical attractiveness (Diener, Wolisic, & Fujita, 1995), are often found to be small. Similarly, the findings of Campbell, Converse, and Rogers (1976) indicate that the summed effects of demographic variables on SWB are small. Other researchers have shown that well-being is primarily determined by enduring individual characteristics rather than by external life circumstances (Costa & McCrae, 1980, 1984; Costa, McCrae, & Zonderman, 1987; Diener, Sandvik, Pavot, & Fujita, 1992). Finally, on the basis of the framework of adaptation level theory, Brickman, Coates, and Janoff-Bulman (1978) discounted the influence of life events on happiness by suggesting that the effects of salient life events eventually wear off (habituation) and, by comparison, make mundane experiences seem less extreme (contrast). They found that lottery winners were not significantly happier than controls and also that people with spinal cord injuries were only slightly less happy than other people.

The studies just mentioned share the common methodological problems of a cross-sectional design. By limiting the measurement of people to a single point in time, they fail to show the process of adaptation or habituation among participants. Moreover, there is difficulty in assessing the degree of psychological impact of the incident on individuals. Silver (1982), however, conducted a longitudinal study to understand how people cope during the first 8 weeks after the trauma of a disabling accident (spinal cord injury). She found that the patients adapted surprisingly well to their tragic experiences during the course of the next several months. This study implies that adaptation indeed does occur, and in a surprisingly short time. Longitudinal findings reported by Costa et al. (1987) and Diener, Sandvik, Pavot, and Fujita (1992) are supportive of Silver’s finding in suggesting that life events or changes do not have a large influence on SWB over long periods of time (10 years).

The aforementioned studies can be more or less grouped as “top-down” theories of SWB that suggest that SWB is essentially determined by one’s personality rather than by external life circumstances or events. Recent studies (Brief, Butcher, George, & Link, 1993; Feist, Bodner, Jacobs, Miles, & Tan,

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Eunkook Suh and Ed Diener, Department of Psychology, University of Illinois at Urbana–Champaign; Frank Fujita, Department of Psychology, Indiana University at South Bend.

Correspondence concerning this article should be addressed to Ed Diener, Department of Psychology, University of Illinois, 603 East Daniel Street, Champaign, Illinois 61820. Electronic mail may be sent via the Internet to [ediener@psych.uiuc.edu](mailto:ediener@psych.uiuc.edu).

1995) suggest, however, that SWB is best explained by integrative models that consider both the effects of immediate life circumstances (e.g., objective health) and global personality dimensions. Such findings, along with the earlier adaptation studies (Brickman et al., 1978; Silver, 1982), lead us to believe that life events and personality may differ in terms of their duration of effect on SWB; personality is likely to have long-term effects on SWB, whereas the effects of life events on SWB may be more short term. Thus, the current study was based on a conceptual framework suggesting that one's current level of SWB is a product of both long-term personality (e.g., extraversion and neuroticism) and recent events that temporarily modify one's experience of well-being.

The current study represented a further extension of Silver's (1982) findings to life events in general. We desired to track people during a transitional period of their life (college graduation) and examine whether events gradually lose impact on SWB over time. We particularly wanted to assess the amount of time required for people to adapt to life events. Do life events lose their impact on SWB in a matter of months, as Silver's (1982) findings suggest, or do they last for years? We also wanted to examine the adaptation to both good and bad events. Do people adapt to good events as well as they adapt to bad experiences? If so, do they adapt to both with equal rapidity? Finally, we examined whether life events influence SWB beyond the effects of personality.

Several additional factors about the relation of life events and SWB were explored. A number of studies (Block & Zautra, 1981; Headey & Wearing, 1989; Magnus, Diener, Fujita, & Pavot, 1993) have shown that positive and negative life events correlate positively, suggesting that more active people experience both more good and bad events because of their greater degree of involvement with the world. In contrast, the lives of some people are less dramatic; they experience fewer of both types of events. Following the lead of previous findings, we addressed two further questions. First, we sought to determine whether the coupling of positive and negative events moderates SWB. That is, if people experience both types of events, will control of one type increase the impact of the other on SWB? This would be the case if negative events do in fact suppress the impact of positive events on SWB, and vice versa. Second, we tried to ascertain whether this covariation is strictly a function of activity level or whether it also occurs within individuals. In other words, is the coupling of positive and negative events primarily an individual-differences phenomenon, or does it also occur within individuals (depending on the life period)?

We also sought to explore the stability of personality, SWB, and events. Costa and his colleagues (Costa, 1994; Costa & McCrae, 1988; McCrae & Costa, 1990) have argued that personality is extremely stable. They claimed that it is basically set by the time adults reach the age of 30 and is no longer reactive to external input, except under unusual circumstances. SWB, by comparison, is presumably somewhat less stable than personality because it is a function of both personality and events. Schwartz and Strack (1991) have convincingly demonstrated that momentary situational factors can influence SWB judgments. But are there also stable influences that create a temporal stability in SWB? Headey and Wearing (1989) argued that

life events are stable because they are, in part, generated by the individual's personality. Although events were believed to be largely caused by random causes outside of the individual, recent studies show that they also flow in part from personality. In support of this claim, Magnus et al. (1993) showed that extraversion and neuroticism predicted the occurrence of future objective events for individuals. Thus, one would expect life events, both positive and negative, to show temporal stability because they are in part influenced by personality, which is very stable. Furthermore, there are stable aspects of individuals' life circumstances that might also predispose them to stable levels of positive and negative life events.

Finally, a number of researchers have suggested an alternative view on the effects of personality in the relation between stressful, negative life event reports and well-being (Brett, Brief, Burke, George, & Webster, 1990; Brief, Burke, George, Robinson, & Webster, 1988; Watson & Pennebaker, 1989). These authors suggest that the personality disposition of negative affectivity and neuroticism introduces a spurious effect in the life event and well-being relation by reasons other than actual differences in the occurrence of events (e.g., report style and attribution style). Zautra, Reich, and Guarnaccia (1990), however, found that neuroticism did not have a substantive effect on the reporting of the frequency of life events. We attempted to study this issue by examining whether the correlations between negative life event measures and SWB are affected when neuroticism is partialled out.

In summary, life events and circumstances, in comparison with personality, appear to have a surprisingly small effect on SWB (Costa et al., 1987; Diener, Sandvik, Pavot, & Fujita, 1992; McCrae & Costa, 1988). In an attempt to understand the theoretical significance of this finding, we examined the effects of life events on SWB in several directions. First, we explored whether proximal events influence SWB, whereas distal events do not. On the basis of past findings, we hypothesized that the correlation between life events and SWB will be significant only when recent events are involved. Thus, we sought to determine the duration of various life events' influence on individuals' SWB. In addition, we explored whether the decay period is identical for both positive and negative experiences. According to Frijda (1988), negative emotions require more adaptation time than do positive emotions. In light of this intriguing suggestion, we investigated whether good and bad events in general have the same decay period or whether one type of event has much shorter lived effects than the other.

Second, we examined the interplay between positive and negative life events. If good and bad events co-occur to some extent, possibly because individuals go through many life changes that have both good and bad aspects, is their influence on SWB mitigated because they suppress the effects of each other? Psychologists have traditionally regarded the emotional consequences caused by desirable versus undesirable life events as distinguishable: Desirable events are more linked to psychological well-being, and undesirable events have adverse effects on mental health (Vinokur & Selzer, 1975; Zautra & Reich, 1983; Zautra et al., 1990). If, however, there is a tendency for the effects of one type of event to be canceled by events of the opposite valence, the impact of bad events on SWB may increase if one

controls for the effects of good events. Similarly, one can speculate that the impact of good events on SWB might increase if the influence of bad events is held constant.

Third, we assessed the stability of personality, good and bad life events, and SWB. We hoped to determine the stability of SWB in the midst of the changes people experience in their lives. We examined whether life events are somewhat stable, which should be true if they do, in fact, follow in part from personality. Finally, we sought to explore whether life events have effects on SWB beyond the influence of personality and prior level of SWB.

## Method

### Overview and Sample Description

This study was carried out as part of a longitudinal research project on SWB and personality. The data for Time 1 were collected from 222 individuals (110 men and 112 women) enrolled in a semester-long course on SWB either in the fall semester of 1991 or in the spring semester of 1992. Virtually all participants were either junior or senior college students (20–21 years old) majoring in psychology, and most were White. Personality, SWB, and life events data were collected as class exercises, completed either at home or in laboratory sessions.

The time interval between measurement occasions is crucial in detecting effects in longitudinal studies. We selected a period of 2 years, broken into smaller intervals. This period is reasonably short, to prevent severe memory distortions of past events, but also long enough to trace the adaptation processes during the interval. In the fall of 1993, 155 of the 222 participants in the Time 1 study were located. The follow-up questionnaire package was mailed to the participants in December of 1993. One hundred nineteen individuals (78%) responded during the spring of 1994 (Time 2). To determine whether there was any differential attrition of participants, we compared the Time 1 Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), extraversion, neuroticism, and positive and negative life event scores of those who participated in the follow-up study with the scores of those who were involved in the Time 1 study only. No significant difference was found between the two groups among the five measures (all  $t$ s < 1). Questionnaires sent out in the Time 2 study included a number of personality measures, a 100-item life events checklist, happiness and life satisfaction questions, a current mood measure, and an affect frequency measure. Because of the incomplete data set obtained from 4 participants, the final follow-up sample consisted of 72 women and 43 men (115 in total). The number of participants differed slightly in several of the analyses as a result of occasionally missing data. Participants were paid \$20 for their responses. The check was mailed with a thank you letter that summarized our findings and future research plans.

### Measures

**Personality.** Participants completed the extraversion and neuroticism subscales of the NEO Personality Inventory (NEO-PI; Costa & McCrae, 1985) at both Time 1 and Time 2. Extraversion and neuroticism at Time 1 were assessed by using each of the 48-item scales of the NEO-PI. As a means of measuring temporal stability, extraversion and neuroticism were measured by the NEO Five Factor Inventory (NEO-FFI) at Time 2. The NEO-FFI (12-item scales) is a shortened version of the NEO-PI that allows a brief, comprehensive measure of the five domains of personality. The Time 2 alpha coefficients for the short extraversion and neuroticism scales were .77 and .86, respectively.

**Subjective well-being.** The SWLS (Diener, Emmons, et al., 1985), doc-

umented as having adequate psychometric properties, was used to measure the participants' global, cognitive assessment of their life as a whole (Pavot & Diener, 1993; Pavot, Diener, Colvin, & Sandvik, 1991). The SWLS was administered twice at Time 1, with a separation of a few weeks. As a means of gaining a more stable Time 1 SWLS score, the mean of the two scores was used as the participants' Time 1 life satisfaction score. The total SWLS score was obtained by summing the ratings for the five 7-point items, which produced a possible range of 5 to 35. The alpha coefficients of the SWLS were .91 at Time 1 and .82 at Time 2.

On the basis of major emotion theories, 24 discrete emotions were selected for measuring the frequency of the participants' positive and negative emotional experience at both Time 1 and Time 2 (see Diener, Smith, & Fujita, 1995). The 24 emotions used to obtain positive affect (PA) and negative affect (NA), respectively, represented two positive and four negative emotion categories: joy (joy, happiness, contentment, and pride), love (love, affection, caring, and fondness), fear (fear, worry, anxiety, and nervous), anger (anger, irritation, disgust, and rage), sadness (sadness, unhappiness, depression, and loneliness), and shame-guilt (shame, guilt, regret, and embarrassment). Diener, Smith, & Fujita (1995) identified six coherent factors from the 24 emotion adjectives, including higher order PA and NA factors. The participants indicated how often they experienced each of the 24 emotions by using a 7-point scale ranging from *never* (1) to *always* (7). The PA score was obtained by averaging the eight joy and love items. Similarly, the mean sum of the emotion adjectives in the four negative categories, fear, anger, sadness, and shame-guilt, was used as the NA score. The Time 1 Cronbach's alphas for PA and NA were .82 and .91, respectively. At Time 2, the alphas were .88 for PA and .86 for NA.

**Life events.** At Time 1, participants were asked to indicate their experiences during the previous 4 years with various events on an 88-item life events checklist (35 positive events, 46 negative events, and 7 neutral events). Items were selected from widely used life events measures: the List of Recent Events (Henderson, Byrne, & Duncan-Jones, 1981), the Social Readjustment Rating Scales (Holmes & Rahe, 1967), and the Life Experiences Survey (Sarason, Johnson, & Siegel, 1978). The new checklist was intended to maximize base rates of responses from the sample (mostly college juniors and seniors) and also to balance the distribution of event valence and significance. As can be seen in the examples in Table 1, the checklist consisted of very significant events (e.g., "death of a close friend" and "marriage") as well as relatively mundane events (e.g., "joined a club/group" and "gained weight") of each valence.

At Time 2, the events checklist was increased to a total of 100 items by adding 10 positive events, 3 negative events, and 1 neutral event (45 positive events, 49 negative events, and 6 neutral events) and deleting 2 neutral items. This revision was made so as to match the number of positive and negative events more evenly and improve base rate responses by adding items such as "acquired a new TV or stereo." Among the total items, 73 were objective life events (e.g., had an operation) and 27 were more subjective in nature (e.g., received an unfairly low grade in a course). In this new checklist, participants were asked not only to indicate the occurrence of each event but also to report how long ago the event had occurred. Participants were instructed to place a number from a 7-point scale next to each event they had experienced during the past 4 years. The scale was coded as follows: *past 3 months* (1), *4–6 months ago* (2), *7–12 months ago* (3), *1–2 years ago* (4), *2–3 years ago* (5), *3–4 years ago* (6), and *did not happen* (7).

## Results

The means, standard deviations, and stability coefficients of the major variables are summarized in Table 2. The large differences of means and the standard deviations for the person-

Table 1  
*Sample of Items From the Life Events Checklist*

Event (1991-1993)	Number of participants reporting	% of total
<b>Positive</b>		
Marriage (self)	8	7
Parent/relative gave you a start in business/job	11	10
Engagement (self)	15	13
Became an uncle/aunt	20	17
Sibling got married	23	20
Performed in an artistic event (concert, etc.)	27	23
Got into graduate school	32	28
Promotion/raise	40	35
Improvement in work hours or conditions	47	41
Reconciliation with romantic partner	49	43
Improvement in financial status	61	53
Got a car	69	60
Joined a club or group	77	67
Involvement in a steady romantic relationship (at least 2 months)	94	82
Made a new close friend	104	90
Received an A for a college course	111	97
<b>Negative</b>		
Divorce/marital separation (self)	1	1
Parents divorced or separated	2	2
Had an abortion (self/spouse/romantic partner)	5	4
Victim of a violent crime (rape/assault/etc.)	7	6
Did not get into graduate school	8	7
Fired/laid off	9	8
Death of a close friend	10	9
Serious illness or accident requiring hospitalization	13	11
Had problems getting along with coworkers	23	20
Had an operation	26	23
Death of a close family member	33	29
Troublesome neighbors	35	30
Family had financial problems	36	31
Had a project or assignment overdue	42	37
Unable to locate job	48	42
Gained weight (at least 10 pounds)	60	52
Long-term (at least 3 months) romantic relationship ended	63	55
Had a difficult time deciding on career or life goals	93	81

ality and life events measures across Time 1 and Time 2 are due to changes in the number of items used in the follow-up study rather than actual changes in the participants' scores. The total numbers of positive and negative events that each participant reported to have happened during the previous 4 years were used, respectively, as the individuals' positive and negative event scores.

### Stability

As can be seen in Table 2 (in boldface), SWB, personality, and life events showed a significant degree of stability. Although statistically significant and strong, the temporal stabilities of extraversion and neuroticism were somewhat lower than those reported by Costa and McCrae (1988). It may be that the use of the NEO-FFI instead of the longer version of the NEO-PI at Time 2 slightly lowered the stability in our data. When the SWB measures were corrected for attenuation, the stability of the SWLS increased to .76, the stability of PA increased to .66, and the stability of NA increased to .69. At the same time, the fact that the unattenuated

stability coefficients of SWB measures were noticeably lower than their respective alpha values implies that some of the unaccounted variance could be attributed to other external sources, such as changes in events and life circumstances. The moderately strong stabilities for SWB measures are consistent with the idea that SWB can be influenced by immediate situational factors (Schwartz & Strack, 1991) as well as the notion that there are stable personality influences on SWB (Costa & McCrae, 1980, 1984; Headey & Wearing, 1991).

We hypothesized that if events are in part "created" by individuals, life events should also have a significant degree of stability. Our prediction was confirmed by both types of events. As shown in Table 2, individuals who experienced good events more often at Time 1 continued to do so after 3 years at Time 2 ( $r = .27, p < .01$ ). A similar pattern was observed for bad events, which tended to occur more persistently for those individuals who had previously experienced more such events ( $r = .52, p < .001$ ). An interesting point to note, however, is that bad events seemed to be experienced with much more consistency than good events,  $t(114) = 3.48, p < .01$ . Contrasting results

Table 2  
Means, Standard Deviations, and Correlations of Major Variables

Period and variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Time 1														
1. Extraversion	—													
2. Neuroticism	-.41	—												
3. Positive life events	.19	.01	—											
4. Negative life events	.00	.22	.64	—										
5. Positive affect	.41	-.40	.05	-.20	—									
6. Negative affect	-.40	.69	.03	.32	-.31	—								
7. Life satisfaction	.41	-.48	.09	-.32	.46	-.48	—							
Time 2														
8. Extraversion <sup>a</sup>	.67	-.33	.15	-.10	.43	-.40	.48	—						
9. Neuroticism <sup>a</sup>	-.41	.59	-.03	.19	-.22	.53	-.41	-.53	—					
10. Positive life events <sup>b</sup>	.25	-.14	.27	.23	.17	.05	.18	.18	-.15	—				
11. Negative life events <sup>c</sup>	-.06	.13	.17	.52	-.11	.35	-.23	-.23	.25	.50	—			
12. Positive affect	.33	-.21	.05	-.14	.56	-.19	.28	.54	-.39	.19	-.08	—		
13. Negative affect	-.39	.47	-.08	.19	-.20	.61	-.42	-.46	.69	-.07	.30	-.35	—	
14. Life satisfaction	.36	-.22	.17	-.10	.29	-.31	.66	.55	-.48	.19	-.21	.52	-.50	—
<i>M</i>	118.47	91.88	17.75	15.30	17.51	10.04	23.87	30.33	19.62	23.30	15.85	17.78	10.11	24.56
<i>SD</i>	20.35	22.63	4.96	5.84	3.61	2.05	5.87	6.29	8.16	5.63	6.37	1.92	3.82	5.83

Note.  $N = 111$  to  $115$ . Correlations of .19 and higher were significant at  $p < .05$ , and correlations of .25 and higher were significant at  $p < .01$ . Boldface values indicate stability coefficients.

<sup>a</sup> Used the NEO Five Factor Inventory scales (12 items). <sup>b</sup> Total number of items was increased from 35 at Time 1 to 45 at Time 2. <sup>c</sup> Total number of items was increased from 46 at Time 1 to 49 at Time 2.

were previously obtained by Headey and Wearing (1989): Good events were slightly more stable than bad events. At this point, it is difficult to offer a substantive reason for the contrasting results. One possibility, however, is that the difference was due to an age-related factor(s). All of the participants in the present study at Time 1 were either college juniors or seniors, whereas the participants in Headey and Wearing's study were sampled from a more general population (an age range of 18 to 65 years). The present results suggest the need for future research on this issue: whether positive and negative events actually differ in terms of stability, and, if they do, what the possible reasons may be (e.g., recall style or activity level).

### Adaptation

As summarized in Table 3, the overall correlations between events in various periods and SWB supported our suggestion that only recent life events influence SWB and that the impact of magnitude drops quickly afterward. Although the exact duration of time is likely to vary across individuals and different life events, the sample of events used in our study affected individuals' life satisfaction and PA for less than 6 months. An important implication of our finding is that the time distances of events should be considered as a crucial factor in determining the degree of the influence of life events on SWB. Overall, the findings of the present study support Headey and Wearing's (1989) "dynamic equilibrium model" of SWB. The model claims that deviations from normal patterns of life events modify individuals' SWB, but only temporarily. Our findings support the model's prediction that SWB reverts to a level predetermined by individuals' personality as soon as the pattern of life events regains its equilibrium. According to our findings, this regression process probably takes several months.

The results for NA were similar to the life satisfaction and PA findings. The sole exception to this general pattern was the unexpected correlation between NA and bad events that had occurred 3 to 4 years in the past ( $r = .21$ ,  $p < .05$ ). Further examination of our data showed that the events that were re-

Table 3  
Correlations Between Subjective Well-Being Measures and Life Event Period

Event period and valence	Life satisfaction	Positive affect	Negative affect
3 months ago			
Positive events	.25**	.02	.00
Negative events	-.28**	-.30**	.30**
6 months ago			
Positive events	.16	.26**	-.07
Negative events	-.12	.04	.11
1 year ago			
Positive events	-.01	.09	-.09
Negative events	-.02	.06	-.04
2 years ago			
Positive events	.01	-.02	-.07
Negative events	.00	.01	.11
3 years ago			
Positive events	-.04	.05	.05
Negative events	-.08	.06	.11
4 years ago			
Positive events	-.10	.03	.07
Negative events	-.03	.04	.21*
All periods			
Positive events	.19*	.19*	-.07
Negative events	-.21*	-.09	.30**

Note.  $N = 115$ .  
\*  $p < .05$ . \*\*  $p < .01$ .

ported to have happened most frequently during this particular time period were also supposedly the most negative items on our checklist. For instance, "death of a close family member," "parents divorced," and "abortion" were among the 11 negative events that happened most frequently during this time period. However, because the rest of the distal periods did not correlate with NA, it seems unlikely that negative events in general are more difficult to adapt to than positive events. It seems more reasonable to restrict this possibility to certain exceptionally undesirable events. Nevertheless, this speculation needs to be clarified by future studies.

Finally, to examine whether neuroticism had a marked influence on the report of negative life events and SWB, we partialled out the neuroticism scores in the correlations among the six negative event periods and life satisfaction, PA, and NA. The overall pattern of adaptation was similar to the zero-order correlation results. However, the partial correlations between the most recent bad events (past 3 months) and life satisfaction, PA, and NA dropped, respectively, to  $-.18$ ,  $-.22$ , and  $.16$ . Implications of this result are mentioned in the Discussion session.

### Event Structure

To explore whether positive and negative events suppress each other's effects on SWB over time, we analyzed the correlations between aggregated life events and SWB after holding the effects of the opposite valenced events constant. After the effects of negative events had been controlled, the correlations between aggregated positive life events and life satisfaction, PA, and NA, respectively, increased to  $.35$  ( $p < .001$ ),  $.27$  ( $p < .01$ ), and  $-.27$  ( $p < .01$ ). Similarly, when the effects of positive events were held constant, the correlations between aggregated negative events and life satisfaction, PA, and NA, respectively, increased to  $-.36$  ( $p < .001$ ),  $-.22$  ( $p < .05$ ), and  $.39$  ( $p < .001$ ). As can be seen by comparing the partial correlations with the zero-order correlations presented in Table 3, the relation between life events and SWB became more pronounced when events of the opposite valence were controlled. Moreover, when the opposite type of event was controlled, events of both valence seemed to influence both PA and NA. The theoretical implications of this important finding are discussed later.

Previous findings (Block & Zautra, 1981; Magnus et al., 1993) have also shown that positive and negative life events correlate across individuals; some people tend to experience both good and bad events more frequently than others. This pattern was strongly replicated in our study ( $r = .50$ ,  $n = 115$ ,  $p < .001$ ). We extended the previous findings by examining whether events of both types also correlate within individuals. That is, are there periods within the idiographic course of life when both good and bad events happen more or less often?

To conduct a within-subject correlational analysis of positive and negative events, we standardized both the good event and bad event scores for the six time periods within subjects. This allowed us to eliminate individual differences between participants who experienced many life events and participants who experienced few events within the same time periods. A significant within-subject correlation was obtained between the periods of good events and bad events ( $r = .41$ ,  $p < .001$ ), implying

that good and bad events are indeed more likely to occur together during the same periods in the lives of most young adults.

One potential artifact might explain this intriguing finding. Regardless of the actual times of occurrence, people might simply recall more recent events, whether bad or good, and fewer distal events. Thus, good and bad events might appear to co-occur because of a memory artifact. We checked this possibility by partialing out the temporal order of events from the good and bad event correlation. The partial correlation barely dropped in comparison with the zero-order correlation ( $r = .39$ ,  $p < .001$ ), suggesting that positive and negative events do happen closely together within individuals' lives. This counterintuitive finding becomes more understandable if one thinks about the characteristics of life events that occur during transitional periods in life: They usually create more good as well as more bad experiences. Major transitions, such as moving, divorce, a new job, or getting married, are likely to have both positive and negative outcomes.

### Personality

In general, the results of our study support the position that SWB is predictable from individuals' stable personality (Costa & McCrae, 1980, 1984; Diener, Sandvik, Pavot, & Fujita, 1992). However, we wanted to explore whether recent events influence SWB beyond the effects of Time 1 personality. We performed a hierarchical multiple regression analysis, predicting Time 2 life satisfaction, PA, and NA by entering three sets of predictors in the following order: Time 1 personality (extraversion and neuroticism), recent events (positive and negative), and distal events (positive and negative). In addition, we performed another hierarchical multiple regression analysis in which individuals' initial SWB baseline level at Time 1 was controlled. Instead of controlling for Time 1 personality, we entered individuals' initial SWB level at Step 1 in the second analysis. In both cases, it was predicted that if recent life events influenced Time 2 SWB measures beyond the effects of one's personality or initial SWB level, significant  $F$  changes would be observed when the recent events block was entered in Step 2. On the basis of the correlational findings in Table 3, we operationalized recent events as incidents that happened during the previous 6 months; distal events were operationalized as those that occurred from 7 months to 4 years in the past.

As summarized in Table 4, results indicated that Time 1 personality and recent life events were significant predictors of current SWB. As expected, recent events predicted SWB beyond the effects of personality ( $F$  changes for life satisfaction, PA, and NA were all significant at  $p < .05$  at Step 2). However, events that had occurred more than 7 months previously failed to add significant increments to the prediction of current SWB level. More specifically, NA was predicted by Time 1 personality and recent negative events. Life satisfaction and PA, however, were predicted by Time 1 extraversion and both positive and negative recent events. Discussions on this "crossover" effect from negative life events to life satisfaction and PA follow in the next section.

As shown in Table 5, results of the regression analysis obtained after controlling initial SWB level resembled the findings

**Table 4**  
*Hierarchical Regression Analysis for Predicting Time 2 Subjective Well-Being: Controlling Time 1 Personality*

Variable entered	R <sup>2</sup>	R <sup>2</sup> change	F change	β
Life satisfaction				
Time 1 personality	.369		8.59***	
Extraversion				.245**
Neuroticism				-.028
Recent events	.560	.191	13.82***	
Positive				.369***
Negative				-.330***
Distal events	.564	.004	0.34	
Positive				.087
Negative				-.072
Positive affect				
Time 1 personality	.335		6.90**	
Extraversion				.237*
Neuroticism				-.059
Recent events	.422	.087	4.30*	
Positive				.191
Negative				-.234*
Distal events	.430	.008	0.41	
Positive				.045
Negative				.048
Negative affect				
Time 1 personality	.513		19.50***	
Extraversion				-.196*
Neuroticism				.324***
Recent events	.564	.051	4.30*	
Positive				-.079
Negative				.230**
Distal events	.586	.022	1.97	
Positive				-.121
Negative				.203

Note. *N* = 112. Recent events = less than 6 months ago; distal events = from 7 months to 4 years ago.  
\* *p* < .05. \*\* *p* < .01. \*\*\* *p* < .001.

of the first analysis. Similar to the previous analysis, recent life events significantly increased the prediction of Time 2 SWLS score and PA, whereas distal events did not. Both recent and distal life events, however, failed to add significant increments to the prediction of Time 2 NA when initial NA level was controlled. Overall, results of the regression analyses once again supported our hypothesis that, at least for a short period of time, recent life events do affect SWB beyond the influence of stable personality or baseline levels of SWB.

### Discussion

A majority of the participants in the present study (81%) indicated that they had a difficult time deciding on their career or life goals in recent periods. As regards the study of the relation between life events and SWB, such individuals who were at a transitional period of life provided interesting information that might not have been detectable during more stable life periods.

On the other hand, because of the relatively homogeneous nature of our sample (recent college graduates), it remains to be shown whether our findings can be extended to middle-aged and older adults, as well as to less educated and high-income populations. As Sears (1986) has cautioned, data obtained from college student participants who have relatively weak self-definitions and uncrystallized attitudes may not accurately portray the social behavior of the general population in everyday life. Although this problem is not unique to the present research, this relatively unstable nature of college student data has important implications in generalizing the findings to personality stability in adulthood. Haan, Millsap, and Hartka (1986), for instance, suggested that marked shifts in personality occur during the end of adolescence when people go through profound role shifts entailed by new jobs and marriage. Similarly, McCrae and Costa (1990) argued that although personality becomes increasingly solidified after the age of 30, the decade between 20 and 30 years of age is a time when individuals try to attain a configuration of traits that will characterize them for the older adult periods of life. Thus, the present personality stability findings may underestimate the stabilities that would be found with older adults but may be stronger than ones that would be revealed from children or teenagers.

**Table 5**  
*Hierarchical Regression Analysis Predicting Time 2 Subjective Well-Being: Controlling Time 1 Subjective Well-Being*

Variable entered	R <sup>2</sup>	R <sup>2</sup> change	F change	β
Life satisfaction				
Time 1 life satisfaction	.662		85.84***	.567***
Recent events	.723	.061	9.53***	
Positive				.247**
Negative				-.225**
Distal events	.724	.001	0.23	
Positive				.002
Negative				.044
Positive affect				
Time 1 positive affect	.559		49.97***	.526***
Recent events	.607	.048	4.76*	
Positive				.165
Negative				-.200*
Distal events	.613	.006	0.68	
Positive				-.021
Negative				.102
Negative affect				
Time 1 negative affect	.610		65.26***	.539***
Recent events	.627	.017	1.80	
Positive				-.130
Negative				.151
Distal events	.647	.020	2.35	
Positive				-.209*
Negative				.161

Note. *N* = 112. Recent events = less than 6 months ago; distal events = from 7 months to 4 years ago.  
\* *p* < .05. \*\* *p* < .01. \*\*\* *p* < .001.

In general, as Headey and Wearing (1989) have suggested in their equilibrium model of SWB, it seems to be the case that SWB does react to external changes in life but returns to a stable individual baseline rather quickly. More specifically, the results of our study indicate that the impact of most life events on SWB diminishes in less than 3 months. Furthermore, the strong stability of individuals' scores for life satisfaction, PA, and NA suggests that SWB measures reflect more than immediate situational factors. In some ways, our findings link the two traditional views in the area of life events and SWB. We found evidence in support of Costa and his colleagues' (Costa & McCrae, 1980, 1984; Costa et al., 1987) claim that SWB follows from individuals' stable personality. Also, as Brickman et al. (Brickman & Campbell, 1971; Brickman et al., 1978) have argued, we found that individuals do adapt to life events. However, by demonstrating that life events can predict SWB above and beyond the impact of personality, at least for a short time, our study has extended the previous notions regarding the relation between life events and SWB.

An important finding of our study was the coupling of positive and negative events, both between and within subjects. Lay beliefs suggest that there are lucky people who experience most of the good events in life and fewer of the bad events. Similarly, popular wisdom suggests that there are certain "periods" in life when most events are either good or bad. Although lay assumptions may hold true for a small number of people or rare life periods, our findings indicate that these beliefs appear to be untrue for our sample during their past 4 years.

Within individuals, good and bad events are more likely to occur together than apart in the course of life. That is, if a person experiences many bad events, she or he is also more likely to experience many good events occurring during that same period. Perhaps during transitional periods of life, when people get a new job, move to a new residence, or become a parent, they are likely to experience many new events, both positive and negative in nature. On a between-subjects level, those people who experienced more good events also experienced more bad events than others. This finding is particularly interesting because previous studies have shown as well that people who experience intense levels of PA also experience extreme levels of NA (Diener & Larsen, 1984; Diener, Larsen, Levine, & Emmons, 1985). A possible link between individuals' affect intensity level and number of positive and negative event experiences stimulates interesting ideas. For instance, studies have shown that individuals choose and select environments that sustain their personal attributes such as motives and emotional states (Diener, Larsen, & Emmons, 1984; Emmons & Diener, 1986; Snyder, 1983). It will be interesting to investigate whether individuals who experience a high level of affect intensity also experience more life events than others because they approach highly stimulating situations more often.

Despite our finding that positive and negative events occur together over time, why do people not recall that good and bad events tend to happen together? Perhaps unusually good or bad periods, when accompanied by few events of the opposite valence, remain far more salient in people's memories. Also, strong events may tend to overshadow weak events of the opposite valence, which distorts people's recollections of past events. Finally, the fact that our findings are so counterintuitive sug-

gests that the belief structure of events will be a fertile topic for future research.

One unexpected finding was that recent negative events crossed over to and correlated inversely with PA in the zero-order correlations. Furthermore, when the opposite type of event was controlled, both NA and PA were influenced by events of both valence. These results were unexpected in light of past findings showing that events influence only affect of the same valence (Reich & Zautra, 1981; Vinokur & Selzer, 1975; Zautra & Reich, 1983). Numerous studies have also demonstrated that PA and NA are separable and are influenced by different factors (Bradburn, 1969; Diener & Emmons, 1985; Diener, Smith & Fujita, 1995; Goldstein & Strube, 1994; Larson, 1987; Warr, Barter, & Brownbridge, 1983; Watson & Tellegen, 1985). However, if the crossover influence from negative life events to PA disappears when NA is controlled, it would suggest that the crossover effect occurs because PA and NA are separable but not totally independent. Our study supports this notion; the effect of recent negative life events on PA noticeably dropped when the effect of NA was controlled ( $r = -.14$ ). In terms of life events, for instance, extremely undesirable happenings can momentarily detract individuals from PA and also heighten their experience of NA.

Another noticeable finding was that negative events were almost as stable as individuals' neuroticism and NA scores. Is it the case, then, that we are essentially measuring dispositional constructs, such as NA and neuroticism, through our negative event measures? In other words, should negative life events be conceptualized as a person variable rather than as an environmental variable? Our measures of stability show that, although related, negative events are discriminable from NA and neuroticism (e.g., the correlation of .13 between Time 1 neuroticism and Time 2 negative events was markedly lower than their respective stability coefficients). Although we agree with other authors who suggest that neuroticism and NA often function as a "nuisance" variable in the relation between life event reports and well-being (Brett et al., 1990; Burke, Brief, & George, 1993; Watson & Pennebaker, 1989), we believe that it is theoretically important to understand the personality dimensions as crucial person factors in the person-situation transaction in which the negative events occur. Negative events are stable, in part, because the circumstances in which they are likely to occur are often produced by a person's general action tendencies and perception of the world. At the same time, events could be stable also because people live in steady life circumstances. For instance, if someone is poor (rich) today, he or she is likely to be poor (rich) next year. And wealth is likely to produce a large number of recurring events by constraining the range of personal choices and by stabilizing the person's social environment.

The present study offers many challenging issues for future research. One of the most important tasks is to uncover the underlying processes of adaptation. More specifically, how do events affect SWB and why do past events appear to have such a fleeting effect on SWB? Is it just the result of the passage of time, as the term *habituation* suggests, or is it due to an active coping strategy, such as a rearrangement of one's goal structure? First, events may influence SWB, in part, because affective experi-

ences are intrinsically related to goal values (Mandler, 1984; Ortony, Clore, & Collins, 1988). Numerous studies in the SWB field have shown that successful pursuit of personal goals plays an important role in maintaining and increasing one's psychological well-being (Brunstein, 1993; Emmons, 1986, 1992; Omodei & Wearing, 1990; Palys & Little, 1983). During the goal striving process, however, one may use life events as a cue for checking one's rate of progress or the possibility of attaining one's goal (Carver & Scheier, 1990). Positive events (e.g., promotion) that are construed as a sign of progress toward one's higher order goals (e.g., achievement) are likely to increase one's SWB. Negative events (e.g., receiving a low grade) that have an actual or potential possibility of creating a negative outcome in attaining one's higher goals (e.g., getting a scholarship) may lower one's SWB. Brunstein (1993) has recently suggested that perceived progress in goal achievement also increases one's SWB level, implying that the relative increase or decrease of number of events may affect SWB as well. For instance, in our study, the increase in the number of negative life events from the 3 to 6 months ago period to the 3 months ago period correlated positively with NA and negatively with life satisfaction and PA.

Carver and Scheier (1990) have noted, however, that individuals' reference value adjusts over the course of experience in the direction of a moderate state. This habituation or adaptation process may be important to the efficient functioning of a person's emotional system. If one of the important functions of this system is to provide information that helps guide the behavior of the organism, the adaptation process may allow new events that provide new information to take priority over past events. In addition to such automatic processes, other effortful coping processes may be responsible for adaptation. For instance, individuals may "disengage" from their negative experience by reorienting their attention and resources to more easily attainable goals (Carver & Scheier, 1990; Janoff-Bulman & Brickman, 1982), reinterpret events in a more positive light (Taylor & Brown, 1988), or seek to find new meaning in their adverse experience (Janoff-Bulman, 1992; McIntosh, Silver, & Wortman, 1993). Although we have shared some reflections on why events influence SWB and how adaptation takes place, we believe there is much room for more empirical and theoretical work on this important issue.

Another interesting task for future research is to explore why positive and negative events occur together, across and within individuals. To better understand the correlations between good and bad events across participants, researchers need to examine the dispositional characteristics (e.g., activity level) of those people who actively "create" or react intensely to life events. For instance, Costa and McCrae (1984) found that individuals who were high in openness tended to experience both positive and negative emotions more strongly, implying that certain individuals may have a richer and more differentiated emotional reaction to life events. It is difficult to completely rule out the possibility that the convergence of events is due to individual differences in self-report or memory. Some people may report more events because of their lower threshold for reporting any events or because they have a better memory than others. To pursue the within-subject correlation between positive and negative events

further, a better understanding of what takes place during extremely good or bad life periods is needed. For instance, Silver (1982) found that people with spinal cord injuries experienced positive events after their injury, such as great amounts of social support. According to Janoff-Bulman (1992), individuals also often find new meaning and self-worth after experiencing traumatic events. Individuals come to terms with their bad experience by making comparisons with worse situations or by perceiving themselves as strong and capable enough to deal with an extreme situation. Also, several emotion theorists suggest that intense emotional experiences are followed by emotions of the opposite valence (Diener, Colvin, Pavot, & Allman, 1991; Solomon, 1980). It may also be the case that, after a major event, individuals perceive all events to have greater relevance and therefore experience more emotions, both positive and negative (Lazarus, 1991). By and large, how and why this convergence of positive and negative events occurs, both within and between individuals, are important issues for scientists to explore.

Our study had several limitations. First, although our life events checklist covered various events from diverse life domains, some events showed low base rates. Extreme events (e.g., a suicide attempt) were not reported by this sample. Presumably, it may take longer to adapt to sweeping events that have long-term effects on daily life (e.g., losing a spouse). Second, we were unable to specify each separate life event's impact on individuals' SWB levels because our primary purpose was to examine the global impact of life events on SWB. Part of this decision was based on the belief that a focus on single events may turn attention away from the obvious interaction effects of a number of events in inducing changes. Nonetheless, future studies should also concentrate more on specific dimensions of life events (e.g., chronic vs. discrete, controllable vs. uncontrollable, and public vs. private) in reference to their effects on SWB. In addition, researchers should keep in mind that the effects of life events on people are mediated by individual differences. For instance, positive events were found to have more beneficial effects on the mental health of disabled people than on that of bereaved people (Zautra et al., 1990), and negative events had more detrimental effects on people who were less privately self-conscious (Mullen & Suls, 1982).

Another concern of the present study is that we were unable to determine whether people who dropped out of our study changed more than those who participated in the follow-up study. Although we found no evidence that the two groups differed in terms of personality and life event measures at Time 1, it may still be possible that we were unable to locate some of the missing people because more significant life changes had occurred to them during the interim period. Finally, although we tried to minimize recall biases by listing salient events in the events checklist, the potential problem of memory distortion is one of the most common methodological challenges to longitudinal life event studies. Although Seidlitz and Diener (1993) provided evidence showing that people's event reports are based substantially on the actual occurrence of the incidents, upcoming longitudinal studies nevertheless should try to overcome the memory problem by monitoring events more frequently (e.g., every month) over a period of several years and by collecting additional data from multiple informants.

In summary, we found that personality does correlate over time with SWB. Individuals' level of extraversion and neuroticism predicted SWB over a period of years. However, recent events also mattered. Although a significant degree of stability was found in both SWB and life events, changes in life events can, at least temporarily, alter the level of one's SWB. It appears that typical life events lose their effects on SWB after 3 to 6 months. In the case of NA, however, even recent events did not add significantly to the prediction beyond the influence of earlier levels of NA. Finally, we replicated the counterintuitive findings of others (e.g., Magnus et al., 1993; Block & Zautra, 1981) that positive and negative life events correlate highly across people. Surprisingly, however, the two types of events also seem to co-occur during the same periods in people's lives.

Shoda, Mischel, and Wright (1994) recently suggested that the cross-situational consistency of individual differences in social behavior can be understood as a result of stable and distinctive "behavioral signatures" of personality that determine individuals' if-then reaction patterns in person-situation interactions. Happiness, similarly, may be conceptualized more correctly as an interactional product of a person's stable pattern of proactions and reactions to life experiences than as either a result of personality or events alone. Accordingly, we believe that the reciprocal nature between personality and life events warrants more attention in future SWB research.

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