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Article in *Psychological Bulletin* · March 1999

DOI: 10.1037/0033-2909.125.2.276

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# Subjective Well-Being: Three Decades of Progress

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W. Wilson's (1967) review of the area of subjective well-being (SWB) advanced several conclusions regarding those who report high levels of "happiness." A number of his conclusions have been overturned: youth and modest aspirations no longer are seen as prerequisites of SWB. E. Diener's (1984) review placed greater emphasis on theories that stressed psychological factors. In the current article, the authors review current evidence for Wilson's conclusions and discuss modern theories of SWB that stress dispositional influences, adaptation, goals, and coping strategies. The next steps in the evolution of the field are to comprehend the interaction of psychological factors with life circumstances in producing SWB, to understand the causal pathways leading to happiness, understand the processes underlying adaptation to events, and develop theories that explain why certain variables differentially influence the different components of SWB (life satisfaction, pleasant affect, and unpleasant affect).

In 1967, Warner Wilson presented a broad review of subjective well-being (SWB) research entitled, "Correlates of Avowed Happiness." Based on the limited data available at that time, Wilson concluded that the happy person is a "young, healthy, well-educated, well-paid, extroverted, optimistic, worry-free, religious, married person with high self-esteem, job morale, modest aspirations, of either sex and of a wide range of intelligence" (p. 294). In the three decades since Wilson's review, investigations into SWB have evolved. Although researchers now know a great deal more about the correlates of SWB, they are less interested in simply describing the demographic characteristics that correlate with it. Instead, they focus their effort on understanding the processes that underlie happiness. This trend represents a greater recognition of the central role played by people's goals, coping efforts, and dispositions. In this article, we review research on several major theoretical approaches to well-being and then indicate how these theories clarify the findings on demographic correlates of SWB.

Throughout the review we suggest four directions that researchers should pursue in the decades ahead. These are by no means the only questions left to answer, but we believe they are the most interesting issues left to resolve. First, the causal direction of the correlates of happiness must be examined through more sophisticated methodologies. Although the causal priority of demographic factors such as marriage and income is intuitively appealing, it is by no means certain. Second, researchers must focus greater attention on the interaction between internal factors (such as personality traits) and external circumstances. As we shall see, demographic factors have surprisingly small effects on SWB, but

these effects may depend on the personalities of those individuals being studied. Thus, future research must take Person  $\times$  Situation interactions into account. Third, researchers must strive to understand the processes underlying adaptation. Considerable adaptation to both good and bad circumstances often occurs, yet the processes responsible for these effects are poorly understood. Research that examines how habituation, coping strategies, and changing goals influence adaptation will shed much light on the processes responsible for SWB. Finally, theories must be refined to make specific predictions about how input variables differentially influence the components of SWB. In the past, many researchers have treated SWB as a monolithic entity, but it is now clear that there are separable components that exhibit unique patterns of relations with different variables. In each section of this article we discuss progress and opportunities in these four areas.

It is unfortunate that page limitations restrict our coverage. Emerging areas of study including the consequences of happiness (Myers, 1992; Veenhoven, 1988) and people's beliefs about happiness (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998; Loewenstein & Schkade, in press; Schkade & Kahneman, 1997) are not discussed. Specific literatures on the role of social support (Argyle, 1987; Sarason, Sarason, & Pierce, 1990) and the biological systems underlying SWB are each extensive enough to warrant their own literature reviews and are thus omitted from the present discussion. Because our review must be selective, readers are referred to several additional sources: Argyle (1987); Diener and Suh (in press); Strack, Argyle, and Schwarz (1991); and Kahneman, Diener, and Schwarz (in press).

## The Field of Subjective Well-Being

Growth in the field of SWB reflects larger societal trends concerning the value of the individual, the importance of subjective views in evaluating life, and the recognition that well-being necessarily includes positive elements that transcend economic prosperity. The scientific study of subjective well-being developed in part as a reaction to the overwhelming emphasis in psychology on negative states. Psychological articles examining negative states outnumber those examining positive states by a ratio of 17

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We wish to thank Carol Diener, Alexander Grob, and Shige Oishi for their suggestions.

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to 1 (Myers & Diener, 1995). SWB researchers recognize that people approach positive incentives and do not just avoid misery, and thus they study the entire range of well-being from misery to elation.

In addition, SWB researchers believe that social indicators alone do not define quality of life (Diener & Suh, 1997). People react differently to the same circumstances, and they evaluate conditions based on their unique expectations, values, and previous experiences. Although crime statistics and income levels are relevant to discussions of quality of life, the subjective element is essential.

The vast majority of college students around the world consider happiness and life satisfaction to be extremely important. Indeed, almost all respondents believe happiness is more important than money (Diener & Oishi, in press). Furthermore, happy people are judged to have a more desirable life than unhappy people, to be better people, and to be more likely to be admitted into heaven (King & Napa, 1998)! However, few people would argue that subjective well-being is the only ingredient of a good life (Diener, Sapyta, & Suh, 1998)

### The Components of Subjective Well-Being

Subjective well-being is a broad category of phenomena that includes people's emotional responses, domain satisfactions, and global judgments of life satisfaction. Each of the specific constructs need to be understood in their own right, yet the components often correlate substantially, suggesting the need for the higher order factor (Stones & Kozma, 1985). Thus, we define SWB as a general area of scientific interest rather than a single specific construct. Table 1 presents the major divisions and subdivisions of the field.

Moods and emotions, which together are labeled *affect*, represent people's on-line evaluations of the events that occur in their lives. Bradburn and Caplovitz (1965) suggested that pleasant affect and unpleasant affect form two independent factors and should be measured separately. Although the degree of independence between momentary pleasant and unpleasant affect is still debated, the separability of long-term affective dimensions is less controversial. Diener & Emmons (1984) found that pleasant and unpleasant affect became increasingly separate as the time-frame increased. Diener, Smith, and Fujita (1995) used structural equation

modeling and multimethod assessment to control measurement error in affect measures. They found that the two constructs are moderately inversely correlated but clearly separable. Because SWB researchers are primarily interested in long-term moods rather than momentary emotions, they should include measures of both pleasant and unpleasant affect in their research. Kozma, Stone, and Stones (in press) discovered that various measures of SWB reflect short- and long-term influences to differing degrees. In addition, in certain contexts discrete emotions such as anger, anxiety, and sadness should be assessed.

In addition to studying affective reactions, SWB researchers are interested in cognitive evaluations of life satisfaction. Andrews and Withey (1976) found that life satisfaction formed a separate factor from the two major types of affect. Lucas, Diener, and Suh (1996) used multitrait-multimethod analyses to show that pleasant affect, unpleasant affect, and life satisfaction were separable constructs. Even over 2 years and across multiple methods of assessment (e.g., self- versus informant reports), validity coefficients for each of the three constructs were stronger than the intercorrelations among different constructs. The Satisfaction with Life Scale (see Pavot & Diener, 1993) is a valid and reliable scale for measuring life satisfaction.

Few existing theories attempt to explain why variables differentially relate to the separate components of SWB. For example, researchers have attempted to map the personality traits of extraversion and neuroticism onto pleasant and unpleasant affect, respectively (e.g., Larsen & Ketelaar, 1991). The notion of separate emotion systems suggests that rewarding stimuli such as daily pleasures will be more strongly associated with variability between people in pleasant affect than unpleasant affect, and that punishing stimuli such as daily hassles will be more strongly associated with variability in unpleasant affect. Yet the differential relations among most input variables and the components of SWB are poorly understood. In our review we attempt to specify how variables correlate with each of the major components of SWB. It is unfortunate that researchers often rely on global measures of happiness or instruments that cannot be neatly mapped onto the components of SWB, making such distinctions impossible. We recommend that the major components of SWB be assessed separately in future research.

### Research Method

The field of SWB has deep roots in survey research, and the most common assessment technique is the single-occasion, self-report Happiness scale. Although this tradition has encouraged the use of broad, representative samples that may be more generalizable than samples used in most areas in the psychological sciences, our methods have been limited in some important ways. First, SWB research is limited by the almost exclusive reliance on cross-sectional correlational designs with inadequate tests of causal hypotheses. This shortcoming leaves researchers in an uncertain position regarding the causal priority of the variables they study. Causal modeling and longitudinal studies have become more popular in recent years, but the field would clearly benefit from further methodological sophistication.

A second methodological concern is the ubiquity of global self-report measures of SWB. These measures do possess adequate psychometric properties, exhibiting good internal consistency (Larsen, Diener, & Emmons, 1985), moderate stability, and appropriate sensitivity to changing life circumstances (Eid & Diener, in press-b; Headey & Waring, 1991).

Table 1  
*Components of Subjective Well-Being*

Pleasant affect	Unpleasant affect	Life satisfaction	Domain satisfactions
Joy	Guilt and shame	Desire to change life	Work
Elation	Sadness	Satisfaction with current life	Family
Contentment	Anxiety and worry	Satisfaction with past	Leisure
Pride	Anger	Satisfaction with future	Health
Affection	Stress	Significant others' views of one's life	Finances
Happiness	Depression		Self
Ecstasy	Envy		One's group

Furthermore, global reports show a moderate level of convergence with daily mood reports, informant reports (Sandvik, Diener, & Seidlitz, 1993), spouse reports (Costa & McCrae, 1988), and recall for positive versus negative life events (e.g., Seidlitz, Wyer, & Diener, 1997). People who score high on global life satisfaction are less likely to attempt suicide (Moum, 1996) and to become depressed in the future (Frisch, in press; Lewinsohn, Redner, & Seeley, 1991).

However, Schwarz, Strack, and their colleagues documented a number of artifacts that can plague the reports. SWB values may change depending on the type of scales used, the order of items, the time-frame of the questions, current mood at the time of measurement (e.g., Moum, 1988), and other situational factors (see Schwarz & Strack, 1991, for a review). Although current mood is relevant to investigations of SWB, researchers do not want current mood to unduly influence reports of how one has felt over the past month or year. Eid and Diener (in press-b), however, found that in normal testing situations, the stable component of life satisfaction overshadowed the influence of current mood.

Because global self-report measures may be subject to distortions (including traditional artifacts such as impression management; Park, Upshaw, & Koh, 1988), researchers should assess the impact of these artifacts when possible. For example, the influence of impression management can be assessed by comparing responses taken from in-person interviews to those from anonymous questionnaires. In addition, steps should be taken to reduce measurement error. Well-being measures should be administered under constant or systematically varied conditions, as the measurement situation can influence reports.

Perhaps because of these distortions, global self-reports of SWB do not map completely onto SWB scores assessed using other techniques. For example, global reports of SWB do not always strongly converge with average mood levels computed from multiple-occasion, daily diary studies (e.g., Schimmack, 1997; D. Thomas & Diener, 1990). In addition, individuals who report positive well-being may simultaneously exhibit distress in measurements of physiological reactivity and interview ratings (Shedler, Maymann, & Manis, 1993). In a similar vein, Eisenberg, Fabes, Schaller, Carlo, and Miller (1991) found that boys who were socialized to inhibit emotional displays reported less stress during a sympathy-inducing film but exhibited more physiological distress. Because of clear instances where global reports of SWB and other types of measures yield discrepant readings, a fuller range of measures must be used.

Several other methods for assessing SWB besides global self-reports are now available. Kahneman (in press) argued that experience sampling measures of happiness ought to be the primary method for measuring SWB. By sampling moods, emotions, and other feelings at random moments in respondents' everyday lives, this method reduces the memory biases that affect retrospective reports of experiences. Despite some limitations, experience sampling may sometimes provide more accurate values than global reports (Stone, Shiffman, & DeVries, in press). Other methods such as scoring qualitative descriptions of people's lives (e.g., L. E. Thomas & Chambers, 1989), measuring reactions to emotionally ambiguous stimuli (e.g., Rusting, 1997), and recording people's memories for good and bad events (Pavot, Diener, Colvin, & Sandvik, 1991) can also be used to assess SWB. Finally, physiological measures such as salivary cortisol levels (e.g., Dinan, 1994) might also be used to indicate levels of well-being and ill-being.

Subjective well-being is not a simple unitary entity. It has multiple facets that must be assessed through global judgments, momentary mood reports, physiology, memory, and emotional expression. Although some might argue that SWB is, after all, subjective, it nevertheless depends on reactions in multiple physiological and psychological systems. Thus, we believe that subjective experience can also be measured by physiological characteristics, behavioral reactions, and memories. As more researchers use varied measures, they will be able to transcend Wilson's description of SWB measures as mere *avowals* of happiness.

## Theory

In 1930, Dodge wrote that theories of happiness had not advanced beyond those formulated by the Greek philosophers (cited in Wilson, 1967). More than 30 years later, Wilson echoed this sentiment, noting that only a few tentative theoretical postulates had been proposed to explain individual differences in SWB. These postulates (which Wilson himself proposed in his 1960 doctoral dissertation) were as follows: (a) "The prompt satisfaction of needs causes happiness, while the persistence of unfulfilled needs causes unhappiness"; and (b) "The degree of fulfillment required to produce satisfaction depends on adaptation or aspiration level, which is influenced by past experience, comparisons with others, personal values, and other factors" (1967, p. 302). By examining the correlates of avowed happiness, Wilson hoped to identify which needs were of central importance to SWB. At the time of his review, however, few studies had addressed the second of Wilson's postulates.

It is fortunate that numerous theories have now been proposed and tested. Perhaps the most important theoretical advance of the past 30 years is the shift in emphasis from the first of Wilson's postulates (identifying which needs must be met for happiness to ensue) to the second (identifying the comparative factors that influence whether or not resources will influence well-being). Whereas the former approach attempts to identify external, situational, or bottom-up factors that consistently affect happiness, the latter approach focuses on the top-down processes within the individual.

The fact that researchers have not yet identified resources that strongly affect SWB, although once considered a failure of SWB research, now motivates many of the studies about the processes underlying happiness. Researchers have begun to examine the context provided by people's experiences, values, and goals when assessing the influence of external events on happiness. In the following section, we introduce several major conceptual models pertaining to SWB and review the evidence relevant to these models.

### *Bottom-Up Situational Influences*

In his 1984 review, Diener distinguished between top-down and bottom-up processes that influence SWB. The major focus of early theoretical formulations was to identify the bottom-up factors that influence SWB: how do external events, situations, and demographics influence happiness? The bottom-up approach is built on Wilson's idea that there are basic and universal human needs, and that if one's circumstances allow a person to fulfill these needs, he or she will be happy.

In support of the bottom-up approach, a variety of pleasures have been shown to be connected to reports of well-being. For example, the experience of daily pleasurable events is related to pleasant affect, and the experience of daily undesirable events is related to unpleasant affect (Stallings, Dunham, Gatz, Baker, & Bengtson, 1997). Yet, researchers are often disappointed by the relatively small effect sizes for the external, objective variables that were explored in most early studies. Campbell, Converse, and Rodgers (1976) found that demographic factors (e.g., age, sex, income, race, education, and marital status) accounted for less than 20% of the variance in SWB. Andrews and Withey (1976) could

only account for 8% by using these variables. Moreover, on the basis of his review of the literature, Argyle (in press) suggested that external circumstances account for about 15% of the variance in SWB reports. Because of the small effects, researchers turned to top-down areas to explain variability in SWB, structures within the person that determine how events and circumstances are perceived.

### *Personality*

Personality is one of the strongest and most consistent predictors of subjective well-being (for a review, see Diener & Lucas, in press). Evidence for the personality–SWB link comes from a wide variety of research traditions and methodologies. Because personality is a reliable predictor of SWB, a number of theories have been developed to explain why it is related to SWB. In the following sections, we first review data showing that SWB has the properties of a disposition. We then discuss which adult personality traits are most reliably correlated with SWB and review how personality interacts with life circumstances to influence SWB. Finally, we discuss how personality correlates with more dynamic aspects of SWB such as emotional variability.

*Temperamental predisposition for SWB.* One conceptual model for the link between personality and SWB is that some people have a genetic predisposition to be happy or unhappy, which is presumably caused by inborn individual differences in the nervous system. The strongest evidence for a temperamental predisposition to experience certain levels of SWB comes from behavior–genetic studies of heritability. Heritability studies estimate the amount of variance in SWB scores that can be explained by one's genes. Tellegen et al. (1988), for example, examined monozygotic and dizygotic twins who were reared together and others who were reared apart. Tellegen et al. found that monozygotic twins who grew up in different homes were more similar to each other than were dizygotic twins who were raised together or apart. Furthermore, twins who were raised in the same family were not much more similar to each other than were twins who were raised apart. Tellegen et al. estimated that genes account for about 40% of the variance in positive emotionality and 55% of the variance in negative emotionality, whereas shared family environment accounts for 22% and 2% of the variance in positive emotionality and negative emotionality, respectively. Braungart, Plomin, DeFries, and Fulker (1992) used both adoption and twin methodologies and found substantial heritability for positive affect in 12-month-old babies.

In a reanalysis of Tellegen et al.'s twin study, Lykken and Tellegen (1996) calculated that although 40% to 55% of the variation in current SWB can be explained by genes, 80% of long-term SWB is heritable. Based on the later heritability estimate, it could be said that it is as hard to change one's happiness as it is to change one's height. Note, however, that although Lykken and Tellegen's heritability estimate of .80 is for that portion of affect that was stable over a 10-year period, the stable portion of SWB accounted for only a moderate percentage of the variance in SWB responses at either time period. Thus, one can focus on happiness at a specific period in life and conclude that heritability has a moderate influence, or one can focus only on people's average happiness over the long term (e.g., a decade) and conclude that heritability has a substantial effect. Naturally, the portion of happiness that is constant for a period of 10 years is

more likely to be influenced by a stable factor such as one's genes and is less likely to be influenced by a set of events that might influence current well-being. Note too that heritability estimates are influenced by the amount of environmental variability in the sample being examined. If environment was held absolutely constant, variation could only be explained by genes. Samples included in twin studies are unlikely to experience the most extreme environments that might influence SWB (e.g., revolution or solitary confinement). Thus, heritability studies tell us about the heritability of long-term SWB among a sample of people in modern Western society, but they do not provide absolute, unchangeable estimates of genetic effects.

Another reason for caution is that heritability estimates are often inconsistent across studies. Baker, Cesa, Gatz, and Mellins (1992) found a significant heritability for negative affect but environmental effects and assortative mating influences for positive affect. McGue and Christensen (1997) found a heritability estimate of .27 for affect among elderly Danish twins. Gatz, Pedersen, Plomin, and Nesselroade (1992) studied older adults and found a modest heritability score for depression, but heritability was minimal for depressed mood and well-being. Unique life experiences accounted for the largest portion of variance. In a similar vein, Silberg et al. (1990) found that nonshared environmental factors explained the largest percentage of variance in depressed affect and positive affect. Thus, heritability estimates are often smaller than those found by Lykken and Tellegen (1996).

One complicating factor is that monozygotic twins may or may not share placentas in utero, and this might make them more or less similar. Thus, the intrauterine environment may confound the genetic interpretation of earlier twin study findings (Phelps, Davis, & Schartz, 1997). Another challenging factor is that genetic effects on SWB may not be direct. For example, Plomin, Lichtenstein, Pedersen, McClearn, and Nesselroade (1990) found that genes have an influence on life events. In other words, there are genetic factors influencing behavior that increase the probability that certain life events will be experienced. Thus, genes might influence SWB by making certain behaviors more likely in certain contexts. Thus, the heritability estimates do not inevitably point to unchangeable predispositions to experience emotions.

It appears that there is some genetic influence on SWB, although the estimates for the size of this influence vary widely. Indeed, it is likely that the heritability coefficients for SWB are influenced by the environment and also by the particular component of SWB being considered. A more direct examination of genetic influences on SWB is to examine how specific genes may influence brain hormones and receptor sites, which in turn influence SWB (Hamer & Copeland, 1998). Thus, the genetic predisposition approach may soon be connected to biological variables that are known to indicate mood.

If there are stable predispositions to experience happiness or unhappiness, one would expect SWB to be at least somewhat consistent across time and across situations. Although situational factors may move SWB up or down from baseline levels, stable personality factors should exert a long-term influence. In support of this idea, Magnus and Diener (1991) found that measures of personality predicted life satisfaction 4 years later, even after controlling for the influence of intervening life events. In a similar vein, Headey and Wearing (1989) found that people eventually return to a baseline of positive and negative affect after the

occurrence of good and bad events. They proposed a *dynamic equilibrium* theory in which personality determines baseline levels of emotional responses. Events can move people above or below this baseline, but they will in time return to this stable set point. Kozma, Stone, and Stones (1997) explored whether stability in SWB is due to stability in the environment, in personality, or in affective styles. They found that all factors contributed to the stability of SWB to some degree, although the stable environmental component was the smallest. Stable environmental factors could not completely account for the substantial stability in SWB, indicating that more stable factors such as personality must also be involved.

If stability in SWB scores is influenced by stable personality variables, one would not only expect stability across time but also consistency across different types of situations. People who are happy at work should also be happy when at leisure. Diener and Larsen (1984) examined this hypothesis and found that average levels of pleasant affect in work situations correlated .70 with average moods in recreation situations, and average levels of negative affect in work situations correlated .74 with average levels in recreation situations. Similar levels of consistency were found across social versus alone situations and across novel versus typical situations. Although events and situations certainly influence our emotions and feelings of well-being, we have a tendency to experience similar mean levels of positive and negative emotions in a wide variety of situations. Naturally, people react to events—it is only the aggregated levels of emotion that tend to be stable.

The limited influence of objective circumstances, in combination with studies that estimate the genetic component of SWB to be significant, led some to believe that happiness is a trait (e.g., Costa, McCrae, & Zonderman, 1987). This viewpoint has been criticized by Veenhoven (1994b), who argued that happiness can change over time and is influenced by fortune and adversity. In support of Veenhoven's claim, Kozma et al. (1997) show that SWB does fluctuate over time. Furthermore, evidence reviewed here later demonstrates that certain circumstances do influence levels of SWB. Based on the large body of evidence on the correlates of SWB, Veenhoven's claim that happiness itself is not a trait appears to be correct. However, stable personality traits can influence SWB, and thus SWB has both trait-like and state-like properties. The current working model of researchers in the field is that personality predisposes people to certain affective reactions but that current events also influence one's current levels of SWB. As we will see in future sections, however, long-term life circumstances can also have some continuing influence on people's level of SWB.

*Traits and cognitive dispositions associated with SWB.* The traits that have received the most theoretical and empirical attention in relation to SWB are extraversion and neuroticism. Costa and McCrae (1980) posited that extraversion influences positive affect, whereas neuroticism influences negative affect. Using structural equation modeling to control for measurement error, Fujita (1991) found that an extraversion latent correlated .71 with a positive affect latent trait, and neuroticism and negative affect formed a single, indistinguishable factor. Lucas, Diener, Grob, Suh, and Shao (1998) replicated the strong extraversion–pleasant affect relation: In their study the latent traits of positive affect and extraversion correlated .74 in an international sample.

The relations among these constructs are so strong and consis-

tent that Watson and Clark (1984) relabeled the trait of neuroticism as negative affectivity and suggested that positive affectivity forms the core of the broad trait of extraversion (Watson & Clark, 1997). Watson and Clark posit that neurotics and extraverts have a temperamental susceptibility to experience negative and positive affect, respectively. This claim is based on Gray's (1991) theory of personality. Gray claims that two underlying brain systems are responsible for much of the individual differences in personality. The behavioral activation system (BAS) is sensitive to signals of reward and nonpunishment and controls approach behavior. The behavioral inhibition system (BIS) is sensitive to signals of punishment and nonreward and is responsible for inhibiting behavior when there is the threat of punishment.

Based on Gray's (1991) theories, Lucas et al. (1998) suggested that extraverts are more sensitive to rewards and that this sensitivity manifests itself in the form of greater pleasant affect when exposed to rewarding stimuli. Higher positive affect then motivates individuals to approach rewarding stimuli. Because social situations tend to be more fun and rewarding than nonsocial situations, extraverts' elevated positive affect and sensitivity to rewards leads to increased social behavior. Thus, they conjecture that extraversion may actually result from individual differences in pleasant affect.

Larsen and his colleagues (Larsen & Ketelaar, 1991; Rusting & Larsen, 1997) tested the hypothesis that extraverts are characterized by a greater sensitivity to rewards by exposing introverts and extraverts to positive and negative mood induction procedures. The extraverts were more sensitive to the positive mood induction (i.e., extraverts had higher levels of positive emotions) than introverts, but there were no differences between groups for the negative mood induction. In a similar vein, Derryberry and Reed (1994) found that extraverts and introverts inhibited differential attention to positive stimuli, with no difference in attention to negative stimuli, whereas the converse was true for neurotic participants compared with low neurotic participants. Larsen and Ketelaar believed that extraverts' greater reward-sensitivity results in higher average levels of positive emotions because extraverts react more positively than introverts to the same daily stimuli and events.

Other researchers suggest that extraversion is related to positive affect through more indirect mechanisms (e.g., Argyle & Lu, 1990; Pavot, Diener, & Fujita, 1990). For example, both extraverts and introverts experience more positive affect in social situations than in nonsocial situations (Pavot et al., 1990). If extraverts spend more time in social situations, their greater happiness could be explained by the greater amount of time spent in positive, happy engagement with people. Pavot et al. found that extraverts were happier than introverts, however, even when alone. Moreover, Diener, Sandvik, Pavot, and Fujita (1992) found that extraverts were happier than introverts whether they lived alone or with others, worked in nonsocial jobs or in social jobs, or lived in rural or urban areas. Furthermore, Pavot et al. (1990) found in a time-sampling study that extraverts did not spend more time with others, although they were happier than introverts.

Others examined the hypothesis that extraverts are happier than introverts because of greater personality–environment fit (Diener et al., 1992; Diener, Larsen, & Emmons, 1984). According to this explanation, social involvement is required by the demands of society, and because extraverts are more comfortable and happy in social situations, extraverts are (on average) happier than intro-

verts. Although this hypothesis has received mixed support (e.g., Diener et al., 1984; Moskowitz & Cote, 1995), it cannot explain Pavot et al.'s finding that extraverts are happier in all types of situations. Argyle and Lu (1990) reported that about half of extraverts' greater happiness can be attributed to their participation in certain types of social activity. In sum, there are a number of models for why extraverts may experience more pleasant affect than introverts, but an intriguing possibility is the idea that the characteristics of extraverts are actually an outcome of higher levels of positive affect.

Extraversion and neuroticism are clearly not the only traits that relate to SWB. For example, Wilson concluded that self-esteem is related to SWB. People in Western societies use many and diverse cognitive strategies to maintain their self-esteem (e.g., Dunning, Leuenberger, & Sherman, 1995). The finding that self-esteem measures are strongly correlated with SWB is often replicated in Western samples (e.g., Lucas et al., 1996), but Diener and Diener (1995) provided evidence that the relation is not universal. In a cross-cultural investigation of the relation between self-esteem and life satisfaction, they found that the correlation between the two constructs is lower in collectivist cultures. Extending this finding, Kwan, Bond, and Singelis (1997) found a strong relation between self-esteem and life satisfaction in the United States but discovered that relationship harmony was also a strong predictor of life satisfaction in Hong Kong. Reporting high self-regard may not be an all-powerful predictor of SWB in cultures that value the group above the individual.

Another characteristic that Wilson mentioned as a correlate of happiness is optimism. Scheier and Carver (1985) developed a theory of dispositional optimism, in which one's characteristic thoughts about the future affect one's circumstances and therefore one's SWB. According to their theory, optimism represents a generalized tendency to expect favorable outcomes in one's life. If one expects positive outcomes, he or she will work for the goals that he or she has set, whereas, if one expects failures, he or she will disengage from the goals that have been set. This pattern of behavior leads to more successful achievement of goals by optimists than by pessimists. A related trait, expectancy for control, also correlates with SWB (Grob, Stetsenko, Sabatier, Botcheva, & Macek, in press). For example, Lachman and Weaver (1998) found that the effects of low income on well-being were moderated by control beliefs. It is difficult to disentangle, however, whether the cognitive processes associated with optimism and expectancy for control are the cause or the result of higher well-being. Early studies on Pollyannaism have shown that a number of positive feelings and thoughts often co-occur (Matlin & Gawron, 1979), and it is difficult to determine whether the cognitions cause the mood, or vice versa.

Taylor and Brown (1988) suggested that many people possess positive illusions that include unrealistically positive self-perceptions, views of the future that are overly optimistic, and overestimates of environmental control. These illusions seem to foster not only SWB but also other positive qualities such as caring for others and the ability to engage in productive work. Taylor and Armor (1996) found that positive illusions are correlated with successful adjustment to stressful circumstances, including extreme adversity. In the same view, Erez, Johnson, and Judge (1995) found that those with a positive disposition tended to use more self-deception, which in turn increased their SWB. Lightsey

(1994) found that among people with automatic positive cognitions, negative events have a weaker relation to depression. Seiditz and Diener (1993) found that happy people can remember more good events and that primary reason for this is that they initially encode more of the events from their lives in a positive way.

Once events are stored in memory, people who ruminate on the negative events are likely to have lower SWB. For instance, Nolen-Hoeksema, Parker, and Larson (1994) found that bereaved adults with a ruminative coping style were more depressed 6 months after widowhood, even when controlling for gender, initial depression, and social support. In fact, they found that the effects of social support were entirely mediated by rumination. Pierce et al. (1998) found that a predisposition to rumination predicted cognitive interference beyond the effects of neuroticism. An important task for future research is to explore how cognitive tendencies influence personality, and vice versa, and how the two interact to influence SWB.

*Personality  $\times$  Environment interactions.* The influences of traits on emotions are probably moderated by the environment in which the individual is immersed. Thus, the effects of personality may extend beyond straightforward main effects; personality may interact with situations and the environment to influence SWB. Research on the nature of these interactions is limited, and the research that does exist is hindered by inconsistent definitions and models of interactionism. Emmons, Diener, and Larsen (1986), for example, identified three models of interactionism that could be studied in the context of SWB research. They suggested that the inconsistent and imprecise use of the term *interaction* has led to confusion in the field.

The first type of interaction that Emmons et al. (1986) identified was a statistical or additive form of interaction in which the variance in the dependent variable is partitioned into variance accounted for by persons, situations, and their interactions. If one applies this type of interactionist thinking to the field of SWB, one derives models that are analogous to the diathesis-stress model of depression. Certain individuals may have a predisposition to react strongly to positive events, but greater happiness will only ensue if pleasant events occur. Happiness would require precise combinations of personality and environment. Larsen's (Larsen & Ketelaar, 1991; Rusting & Larsen, 1997) work on differential susceptibility to positive and negative mood induction procedures among extraverts and neurotics is an example of this type of interactionist model. Because extraverts react more strongly to pleasant stimuli than introverts, we may expect differential levels of happiness among extraverts and introverts only if sufficient pleasant conditions exist in the extraverts' environments. When exposed to neutral conditions, extraverts and introverts may have similar emotional experiences.

The statistical definition of interactionism (in which the product of personality and environment account for variance beyond their main effects) can be contrasted with more complex models of interactionism that Emmons et al. (1986) refer to as "reciprocal, dynamic, transactional, or organismic interactionism" (p. 851). Reciprocal interactions treat both personality and environment as simultaneous independent and dependent variables with bidirectional causality. In a series of studies designed to test this dynamic form of interactionism, Emmons and Diener (Diener, Larsen, & Emmons, 1984; Emmons et al., 1986; Emmons & Diener, 1986)

investigated whether individuals choose situations on the basis of their personality and whether congruence between personality and situation would lead to greater SWB. Although Diener et al. found some support for the idea that people choose situations on the basis of their personality, support for the congruence hypothesis was limited. People were not necessarily happier when in situations that were congruent with their personality. Emmons et al. and Emmons and Diener found greater support for the congruence hypothesis when they distinguished between chosen versus imposed situations: Participants experienced elevated pleasant affect when in personality-congruent situations that they had chosen but not in personality-congruent situations that were imposed. More recently, Moskowitz and Cote (1995) found that personality-situation congruence is less important in determining affect than the congruence between one's personality and the specific behavior in which one is engaged. Assertive individuals feel more positive affect when engaged in assertive behavior, not when they simply are in situations in which assertiveness can be displayed. Thus, features of the environment, one's behavior, and one's personality may mutually influence each other and SWB.

In line with this dynamic approach to personality-environment interactions, researchers have begun to examine the influence that personality has on situations that are likely to increase or decrease SWB. For example, Headey and Wearing (1989) and Magnus, Diener, Fujita, and Pavot (1993) used longitudinal designs to assess the influence of personality on the experience of life events. In both studies, extraversion and neuroticism predisposed individuals to experience positive and negative life events, respectively. These life events, in turn, had an influence on SWB that could not be explained by personality variables alone. Thus, personality can create situations that increase or decrease overall SWB. Although at this time there is only limited support for personality-environment interaction effects, future research must use more sophisticated methodology (including longitudinal designs and causal modeling) to advance our understanding of dynamic, reciprocal interactionism. Nevertheless, it appears that the influence of personality on SWB goes beyond dispositions to react in positive or negative ways to events. The effects of personality appear also to include behaviors that increase or decrease the probability of rewarding events.

**Variability.** Mean levels of SWB indicate how much SWB a person possesses on average. One can also examine variability in well-being over time by examining the standard deviation of a person's SWB or by examining cycles in well-being via spectral analysis. The amount of variability of a person's life satisfaction and affect is itself stable over time and correlates with other personality variables (Eid & Diener, in press-a). For instance, Eid and Diener (in press-a) found that the variability of affect correlates primarily with neuroticism.

The quality of happiness that different people experience is influenced by factors such as mood intensity (Larsen & Diener, 1987), emotionality (Eisenberg et al., 1995), and mood variability (Eid & Diener, in press-a). Two individuals may be equally happy on average, yet one may experience substantial mood swings, whereas the other may experience little variability in his or her moods. In addition, Oishi, Schimmack, and Diener (1998) found that people differentially value emotional experiences of varying levels of intensity, depending on their values and personality. Higher sensation seekers were more satisfied when they experi-

enced pleasure and high-arousal emotions, whereas low sensation seekers preferred lower-arousal affective states. Thus, emotional intensity may influence the type of emotions that are preferred and the variability in one's emotional life even if it does not influence one's mean level of happiness. In sum, people may experience a contented form of happiness or a relatively more aroused form of joy as their modal mood, and people vary in terms of which type of experience they most desire.

**Personality conclusions.** With a few caveats, we agree with Wilson's statement that the happy individual is one who is extraverted, optimistic, and worry-free (see also DeNeve & Cooper, 1998). Personality traits exhibit some of the strongest relations with SWB, and it appears that genes may be partly responsible for these relations. We are unsure how many additional personality traits are needed to provide a complete picture of the happy individual. Identifying which personality traits are related to SWB, the direction of causality, and the mechanisms responsible for these relations have emerged as important goals in personality and SWB research. Several conceptual models exist for explaining the relation of personality to SWB—ffective predispositions, rewarding behaviors, and person-environment fit—and there is some evidence to support each of these theoretical approaches.

### *Discrepancy Theories*

In 1985, Michalos advanced the *multiple discrepancy theory of satisfaction*, which borrowed from the ideas of the ancient Greeks, Wilson (1967), Campbell et al. (1976), and others. According to Michalos's theory, individuals compare themselves to multiple standards including other people, past conditions, aspirations and ideal levels of satisfaction, and needs or goals. Satisfaction judgments are then based on discrepancies between current conditions and these standards. A discrepancy that involves an upward comparison (i.e., where the comparison standard is higher) will result in decreased satisfaction, whereas a downward comparison will result in increased satisfaction.

**Social comparison.** Early models of social comparison emphasized contrast effects in explaining social comparison influences on SWB (see Diener & Fujita, 1997). The idea was that one should be happy if proximate others are worse off, and unhappy if proximate others are better off. In recent years, however, theories of social comparison have become more intricate, allowing for variation in the type of information that is used in comparison as well as the way that the information is used. In a recent definition of social comparison, Wood (1996) stated that social comparison is simply "the process of thinking about information about one or more other people in relation to the self" (p. 520). Three major processes involved in social comparison are (a) acquiring social information, (b) thinking about social information, and (c) reacting to social comparisons. The social information one acquires can come from proximate individuals, individuals that one reads about, or even imagined individuals (e.g., J. Wood, Taylor, & Lichtman, 1985). The process of thinking about social information includes observing similarities, differences, or both, between the other and the self. Finally, reactions to social comparison scan involve a variety of cognitive, affective, or behavioral responses and do not necessarily involve perceiving a contrast between oneself and others.

According to Wood's definition, the choice of a comparison



target is a flexible process and is not determined solely by the proximity or accessibility of relevant others. In fact, social comparison may be used as a coping strategy and can be influenced by personality or performance (Diener & Fujita, 1997). Gibbons, Benbow, and Gerrard (1994), for example, found that students who performed poorly on a test reduced the amount of social comparisons in which they engaged. Brown and Dutton (1995) stated that people "compare themselves with others when they think it will make them feel good, but shy away from comparing with others when they think it will make them feel bad" (p. 1292). In addition, Lyubomirsky and Ross (1997) found that happy people tended to use only downward comparisons, whereas unhappy people tended to compare upward as well as downward.

The second process implicated in J. V. Wood's (1996) definition of social comparison, thinking about social information, exhibits similar flexibility. McFarland and Miller (1994), for example, found that an individual's personality influenced the way he or she used social comparison information. Nondepressives and optimists tended to focus on the number of people who performed worse than they did, whereas depressives and pessimists focused on the number of people who performed better than they did (see also Ahrens, 1991; Wheeler & Miyake, 1992). Thus, happy people tended to be more positive as the number of comparison others grew, whereas unhappy people were less happy as the number of comparison others grew. Furthermore, the tendency to use downward or upward comparison may be a result and not a cause of increased SWB. This conclusion was supported by Diener and Fujita (1997), who found that although participants' resources (e.g., income and intelligence) were hardly correlated with each other, participants' ratings of how they compared to others on these resources were much more strongly related. This correlate disappeared when the participant's life satisfaction score was controlled, suggesting that perceptions of social comparison gaps may result from global top-down processes rather than from actual calculated comparisons.

Even when individuals use the same comparison target (i.e., all individuals use upward comparison or all individuals use downward comparison), they may not use this information in the same way. Buunk, Collins, Taylor, Van Yperen, and Dakof (1990) found that the directionality of a comparison does not affect SWB in a consistent manner. Indeed, both upward and downward comparisons have the potential for increasing or decreasing happiness. For example, if a cancer victim sees others with cancer who are worse off, she may receive a boost in well-being because she notes that her condition is not that bad. On the other hand, she may believe that her cancer could worsen as well, and this would decrease feelings of well-being (see also Pelham & Wachsmuth, 1995). In a similar manner, seeing a person who has overcome cancer may either give someone hope or it may cause envy. These effects may be inconsistent because most traits are ambiguous and can be redefined in a self-serving way (Dunning, Meyerowitz, & Holzberg, 1989).

It is clear that the effects of social comparison on SWB in natural settings are more subtle than originally believed. Fujita (1993), for example, examined the effects of one's objective standing and his or her roommate's standing on achievement, physical attractiveness, and social relationship dimensions. He then used these measures to assess the degree to which comparisons with proximate others influence satisfaction on these dimen-

sions. Neither the objective standing nor the perceived standing of the roommate negatively influenced satisfaction in any of these domains. Indeed, Fujita found that participants who had a popular roommate were themselves more satisfied with their social life.

The question is no longer whether or not social comparison can affect SWB. Laboratory studies demonstrate that, at least in the short-run, happiness and satisfaction scores can be affected by the standing of others (Diener & Fujita, 1997). The interesting questions now concern when and where social comparison produces which types of effects. The choice of comparison target, the use of upward or downward comparison, and the directionality of effects on SWB are flexible and, to some degree, dependent on personality. Thus, the influence of one's immediate social environment appears not to produce long-term effects on people's SWB through social comparison. Instead, we hypothesize that social information has its largest influence on SWB when it influences their goals, a topic covered in a subsequent section.

*Modest aspirations.* Wilson (1967) mentioned one specific discrepancy in his review of the happiness literature: He believed that high aspirations were a major threat to happiness. Many contemporary theories suggest that the discrepancy between one's aspirations and actual standing relates to SWB (e.g., Markus & Nurius, 1986; Michalos, 1985). The general theoretical idea is that high aspirations will lead to unhappiness because the person will be discouraged by the long gap between where he or she is and where they would like to be. However, either inappropriately high or low levels of aspiration can be detrimental to SWB, leading to anxiety (Emmons, 1992) or boredom (Csikszentmihalyi, 1990), respectively. Thus, Emmons and Diener (1985) found that aspiration level per se was not a good predictor of SWB among college students. It is probably not the absolute level of one's aspirations but whether they are set realistically and are congruent with one's personal resources that predicts SWB (Diener & Fujita, 1995).

Current theories suggest that the process of moving toward one's aspirations may be more important to well-being than the end-state of goal attainment (e.g., Carver, Lawrence, & Scheier, 1996; Csikszentmihalyi, 1990). Thus, people with high aspirations and low current outcomes may be satisfied as long as they are making adequate progress toward their goals. Furthermore, low aspirations might reflect a series of past failures and therefore may not predict positive levels of SWB. In addition, being overly obsessed with the final outcomes of one's aspiration is negatively related to well-being (McIntosh & Martin, 1992).

Kasser and Ryan (1993, 1996) found that the likelihood of achieving an aspiration is less important than the content of the aspiration in determining one's well-being. When respondents' beliefs about the likelihood that they would achieve their aspirations were measured, their estimated likelihood of attaining intrinsic aspirations (e.g., personal growth) was positively related to subjective well-being, but the likelihood of attaining extrinsic aspirations (e.g., fame or money) was negatively correlated with SWB. Thus, the relation between aspirations and SWB is more complex than envisioned by Wilson, and high aspirations alone do not guarantee unhappiness. Although aspiration level per se does not directly predict SWB, the related concept of goals has proven valuable in understanding SWB.

## Goals

According to what Diener (1984) called *telic* theories, individuals' behaviors can be best understood by examining goals: what people are typically trying to do in life (Austin & Vancouver, 1996) and how well they are succeeding at it. The types of goals one has, the structure of one's goals, the success with which one is able to attain one's goals, and the rate of progress toward one's goals can all potentially affect one's emotions and life satisfaction. The general conceptual model is that people react in positive ways when making progress toward goals and react negatively when they fail to achieve goals. Thus, a central idea is that goals serve as an important reference standard for the affect system.

Cantor and Sanderson (in press) emphasized the importance of having goals. Commitment to a set of goals provides a sense of personal agency and a sense of structure and meaning to daily life. Furthermore, commitment to goals may help individuals cope with various problems in daily life and hence maintain personal as well as social well-being in times of adversity. Cantor and Sanderson maintained that the types of goals that one chooses influence the effect of goals on SWB: "Well-being should be enhanced when individuals are able to pursue their distinct personal goals in ways that are intrinsically valued and autonomously chosen, approached at a feasible level, and facilitated in their daily life context" (manuscript p. 5). Thus, resources may facilitate well-being indirectly by allowing individuals to pursue and attain important goals.

Cantor's model provides important insight into the reasons why bottom-up situational factors have such a small influence on SWB in nomothetic research that examines well-being across individuals. Events, circumstances, and demographic factors may affect SWB primarily when they interfere with or facilitate progress toward goals, but because people have diverse goals and motives, different resources predict SWB for different people. Diener and Fujita (1995) tested this idea by measuring people's individual goals, their resources, and their SWB. Resources predicted SWB more strongly when they were relevant to a person's goals than when they were not. On the basis of Diener and Fujita's findings, we know that resources such as income or physical attractiveness contribute more to the SWB of individuals who have goals related to these resources. A related point was made by Brunstein (1993), who found that the effects of goal achievement on SWB were mediated by the degree of commitment to those goals. In a similar vein, Oishi, Diener, Suh, and Lucas (in press) found that students with achievement values felt better on days when they did well in school, and people with strong social values felt better on days when they had a more satisfying interpersonal life.

Because the ability to reach goals depends on the situational context, having certain goals may predict either well-being or ill-being, depending on the environmental circumstances. For example, Kasser (1996) found that for prisoners, placing importance on self-acceptance was related to greater depression, whereas being physically fit was related to feeling vigorous. On the other hand, there was a tendency for those with satisfying intimate relationships, perhaps with people outside of the prison, to have lower well-being in the prisoner sample. Thus, during incarceration, goals that usually predict SWB might be inversely related to it because the ability to attain these goals is so low. These findings are important in showing that the influence of people's motives and goals on SWB may depend on the environmental context.

Certain goal strivings may be more beneficial than other goal strivings only within contexts where those goal strivings are likely to be rewarded.

Another important finding is that not all goals are equal in terms of producing high SWB. Brunstein, Schultheiss, and Grassman (1998) found that only progress toward motive-congruent goals was related to SWB. Indeed, they found that commitment to motive-incongruent goals led to a decline in emotional well-being. The idea is that an individual has certain needs, which may or may not be consciously labeled, and that meeting these needs will lead to higher SWB. However, individuals may adopt goals that are not congruent with their needs, and success at these goals will not enhance SWB. In a similar vein, Kasser and Ryan (1993) found that those who rated financial success as more important than self-acceptance, community feeling, or affiliation goals reported lower well-being. They also found that SWB does not occur when people make progress toward certain goals such as making money. Kasser and Ryan explained these findings by theorizing that some success at certain goals meets intrinsic human needs, whereas other goals (e.g., wealth, beauty, and fame) are extrinsic and do not meet human needs. Thus, it appears that the influence of goals on SWB is more complex than simply achieving one's goals. The goals must be appropriate to the person's motives and needs before the connection occurs and must be appropriate in the context of the individual's life.

An important component of context is the culture in which the individual is immersed. As Cantor and Sanderson (in press) pointed out, commitment to goals is most conducive to happiness when those goals are valued by the culture or subculture to which the individual belongs. Culture influences the goals people select, and thus the sources of SWB.

One dimension of culture that has been particularly useful in identifying systematic differences in the processes underlying SWB constructs is individualism–collectivism (Triandis, 1989) or independent–interdependent concepts of the self (Markus & Kitayama, 1991). A defining feature of this dimension is the degree to which people view the self as an autonomous, self-sufficient entity. In individualist cultures, such as North America and Western Europe, individuals typically attempt to distinguish themselves from others. Consequently, feelings and emotions—phenomena that are considered unique to the individual who experiences them—weigh heavily as predictors of life satisfaction (Suh, Diener, Oishi, & Triandis, 1998). It is not surprising that feelings about the self (i.e., self-esteem), in particular, correlate highly with happiness in these cultures (Diener & Diener, 1995). In collectivist cultures, however, a central goal of the individual is not to distinguish herself or himself from others but to maintain harmony with them. One's personal desires often are subordinated to those of the group. Because of the lessened importance of the autonomous person, feelings, emotions, and other thoughts experienced by the individual are seen as less important determinants of behavior. Consequently, feelings about the self and emotions weigh less heavily in satisfaction judgments in members of collectivist cultures. A similar pattern of results was also found between Asian American and White college students in the United States (Suh, 1998).

Because people's goals are likely to differ substantially across cultures, what is important for happiness in one culture may be less important in another (Suh, in press). This does not mean that the

construct of happiness does not exist in these cultures; it simply means that certain aspects of life are weighted differently because people have somewhat different goals in different cultures. Certain goals, especially those related to basic biological needs such as hunger, are probably embraced across cultures and therefore should be influential determinants of happiness everywhere. Oishi, Diener, Lucas, and Suh (in press), for example, found that the fulfillment of basic biological needs is predictive of SWB across diverse cultures. Once basic biological needs are met, leisure is likely to become an important source of SWB. Leisure activities can be rewarding when intrinsically valuable pursuits allow people to use their skills and interact with friends and family (Argyle, 1987). However, reaction is varied and is usually more under people's control than is their work. Thus, the leisure activities that predict SWB are likely to vary across individuals and cultures. Oishi et al. found, for example, that satisfaction with travel was a more important predictor of SWB in wealthy than in poor societies. In sum, culture can have a profound effect on the causes of happiness by influencing the goals people pursue as well as the resources available to attain goals.

Simply having goals and having the resources to pursue those goals is not enough to guarantee happiness. Goals can act as standards or aspirations and according to this viewpoint, SWB is seen as a yardstick that measures an individual's proximity to those things for which he or she strives. Carver and Scheier (1998), for example, suggested that discrepancies between goals and the actual conditions in people's lives influence the amount of positive and negative affect they experience. Hsee and Abelson (1991) found that the rate of progress toward one's goals, rather than the attainment of goals per se, was responsible for differences in affect.

Yet the relation between goals and SWB is more complex than this yardstick metaphor suggests. Emmons (1986), for example, found that several specific characteristics of goals predict SWB, and the different characteristics influence positive affect, negative affect, and life satisfaction in different ways. Consistent with Carver and Scheier's (1998) formulation, Emmons reported that positive affect is associated with past fulfillment of goals, and negative affect is associated with low perceived probability of success in meeting future goals. Furthermore, Emmons found that happy people's aspirations are more coherently organized and congruent with each other than those of less happy people (Emmons & King, 1988; Sheldon & Kasser, 1995). The importance that one places on one's goals and the amount of effort required to achieve those goals are associated with positive affect. However, in a provocative set of studies, Pomerantz, Saxon, and Oishi (1998) reported that people with more goals that they consider very important have higher life satisfaction, self-esteem, and positive affect but also more symptoms of anxiety. This suggests that believing one's goals are important has rewards but can also increase stress because of the increased pressure to achieve those goals.

Emmons (1986) found that conflict among goals and ambivalence toward goals are associated with negative affect. Thus, King (1996) argued that an important aspect of self-regulation and adaptation is using processes to reduce conflict among one's goals. Thus, selecting compatible goals may be a critical aspect of achieving SWB.

Emmons (1986) found that simply having valued goals, inde-

pendent of past success, was associated with higher life satisfaction. Furthermore, happy people may select goals for which they have the appropriate resources (Diener & Fujita, 1995). That is, it is possible that goal attainment may result from high SWB as well as cause it. In contrast, certain goals are reflective of preexisting negative states and therefore are related to lower SWB. For example, Lapierre, Bouffard, and Bastin (1997) found that elderly people who had goals related to self-preservation had lower feelings of mastery, whereas those who had goals related to self-development felt more competent. In addition, it may be that the loss of a resource in an area related to one's goals is more aversive than the gain of that resource. This prediction of Kahneman and Tversky's (1984) prospect theory has been applied to everyday resources by Hobfoll, Lilly, and Jackson (1992).

The study of goals and their relation to SWB has provided an important contribution to theoretical conceptualizations of happiness. Nevertheless, there remain important questions about goals and SWB. For example, can motives influence SWB even if a person is unaware of them? Do social comparisons and comparisons with one's past have an indirect effect on SWB when they influence a person's goals? The goal approach provides a broad conceptual model for understanding many SWB findings, but many details of this approach have yet to be determined.

### *Adaptation and Coping*

The idea of adaptation or habituation to continuing conditions is a central component of modern theories of SWB. Evolution prepared us to make adjustments to external conditions. For example, our bodies make adaptations to help us adjust to cold, heat, too little water, and high altitudes. In a similar manner, we may adjust, at least to some degree, to both good and bad events so that we do not remain in a state of either elation or despair. Our emotion system reacts most strongly to new events and these reactions dampen over time. When well-being is considered, recent events usually have a greater impact than events that happened in the past (e.g., Headey & Wearing, 1989; Suh, Diener, & Fujita, 1996). In addition, people adapt to many events in a relatively short time—in less than three months for the events studied by Suh, Diener, and Fujita (1996).

Helson (1947) defined adaptation as the diminished responsiveness to repeated or continued stimuli. There is now evidence that adaptation to events is an important factor in understanding SWB (Loewenstein & Frederick, in press). Brickman, Coates, and Janoff-Bulman (1976) found that lottery winners were not significantly happier than a control group and that a group of individuals with spinal cord injuries were not as unhappy as might be expected. Silver (1982) found that quadriplegics and paraplegics adapted to their spinal cord injury during the ensuing 2 months after the injury. Although sadness and fear were the strongest emotions one week after the injury, positive affect predominated over negative affect by the 8th week. In a similar vein, Mehnert, Krauss, Nadler, and Boyd (1990) found that individuals who acquired disabilities later in life were less satisfied with life than those who acquired their disabilities at birth or in early life. Presumably, those who had the disability longer had more time to adapt. In a more rigorous test of adaptation, Krause and Sternberg (1997) used a time-sequential longitudinal design to separate the effects of age of injury, time period, and time since injury on the

well-being of persons with spinal cord injuries. They found that time since injury was a positive predictor of general satisfaction, controlling for the other factors. Research on incarceration and bereavement after the loss of a loved one also provide evidence for the effects of adaptation (see Loewenstein & Frederick, in press, for a review).

It is important to note, however, that considerable evidence exists that contradicts the "hedonic treadmill" theory that people completely and rapidly adapt to all circumstances. Adaptation to some events can occur slowly. For example, Stroebe, Stroebe, Abakoumkin, and Schut (1996) found that even after 2 years, people who were widowed showed higher average levels of depression than nonbereaved persons, although rates of depression did decline over this period. Furthermore, Vitaliano, Russo, Young, Becker, and Maiuro (1991) found that family caregivers of Alzheimer's patients showed deteriorating SWB over time. Diener, Diener, and Diener (1995) found that respondents in very poor nations such as India and Nigeria reported much lower SWB than people in wealthier nations even though poverty there has been endured for centuries. Finally, Loewenstein and Frederick (in press) reported that people adapt rapidly to some conditions (e.g., imprisonment and increases in income), slowly to other conditions (e.g., the death of a loved one), and little or not at all to other conditions (e.g., the pleasures of eating and the avoidance of noise). One other limitation of the hedonic treadmill idea is that we may have a *positivity offset* (Ito & Cacioppo, in press), or positive baseline, meaning that we adapt back to a positive point rather than to complete neutrality (Diener & Diener, 1996).

Past research raises important questions about the phenomenon of adaptation. For example, do people habituate to steadily worsening conditions or can they only adapt to single-occasion events such as winning a lottery or losing a limb? Does adaptation represent a decrease in the magnitude of emotional reaction, a recalibration of one's scale for hedonic experiences, or an adjustment in people's goals and their strategies of living? For example, losing a limb might be devastating because of its impact on one's daily life and long-term goals. Adaptation may occur, however, when individuals learn how to cope with the loss and adjust their goals accordingly. In this case, individuals are not responding less intensely to the same stimulus, as Helson's definition suggests; they are restructuring their thoughts about the stimulus and its effect on their lives. Do individuals who have greater ability at emotion regulation (Eisenberg et al., 1995) adapt more quickly to negative events? A complete theory of subjective well-being must explain the effects of the temporal context of events; when adaptations occurs, what processes are responsible for adaptation, and any limits to individuals' abilities to adapt.

Adaptation should be distinguished from coping, where the emphasis is on the active role of the participant rather than on an automatic passive biological process, as in habituation. Certain coping strategies are consistently related to higher SWB. For example, Folkman (1997) found that spiritual beliefs, giving ordinary events a positive meaning, positive reappraisal, and problem-focused coping were all related to positive states in HIV caregivers. In a similar vein, McCrae and Costa (1986) found that certain coping behaviors were perceived as effective coping responses by respondents, for example, rational action, seeking help, drawing strength from adversity, and faith. They also found that those who used these forms of coping reported higher SWB, and

this relation persisted even when personality variables were controlled. For example, neurotic coping correlated inversely with life satisfaction (but not significantly with affect), and mature coping correlated with pleasant affect (but not significantly with life satisfaction or negative affect) after controlling for personality variables. Despite the descriptive findings, strong models of the processes underlying coping and how they mitigate distress are not yet available (Folkman, 1991). Perhaps one of the more compelling agendas for the psychology of SWB is to understand why people use certain methods of coping and why some are more effective than others. It is plausible that adaptation includes diverse processes, including attentional and emotion habituation, change in goal content or goal structure, and other cognitive coping strategies. Furthermore, it seems likely that the diverse processes included under the rubric of "adaptation" may have different effects on the various components of well-being and cause "adaptation" to occur in varying lengths of time.

### Summary

Early research on SWB was limited to cataloging the various resources and demographic factors that are correlated with subjective well-being. Although the most recent 30 years of research have increased our knowledge in this area, the most important contribution is in the understanding that these external, bottom-up factors often are responsible for only a small part of the variance in SWB. One's temperament and cognitions, goals, culture, and adaptation coping efforts moderate the influence of life circumstances and events on SWB. Theoretical models have been developed in each of these areas to explain how internal factors within the person moderate and mediate the impact of the environment on people's SWB. A major goal for the future is to clarify the interrelations among these factors. For example, how does personality affect one's tendency to adapt to negative events? Does adaptation exist primarily because of changes in goals?

### Wilson's Conclusions Reexamined

In considering Wilson's (1967) conclusions about who is happy, one must first recognize that the studies on which he based his judgments were really about who is *most* happy. In fact, the majority of people avow positive levels of happiness (e.g., Diener & Diener, 1996; Headey & Wearing, 1988; Matlin & Stang, 1978). Most individuals report that their well-being varies between slightly satisfied and very satisfied, and between slightly happy and very happy. Folkman (1997) found that even in the extremely distressing circumstances of caring for and losing a partner with AIDS, caregivers felt more positive than negative affect most of the time. Thus, there is a truncated range in SWB that some have conjectured might be of genetic origin (Diener & Diener, 1996; Lykken & Tellegen, 1996). What causes the variations in SWB between people who score at varying places in the positive range may differ considerably from what causes a few people to experience depression and other severe negative states.

In the following sections, we assess Wilson's conclusions that happy people are young, healthy, well-educated, well-paid, religious, married persons, with high job morale, of either sex, and of any level of intelligence.

## Health

Wilson concluded that health is strongly correlated with SWB. This association, however, holds only for self-reported health measures (e.g., George & Landerman, 1984; Larson, 1978; Okun, Stock, Haring, & Witter, 1984). The correlation weakens considerably when objective health ratings by physicians are examined (e.g., Watten, Vassend, Myhrer, & Syversen, 1997). Okun and George (1984), for example, examined eight correlations between physician-rated health and SWB and only one reached statistical significance. A longitudinal study by Brief, Butcher, George, and Link (1993) also failed to find a direct effect of objective health (as indexed, for example, by doctor visits and hospitalization) on global life satisfaction. Instead, life satisfaction was predicted by subjectively interpreted health, which was influenced by both negative affect and objective health. Furthermore, one's perceptions of health are influenced by personality; Larsen (1992) found that neurotics retrospectively recalled more gastrointestinal and respiratory symptoms than they had previously reported on a daily basis. Self-rated health measures reflect not only one's actual physical condition but also one's level of emotional adjustment (Hooker & Siegler, 1992; Watson & Pennebaker, 1989), and the relation between self-rated health and SWB is inflated by this emotional component. Thus, perceptions of health rather appear to be more important than objective health in their effects on SWB.

When respondents are asked to judge the importance of various domains of their lives, "good health" obtains the highest rating (Campbell et al., 1976). How is it possible, then, that the global life satisfaction of severely ill patients (e.g., cancer victims) and non-patients differ only slightly (e.g., Breetvelt & Van Dam, 1991)? One reason is that people appear to be remarkably effective in coping, using cognitive strategies such as downward comparison (J. Wood et al., 1985) that induce a positive image of their health condition. If people can find a way to appraise their health positively, the adverse impact of illness or disability on life satisfaction can be mitigated. Furthermore, people in poor health downplay the importance of their health when evaluating their global life satisfaction. However, it is also possible that patients exaggerate their reports of well-being because of the pressures they feel to be optimistic for their caregiver's benefit.

Although adaptation has been one of the most popular explanations for the weak association between objective health status and SWB, adaptation in this domain is sometimes not complete. For example, although the spinal-cord-injured accident victims in Brickman et al.'s (1978) famous study did not appear "nearly as unhappy as might have been expected" (p. 921), their current happiness was significantly lower than the control group. Indeed, the accident victims scored one point lower than the control group on a 6-point scale even though their injury was some distance in the past. In a similar vein, a number of recent studies show that people with severe physical ailments may fail to return to their initial levels of SWB. For instance, Verbrugge, Reoma, and Gruber-Baldini (1994) traced the functional changes of patients with one or more symptoms of serious chronic morbidity (e.g., pulmonary disease, congestive heart failure) from hospital admission to 1 year post-discharge. Patients with one chronic problem showed pronounced improvement in SWB during this period, whereas patients with five or more physical problems worsened in many ways. Mehnert et al. (1990) found that 68% of individuals

reporting disabling conditions said they were somewhat or very satisfied with their lives, compared to 90% of a nondisabled comparison group. Again, those with multiple disabling conditions were less satisfied than those with a single condition. Thus, SWB in people with disabilities might be high, but it is often lower than the SWB of people without disabilities.

In sum, the impact of one's health depends on the individual's perception of the situation. When the disabling condition is severe or entails multiple or chronic problems, however, it may negatively influence SWB. When the condition is less severe, substantial adaptation is possible. It is unfortunate that we do not yet understand the psychological and physical factors that determine successful adaptation to illness and disability. Ill health may negatively influence SWB because it interferes with the attainment of important goals. Adaptation could occur by adjusting these goals. However, some health conditions may be so profound that they interfere with a wide variety of goals and therefore almost inevitably affect SWB. Frisch (in press) offers a review of how subjective measures of quality of life are essential in health care assessment.

## Income

Researchers examined the relation between income and SWB in four lines of research: (a) within-country correlations between income and SWB, (b) changes in SWB among individuals who experience increases or decreases in income, (c) trends in SWB during periods of national economic growth, and (d) between-country correlations of average SWB and national wealth.

*Within-nation correlations.* In studies of personal income, small but significant correlations are often found within countries (e.g., Veenhoven, 1994a). Haring, Stock, and Okun (1984) found an average correlation of .17 between income and well-being within countries. Diener, Sandvik, Seidlitz, and Diener (1993) found a correlation between income and SWB of .12 in a nationally representative sample in the United States, but Clark and Oswald (1994) did not find a statistically significant effect of income in a representative sample from Britain.

Even when extremely wealthy individuals are examined, the effects of income are small. Diener, Horwitz, and Emmons (1985) compared individuals with a net worth over 125 million U.S. dollars to randomly selected controls from the same geographical areas. Even though the very rich were, on average, somewhat happier than the mean of national samples, there was considerable overlap in the distributions of the wealthy and not wealthy groups. Thus, wealthier people are consistently found to be happier than poorer people, but the effects are small.

*Income change.* Within countries, increases in income are not inevitably associated with increases in well-being. Brickman et al. (1978) found that lottery winners were happier than controls but not significantly so. Although the statistical power of this study was quite low, other studies of income change support Brickman et al.'s conclusions. For example, Diener et al. (1993) found no differences in hedonic level between groups of people who had gone up or down at least one half of a standard deviation in income over a 10-year period. When income remains stable over an extended period of time, individuals may adapt to a particular level of wealth. If changes in income occur, SWB may temporarily increase or decrease, especially if the change in income results in

the inability to pursue one's goals or to meet one's basic needs. Adaptation theory suggests, however, that over time people will adapt to the new level of income.

It is surprising that the effects of income are not always positive, a fact that complicates our study of the income-SWB relation. Smith and Razzell (1975), for example, studied individuals who had won large sums of money in the British football pools. Thirty-nine percent described their lives as very happy, compared to just 19% of controls. However, there were also costs associated with the increased wealth. Many of the pool winners quit their jobs, resulting in lost relationships and decreased feelings of accomplishment. Furthermore, tension between friends and family can increase when the wealthier individual is expected to provide financial assistance. In a large naturalistic experiment in which randomly selected people received higher welfare incomes, Thoits and Hannan (1979) found that increased income often led to increased levels of distress. Thus, even positive changes in income may result in more stress, mitigating the positive effects of wealth on well-being.

*Income change at the national level.* Large-scale change in national economies also have consequences for mental health and SWB. Dooley and Catalano studied the relation between mental illness and economic recessions and found that economic contraction affects the rate of depression (Dooley, Catalano, & Wilson, 1994) but does not seem to affect suicide rates (Dooley, Catalano, Rook, & Serxner, 1989). Similar effects are seen on the positive end of the well-being spectrum. Diener & Suh (1997) reported long-term trends in SWB from 1946 to 1990. Despite tremendous economic growth in France, Japan, and the United States during this period, there was no increase in mean reports of SWB. Figure 1 illustrates this point. Disposable income rose dramatically (even controlling for inflation and taxes), but levels of well-being re-

mained stable. Oswald (1997) found that there was virtually no increase in SWB in nine European nations during a period of rapid economic growth, and Diener and Oishi (in press) reported similar findings. Rather, growth may be accompanied by a concomitant rise in expectations regarding standards of living across all income groups. These data support the conclusion drawn from studies of personal income: Income changes are not necessarily reflected in SWB scores.

*Between-nation differences.* Contrary to Easterlin's (1974) early conclusions on this topic, the relation between wealth of a nation and average SWB is positive and strong. Gross National Product (GNP) per capita correlates approximately .50 with life satisfaction across 39 nations (Diener et al., 1993). Diener, Diener, and Diener (1995) replicated these results in a sample of 55 nations, using both GNP and purchasing power as indicators of national financial status. It is important to note, however, that wealthy nations differ from poorer nations in many ways and these differences may inflate the income-SWB correlations between nations. Rich countries tend to be more democratic and egalitarian than poorer nations. Thus, the relation between national wealth and SWB may be due, at least in part, to the indirect effects of other benefits received by individuals in wealthier nations rather than to the direct effect of wealth itself.

*Conclusions.* The data do not support a strong causal path from income to SWB, and more complex models are required to explain all of the results. Wealthy people are only *somewhat happier* than poor people in rich nations, whereas wealthy nations appear *much happier* than poor ones. Furthermore, changes in income do not always have the predicted effects. It appears that examination of expectations and goal concepts (material desires) is required to explain this complex pattern. Wealth may contribute to SWB by providing the means to meet certain basic needs such as

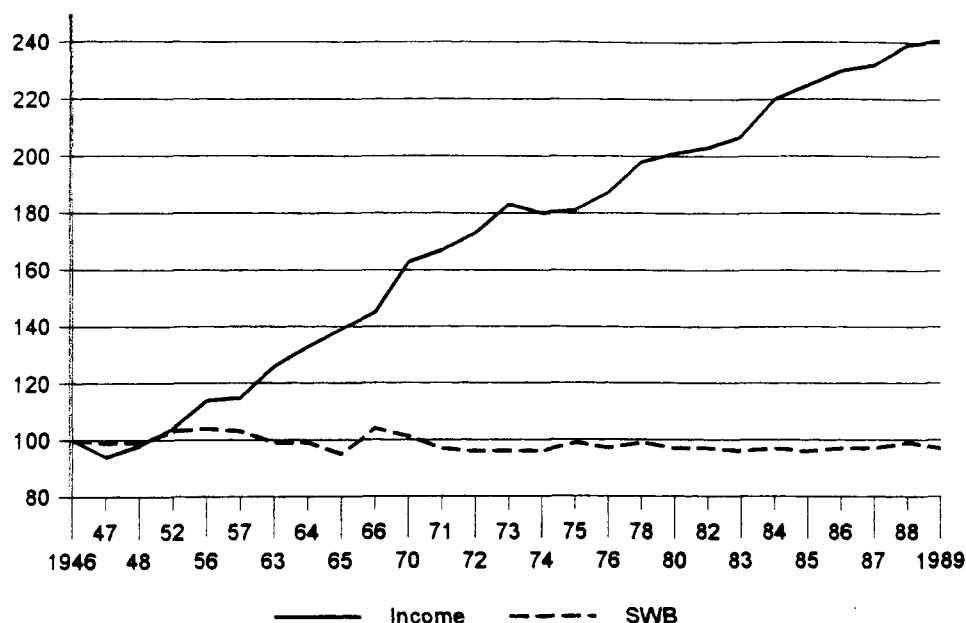


Figure 1. United States income and subjective well-being (SWB), 1946–1989. Income is percentage of after-tax disposable personal income in 1946 dollars (adjusted for inflation). Subjective well-being is reports of happiness as percentage values of the 1946 values.

food, shelter, clean water, and health care. Thus, poverty should affect SWB if it affects basic needs—a prediction confirmed by the greater importance of wealth in countries where basic needs are in danger of not being met. Once basic needs are met, however, the processes of adaptation may take over and then the findings become more complex.

A final issue in the study of income is whether materialistic goals themselves have a direct influence on SWB (Sirgy, 1998). People who value money more highly than other goals are less satisfied with their standard of living and with their lives (Richins & Dawson, 1992), and this association persists even when income is controlled (Crawford, 1998). Materialistic pursuits may be counterproductive insofar as they interfere with other prosocial and self-actualization goals (Scitovsky, 1976). It is unfortunate that researchers have not yet discovered why materialism is a negative predictor of SWB, although Kasser (in press) hypothesizes that it is because the extrinsic goal of money is not conducive to meeting inherent needs in economically advanced societies. Furthermore, researchers do not know the extent to which this relation generalizes to countries where basic needs are at stake.

### *Religion*

Marx described religion as the “opiate of the masses,” suggesting that it leads to greater feelings of well-being. However, in a recent review article, Gartner, Larson, and Allen (1991) concluded that the “preponderance of evidence suggests that religion is associated with mental health benefits” (p. 16), especially when religiosity is measured by actual religious behavior (e.g., church attendance) rather than by attitude scales. A number of large studies, often based on national samples, show that SWB correlates significantly (although the effect sizes are not large) with religious certainty (Ellison, 1991), strength of one’s relationship with the divine (Pollner, 1989), prayer experiences (Poloma & Pendleton, 1991), and devotional and participatory aspects of religiosity (Ellison, Gay, & Glass, 1989), even after controlling for demographic variable such as age, income, and marital status.

Religion may provide both psychological and social benefits. Religious experiences can provide a sense of meaning in daily life (Pollner, 1989) as well as during major life crises (e.g., D. N. McIntosh, Silver, & Wortman, 1993). As Durkheim (1915) noted, religion also serves social purposes by offering a collective identity and reliable social networks consisting of individuals who share similar attitudes and values (e.g., R. Taylor & Chatters, 1988). Indeed, the benefits of church membership are greater for people who have lost other forms of social support (e.g., retirees and widows), suggesting that the benefits of religion may result from increased social support (Moberg & Taves, 1965).

Ellison (1991) reported that religious variables account for approximately 5%–7% of life satisfaction variance, but only 2%–3% of the variance in affective well-being. Ellison suggests that the benefits of religion are mainly cognitive, providing an interpretive framework by which one can make sense of his or her experiences. In contrast, religion may do little to eliminate negative events or increase positive events in people’s lives and therefore may not affect emotional well-being. Religion may increase feelings of efficacy, control, and security and may therefore provide greater benefit for the cognitive aspects of SWB.

The psychological and social benefits of religion may vary

according to the needs of the individual. For instance, extrinsically oriented individuals who regard religion as a means for other nonreligious goals (Allport & Ross, 1967) may find the practical and social rewards to be more important than the existential meaning provided by religious beliefs. Thus far, there is little research on how various facets of religiosity interact with life circumstances to influence SWB. For example, is the effect of belief in an afterlife on SWB greater for those who are facing severe hardships? Strawbridge, Shema, Cohen, Roberts, and Kaplan (1998) reported evidence that religiosity buffers the effects of some stressors on depression, but exacerbates the effects of other stressors such as marital problems and abuse. This finding suggests that the effects of religiosity are not inevitably positive and points to the need for more sophisticated framing of psychological research in this area. As with any correlational study, the relation may be due to a third variable: Individuals in the midst of a family crisis may seek out religion and also be more troubled, and extraverted people may enjoy the social contact of church attendance and also report higher positive affect.

A number of important questions must be studied more systematically. For instance, do happier people tend to be more religious in a religious society because nonconformists who choose to be nonreligious in such surroundings have personality characteristics that predispose them to lower levels of SWB? A corollary idea is that religiosity might be most highly related to SWB in very religious societies. Do current research findings, based mostly on Christianity, generalize to other religions, such as Buddhism or Islam? Are there negative effects of religion on SWB? For example, religious doctrine may lead to frequent guilt in adherents. These questions point to the need for more rigorous methodologies, broader samples, greater precision in measuring types of religiosity, and measures that differentiate the major components of SWB. Finally, the causal direction of the relation should be explored by using longitudinal designs and by examining mediating variables.

### *Marriage*

The positive relation between marriage and SWB noted by Wilson (1967) has been consistently replicated in national and regional surveys conducted in the United States (e.g., Glenn, 1975; Gove & Shin, 1989), Canada (White, 1992), and Norway (Mastekaasa, 1995) as well as in international studies (Diener, Gohm, Suh, & Oishi, 1998). The large-scale surveys reveal that married people report greater happiness than those who were never married or are divorced, separated, or widowed. Among the nonmarried adults, however, people who cohabit with a partner are significantly happier in some cultures than those who live alone (Kurdek, 1991; Mastekaasa, 1995). Marriage and well-being correlate significantly even when variables such as age and income are controlled (Glenn & Weaver, 1979; Gove, Hughes, & Style, 1983). A meta-analysis by Haring-Hidore, Stock, Okun, and Witter (1985) found an average correlation of .14 between marital status and SWB.

The effects of marriage may differ for men and women (Mroczek & Kolarz, 1998). Differences between married and nonmarried men and women from 1972 to 1989 are shown in Figure 2 (based on Lee, Seccombe, & Shehan, 1991). Married women were consistently happier than unmarried women, and married men were



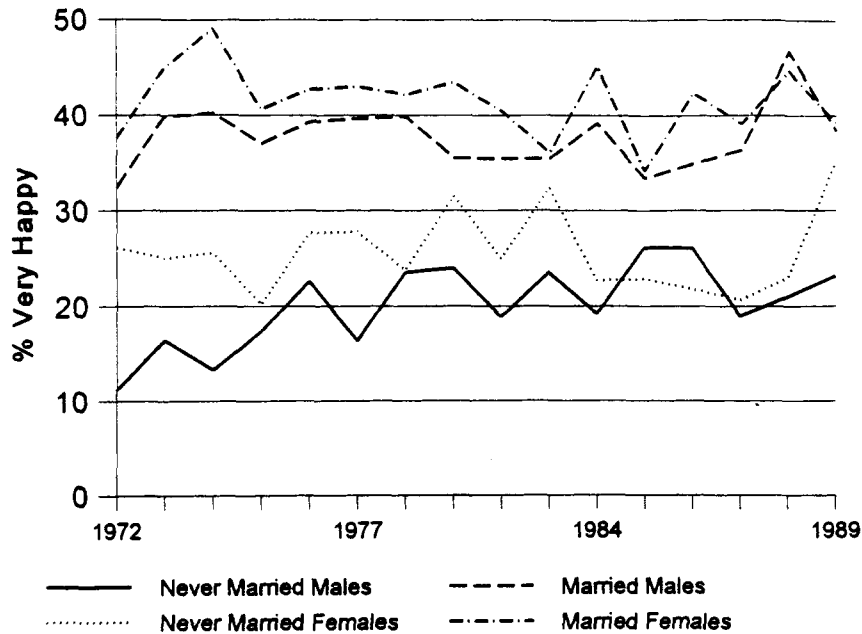


Figure 2. Subjective well-being of married and unmarried women and men, 1972–1989.

consistently happier than unmarried men. There is an ongoing debate, however, about whether marital satisfaction is more important to the overall well-being of men or women (e.g., Glenn, 1975; Gove & Shin, 1989; W. Wood, Rhodes, & Whelan, 1989). Diener et al. (1998) found that marriage holds greater benefits for men than for women in terms of positive emotions, but married men and women did not differ in life satisfaction. Horwitz, White, and Howell-White (1996) found gender-typical stress reactions to divorce and separation, with women showing more depression and men showing more alcohol abuse. Whether women or men react more negatively to divorce may depend on the particular sample and measure used.

The causal direction of the relation between marital status and SWB remains an issue. There is longitudinal evidence that happy and well-adjusted people are more likely to marry (and stay married) than other people (e.g., Mastekaasa, 1992, 1994; Veenhoven, 1989). However, the selection effect is not very strong. Hence, many investigators believe that the salutary effects of marriage, such as its role as a buffer against the hardships of life and the emotional and economic support it provides, generate positive states of well-being (e.g., Coombs, 1991; Gove, Style, & Hughes, 1990; Kessler & Essex, 1982).

In a longitudinal study, Headey, Veenhoven, and Wearing (1991) examined the bottom-up effects of various life domain satisfactions on global life. Among the six life domains they examined (e.g., job, health), only marital satisfaction had a significant causal influence on global life satisfaction. Both selection effects and the benefits of marriage probably underlie the relation between marriage and SWB (Mastekaasa, 1995). Happy people may have a better chance of getting married, and, once they commit themselves to the marital relationship, the psychological benefits of companionship can further boost SWB. Marital quality

is also a predictor of life satisfaction. Factors such as the structure of interactions (Gottman & Levenson, 1986), emotional expressiveness (King, 1993), and role sharing (Hendrix, 1997) are all related to more satisfying marriages.

It is important to note that factors such as social change, cultural characteristics, and age-specific expectations might affect the marriage–SWB link. Glenn and Weaver (1988) and Lee, Secombe, and Shehan (1991) found that the strength of the association between happiness and marriage has declined steadily in the United States since the 1970s. Kurdek (1991), however, challenged this conclusion as being too simplistic. After reanalyzing Glenn and Weaver's data, he argued that the happiness gap between the married and the never-married seemed to narrow because of the increase in the numbers of married individuals with multiple histories of divorce and of never-married people who cohabit with a partner (see also Mastekaasa, 1993, for evidence that the "marriage gap" is not narrowing).

Cultural characteristics can influence the relation between SWB and marital status. In a study of 40 nations, Diener et al. (1998) found that married people were happier than divorced, separated, or single people living alone, regardless of the divorce rate and level of individualism in a nation. However, the effects of (unmarried) cohabitation depended on cultural factors. Unmarried partners in individualist cultures were happier and more satisfied with their lives than married or single people. By contrast, in collectivist countries, people living with a significant other reported lower life satisfaction and more negative emotions than married or single individuals. Perhaps collectivist societies are more traditional and therefore less accepting of cohabitation outside of marriage. However, individuals who were separated or widowed fared relatively better compared to married individuals in collectivist cultures than



they did in individualistic cultures, presumably because social support is more readily available there.

The effects of divorce, marital conflict, and remarriage on offspring also depend on the cultural characteristics of the country (Gohm, Oishi, Darlington, & Diener, 1998). Gohm et al. found that parental marital conflict was a stronger predictor of offspring SWB than divorce per se but that the effects of remarriage and widowhood on the offspring differed by culture. Age-specific expectations also mediate the SWB-marriage correlation. For instance, being widowed when one is young is much worse than being widowed at an older age, suggesting that the effects of marriage on SWB depend on how typical one's situation is in one's age cohort (George, Okun, & Landerman, 1985).

Marriage can provide both economic and social rewards, yet the level of these benefits is likely to depend on the values of the society. In those age groups and cultures where people's needs can be met most easily within marriage, the effects are likely to be most positive. In a similar fashion, in individualistic cultures that place a high value on marriage, people who are divorced or widowed are likely to suffer compared to married individuals because marriage may be the primary source of intimacy and social support.

### Age

According to Wilson's (1967) review, youth is a consistent predictor of happiness. More recent review articles and large-scale empirical studies challenge this conclusion. Although a small decline in life satisfaction with age occasionally is found, the relation is eliminated when other variables such as income are controlled (e.g., Shmotkin, 1990). More important to note is that other recent studies converge to show that life satisfaction often increases, or at least does not drop, with age (Herzog & Rodgers, 1981; Horley & Lavery, 1995; Larson, 1978; Stock, Okun, Haring, & Witter, 1983). Many studies now support Campbell's (1981) contention that "the literary image of the crotchety old person, dissatisfied with everything, is not a very realistic picture of older people" (p. 203). The discrepancy of current findings from those reviewed by Wilson may be due to the fact that older people are now healthier and stay involved in more life domains than did previous generations (e.g., Bass, 1995).

International studies based on representative samples from multiple countries also show that life satisfaction does not decline with age (Butt & Beiser, 1987; Inglehart, 1990; Veenhoven, 1984). Diener and Suh (1998) recently examined the relation between age and SWB in a survey that included national probability samples of almost 60,000 adults from 40 nations. Of the three components measured (life satisfaction, pleasant affect, and unpleasant affect), only pleasant affect declined with age. There was a slight upward trend in life satisfaction from the 20s to the 80s, and the amount of negative affect people experienced exhibited little change across age cohorts. Thus, Wilson's (1967) conclusion that older people are less happy is supported only by trends in positive affect. As a consequence, when researchers examine affect balance (positive minus negative affect) across age groups, the drop in positive affect causes a lower overall mean score in the older cohorts (e.g., Shmotkin, 1990); hence, older adults appear to exhibit a decline in overall happiness or mood. Okma and Veenhoven (1996), for

example, found no decrease in life satisfaction across the adult life span, but a small decline in mood.

One limitation of these studies is that researchers primarily assessed aroused types of pleasant emotions such as "feeling on top of the world" and "energetic." Emotional intensity declines with age (Diener, Sandvik, & Larsen, 1985) so that both pleasant and unpleasant affect decline over the life span (Stacey & Gatz, 1991). Age declines in positive affect may disappear if low arousal or less intense feelings such as contentment and affection were measured. For example, Mroczek and Kolarz (1998) measured the frequency of less and more intense positive emotions in adults in the U.S., and found an upward trend with age. Thus, an important agenda for future research is to examine emotions of different arousal levels over the adult life span to examine the hypothesis that decreases in mood might be due to the sampling of high arousal emotions in past studies.

Cross-sectional studies are limited by their inability to separate age effects from cohort effects. Longitudinal studies are preferable when examining the impact of age on SWB. Costa et al. (1987) found that cross-sectional differences in positive affect were not replicated in a 10-year longitudinal study in the United States. Thus, aging may not be causally related to lower SWB. As an explanation of the lower SWB in older cohorts, Inglehart (1990) argued that as nations become industrialized, they endorse more "post-materialistic" values that are accompanied by higher levels of positive affect. Thus, younger people may be more likely to report higher levels of pleasant emotions because of the historical period in which they live. A definitive explanation of the decline in positive affect across age cohorts will be based on additional longitudinal studies that measure emotions with varying levels of arousal.

The lack of significant decreases in life satisfaction across the life span suggests an impressive ability of people to adapt to their conditions. Figure 3 shows mean levels of life satisfaction across the life span in 40 nations (Diener & Suh, 1998). The figure also shows the declines in income and marriage that occur across age cohorts in later adulthood. Although cross-sectional correlational studies reviewed earlier show positive correlations between SWB and both marriage and income, life satisfaction is stable across the age groups despite the decline in these objective resources. Some have suggested that this is evidence that people readjust their goals as they age (e.g., Campbell et al., 1976; Rapkin & Fischer, 1992). Ryff (1991) found that older adults, compared with younger ones, have a closer fit between their ideal and actual self-perceptions. Brandtstadter and Renner (1990) proposed that adversities in life can be overcome either by actively changing life circumstances to personal preferences (assimilative coping) or by adjusting personal preferences and goals to given situational constraints (accommodative coping). Although both types of coping strategies were positively related to life satisfaction, they found a gradual shift from the assimilative to the accommodative mode of coping with increasing age. This is also consistent with Campbell et al.'s conclusion that the gap between a person's circumstances and his or her goals shrinks with age. The trends shown in Figure 3 suggest that the link between objective conditions and SWB is mediated by expectations.

Wilson's pessimistic suggestion that there is a decline in SWB as people age can be revised. It appears that life satisfaction does not decline, negative affect does not increase, and that even the

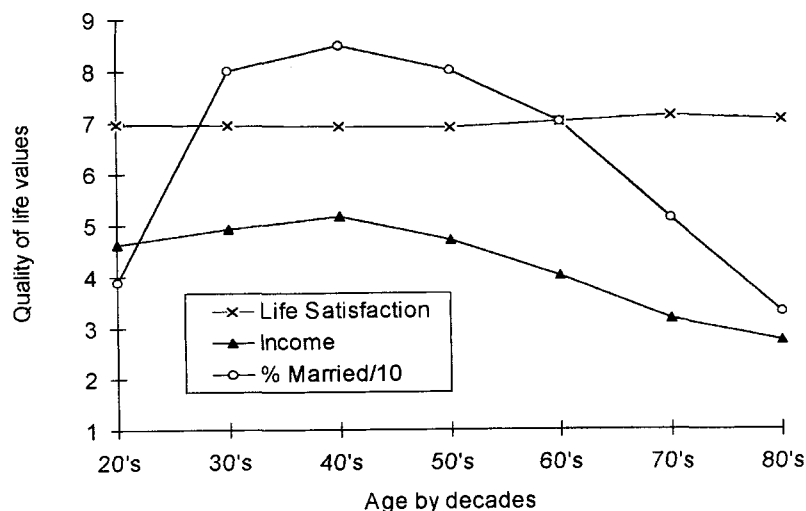


Figure 3. Subjective well-being and resources across the adult life span.

decline in pleasant emotions might be a cohort effect or due to the exclusive measurement of higher arousal positive emotions. Not only are older persons able to cope with the declines occurring in old age but these declines now occur later in adult life. The fact that the life span is now increasing raises a number of interesting issues about SWB that have not yet been addressed. For example, as the healthy life span increases toward its possible outer limit of approximately 130 years, might people become habituated to so many bad and good events that their emotional lives become bland? If present research on aging is able to extend the life span to 200 or 300 years, as some gerontologists now predict based on the increasing molecular understanding of genes and aging, might people grow bored with activities? The pursuit of happiness in a world of very long human life spans will face new challenges.

### Sex Differences

Wilson (1967) discusses only one study regarding sex differences in SWB: Gurin, Veroff, and Feld's (1960) survey in which no differences were found. In a recent meta-analysis, Haring, Stock, and Okun (1984) showed that men were slightly happier than women, but the magnitude of this difference was very small (mean  $r = .04$ ). In an analysis of two large international data sets, Lucas and Gohm (in press) found that women experienced more unpleasant affect than men in the majority of nations studied. In subsequent studies, however, significant gender differences in SWB have not been found. When differences are observed, women usually report higher SWB, but the differences often disappear when other demographic variables are controlled (e.g., Inglehart, 1990; Larson, 1978; Shmotkin, 1990; Warr & Payne, 1982; White, 1992).

The finding that men and women are approximately equal in global happiness is on the surface incompatible with the fact that, in the general population, depression is more prevalent in women than men (Eaton & Kessler, 1981), and reports of unpleasant affect are higher among women (Nolen-Hoeksema & Rusting, in press). One possible explanation of the paradox is that women experience,

on average, both positive and negative emotions more strongly and frequently than men. For example, W. Wood et al. (1989) found that women report higher levels of positive affect on average and more often report extremely high levels of SWB. In a similar vein, Lee, Seccombe, and Shehan (1991) found that women were more likely than men to report being very happy. Thus, in the general population, women's more intense positive emotions seem to balance their higher negative affect, resulting in levels of global SWB similar to those of men. Fujita, Diener, and Sandvik (1991), for instance, found that gender accounted for less than 1% of the variance in happiness but over 13% of the variance in the intensity of emotional experiences. Because women are more open to intense emotional experiences on average, Fujita et al. hypothesized that this may make them more vulnerable to depression if they encounter many bad or uncontrollable events. If their lives are good, however, women may be more likely to experience intense levels of happiness. Although intensely happy and intensely unhappy individuals are rare, women may be overrepresented in both groups.

Why do women have more extreme emotional lives than men? Nolen-Hoeksema and Rusting (in press) reviewed a number of potential explanations and concluded that the difference comes mainly from socially prescribed gender roles (also see W. Wood et al., 1989). The traditional female gender role includes greater caregiving responsibilities, which may encourage more emotional responsiveness in women than in men. As a result, women may be more willing to experience and express emotions. Grossman and Wood (1993) manipulated expectations for emotional responses to assess the impact of these expectancies on emotional behavior. When no gender-specific emotion norms were mentioned, women generated more extreme emotion ratings than men. When expectations for emotional responses were experimentally manipulated, however, no sex difference was obtained. Regardless of sex, participants indicated more extreme emotions when they were encouraged to be emotionally responsive than when their attention was directed so as to attenuate their emotional responses. Furthermore,

the participants' self-reports were significantly correlated with their electromyographically recorded facial emotional displays, suggesting that differences in emotions were not simply due to differences in self-report but represented broader affective reactions. Work by Robinson (Robinson & Johnson, 1997; Robinson, Johnson, & Shields, 1998), however, indicates that emotion stereotypes also influence the reporting of emotions and that the size of sex differences in emotion depends on the form of measurement used.

### *Job Morale*

Tait, Padgett, and Baldwin (1989) conducted a meta-analysis of 34 studies and found an average correlation of .44 between job satisfaction and life satisfaction. Work may be related to SWB because it provides an optimal level of stimulation that people find pleasurable (Csikszentmihalyi, 1990; Scitovsky, 1976), positive social relationships, and a sense of identity and meaning. Tait et al. found that the relation between job satisfaction and life satisfaction has grown stronger for women in recent decades as their roles in society have changed and the careers available to them have expanded.

The characteristics of satisfying jobs have been researched extensively, and certain broad conclusions can be drawn. For example, person-organization fit often correlates with job satisfaction (e.g., Bretz & Judge, 1994), and intrinsic rewards and social benefits are also important predictors of satisfaction (Mottaz, 1985). The relation between number of hours worked and SWB is complex and depends on a number of moderating factors such as job complexity, whether extra hours are voluntary, and work-home conflict (e.g., Gechman & Wiener, 1975). As in general SWB, job morale can be broken down into components such as mood at work and job satisfaction (George & Brief, 1992). Following this reasoning, in affective events theory, Weiss and Cropanzano (1996) predict that there are different outcomes of job satisfaction (e.g., low job withdrawal) versus affective reactions to work (e.g., organizational citizenship behaviors). This theory points toward the importance of discriminating between different components of SWB.

Because the work and life satisfaction findings are correlational, they do not tell us about the causal direction of the relation between SWB and job satisfaction. In addition, work satisfaction ratings are undoubtedly influenced by third variables that also influence life satisfaction. Recently, Judge and his colleagues (Judge & Hulin, 1993; Judge & Watanabe, 1993) used structural equation modeling and cross-lagged designs to examine the directionality and third variable problems. In both cases, they found evidence for a reciprocal relation between job satisfaction and life satisfaction measured at the same point in time. However, when lagged correlations between latent traits were examined, life satisfaction was a significant predictor of job satisfaction 5 years later. The relation between job satisfaction and life satisfaction 5 years later was not significant. Thus, it appears that the relation between job satisfaction and life satisfaction may reflect a top-down process: People who are satisfied with their lives tend to find more satisfaction in their work (Stones & Kozma, 1986).

Perhaps more important than a person's satisfaction with work is whether he or she has a job at all. Unemployed persons have higher distress, lower life satisfaction, and higher rates of suicide

than employed individuals (Oswald, 1997; Platt & Kreitman, 1985). Substantial negative effects of unemployment have been shown among disabled individuals (Mehnert et al., 1990) and participants in the British Household Panel Survey (Clark & Oswald, 1994). A meta-analysis by Haring, Okun, and Stock (1984) found that work status (full-time, part-time, or not employed) was related to SWB at a low but significant level.

The loss of income associated with unemployment cannot account for the effects on SWB (Clark, 1998; Oswald, 1997). Furthermore, unemployment appears to have a causal effect on SWB. After studying a multiyear panel survey, Clark (1998) concluded that unemployment typically causes lower SWB, and it is not simply the case that a greater proportion of less happy people are selected into the ranks of the unemployed. Banks and Jackson (1982) also used a longitudinal design to study the causal ordering of unemployment and SWB. They found that students' unhappiness preceded unemployment but that employment increased happiness. Thus, the influence between unemployment and SWB went in both directions, although the influence was larger for employment on mental health than for mental health on employment. It is interesting that Clark (1998) found that the negative effects of unemployment were buffered by having another person in the same household who was also unemployed.

### *Education*

Small but significant correlations between education and SWB have often been found (e.g., Campbell et al., 1976; Cantril, 1965; Diener et al., 1993). In a meta-analysis of the literature, Witter, Okun, Stock, and Haring (1984) reported a median effect size of .13. This effect size did not differ significantly for measures of life satisfaction (.15), morale (.15), quality of life (.12), or happiness (.12). Education is more highly related to well-being for individuals with lower incomes (Campbell, 1981; Diener et al., 1993) and in poor countries (Veenhoven, 1994a).

At least part of the relation between education and SWB is probably due to the covariation of education with income and occupational status (Campbell, 1981; Witter et al., 1984). That education may be only indirectly related to well-being is supported by studies showing that the small relation between education and SWB in the United States becomes nonsignificant or even negative when the effects of income are controlled (Campbell et al., 1976; Diener et al., 1993). Similar findings are obtained when occupational status is considered. When Witter et al. (1984) controlled for occupational status in their meta-analysis, they found that the average effect size dropped from .13 to .06. Thus, much of the relation between education and SWB is due to the correlation of education with occupational status and income.

It is plausible that education may have other indirect effects on SWB as well. Education may contribute to SWB by allowing individuals to make progress toward their goals or to adapt to changes in the world around them. On the other hand, education may raise aspirations. Clark and Oswald (1994) found that the highly educated were more distressed than less educated persons when these groups were unemployed. Being out of work may be more aversive to the former group because of their higher expectations. Thus, education may interfere with SWB if it leads to expectations that cannot be met.

## Intelligence

Wilson (1967) concluded that intelligence is not appreciably related to happiness, except when it is low enough to prevent economic success. In contrast, Campbell et al. (1976) found that intelligence was one of the strongest predictors of well-being. However, their measure of intelligence was based on interviewers' subjective ratings. To provide a stronger test of the intelligence-SWB relation, Sigelman (1981) analyzed two separate General Social Surveys, using standard intelligence test scores instead of subjective ratings. In his study, the zero-order correlations between intelligence and life satisfaction and happiness were eliminated when demographic variables were controlled, although an inverse association with anomie persisted. More recently, Watten, Syversen, and Myhrer (1995) failed to find a relation between intelligence and well-being in a broad Norwegian army recruit sample.

As Wilson (1967) observed, intelligence per se probably does not have a direct impact on SWB. The relation between SWB with other types of intelligence such as social intelligence (Cantor & Kihlstrom, 1989) and emotional intelligence (Mayer & Salovey, 1993) is also worth investigating, although the concept of emotional intelligence is controversial (e.g., Davies, Stankov, & Roberts, 1998). It seems likely that the relation of intelligence to SWB will depend on the degree to which intelligent people excel in society and the degree to which intelligent people share higher expectations that counterbalance their advantages.

## Take-Home Message

### *Comments on Wilson's Conclusions*

Wilson's conclusions regarding the greater happiness of the married, religious, extraverted, optimistic person have stood the test of time and also appear to have some degree of cross-cultural generality. Researchers do not know, however, all of the limits of these findings—the conditions in which they do not hold. Other of Wilson's assertions, such as those regarding sex differences or the effects of self-esteem, must be qualified by the measures used or by the culture studied. Women do report approximately the same level of global happiness and life satisfaction as men, but at the same time they are more likely to report greater levels of both negative and positive affect. Self-esteem is a strong correlate of SWB primarily in individualistic societies. Wilson's conclusion about the elderly appears to be too pessimistic in light of recent data.

Wilson's inferences are important, in part because of the broad conclusions that have been reached in evaluating them. The past 30 years of research have shown that all of the demographic factors taken together do not account for much variance in SWB. This is partially due to the fact that the effects of demographic variables are probably mediated by psychological processes such as goals and coping abilities. For example, gender and age may influence goals and objective life circumstances, but there probably is no direct path from these variables to happiness. Furthermore, there are many different resources that are related to people's goals, and these resources are only modestly correlated with each other (Diener & Fujita, 1995). Therefore, any single resource is unlikely to have a strong effect when analyzed across people.

Caution is warranted in interpreting the correlations between domain satisfaction and global SWB because satisfaction with

even neutral everyday objects may correlate substantially with life satisfaction (Judge, 1990) because of the influence of personality on these judgments. Judge's findings show the absurdity of inferring causality from these correlations because nobody would claim that a neutral object such as a piece of standard paper causes happiness, and yet judgments about such neutral everyday objects often correlate with global reports of SWB. Thus, investigators must be careful not to infer the importance of a domain from a correlation of subjective judgments of that domain with global SWB.

## *The Causes of SWB*

As has often happened in psychology, partisan groups have emphasized either genes or the environment in explaining differences in SWB. In contrast to demographic variables, temperament often exerts a substantial influence on SWB. Several lines of evidence indicate that the influence of personality on SWB can be substantial: twin studies, early temperament findings, longitudinal studies, and correlations with personality scales that are corrected for measurement error all provide evidence for the SWB-personality relation. The amount of variance in long-term SWB attributable to a person's genetic make-up is often moderately high. It is a serious error, however, to conclude that SWB results entirely from a person's temperament. Such a conclusion ignores evidence such as the finding that young widows are much less happy than others, that there are some nations in which people are less happy, and that people do not completely adapt to physical disabilities. Based on people's ability to cope and adapt and the effects of genetics on SWB, there is a danger of believing that nothing can really make a person happy or unhappy except for inborn temperament. However, an impoverished young widow without confidants and with multiple physical disabilities who lives near a noisy airport is much less likely to be satisfied with her life than the average person. In contrast, a woman with a substantial income and a satisfying marriage who is healthy and conforms to the religious beliefs of her culture is very likely to be satisfied with her life. Even if life circumstances do not lead automatically to elation or despair, they can and do influence SWB. Heritability studies tell us how important on average the environment is in determining long-term happiness in modern nations but not about how strong environmental effects can be in extreme cases.

In contrast to the environmental focus of early demographic research on SWB and the genetic emphasis of heritability researchers, scholars are studying how behavior influences SWB. An increasing number of researchers now focus on people's goals and strivings and how people cope with difficulties. It is likely that researchers who use these approaches will make the most progress if they incorporate concepts related to people's dispositions and circumstances. The genetic, situational, goal, and coping approaches are complementary rather than incompatible, and they need to be integrated.

There is not a simple answer to what causes SWB. Studies of religion, coping, rumination, and attributions suggest that cognitive factors play an important role. Studies of people with disabilities show that objective factors can matter, but people often adapt their goals to what is possible for them. Studies of heritability demonstrate that personality plays an important role. Cross-cultural studies reveal that different factors correlate with SWB in

different societies. Different variables lead to SWB for people with different values and different goals. Researchers should be open to the possibility that different strategies work better in different environments and for different people. Thus, it is pointless to search for a single cause of happiness. Instead, they need to understand the complex interplay of culture, personality, cognitions, goals and resources, and the objective environment.

### Future Research

The field of SWB needs to grow in several directions as it enters the fourth decade after Wilson's seminal review. First, more sophisticated measurement is needed (e.g., based on experience sampling, psychophysiology, and memory), recognizing the multifaceted nature of emotions and SWB. In the early decades of the field, researchers validated the measures of SWB, and it appears that the scales have adequate psychometric properties. At the same time, few researchers have taken the next step of incorporating non-self-report measures into their assessment batteries. This is very desirable because the alternative measures are complementary in strengths to self-report and because they often reflect different aspects of well-being. Virtually all of the findings reported in this review are based on simple one-time self-reports of SWB. Administration of the self-report measures is relatively easy and use of the non-self-report measures is more difficult, and so researchers rely too heavily on survey instruments.

Although researchers sometimes argue that self-report is the only way to measure SWB because it is an internal, subjective phenomenon, there is no reason why other types of measures cannot also be used to tap subjective phenomena. Why should biological indexes, facial expressions, experience sampling, and cognitive measures (e.g., reaction time) not also provide valuable assessments of subjective experience? When other types of measures converge with self-report scales, more confidence will be placed in the conclusions. When the non-self-report measures diverge from the self-report scales, researchers will learn something interesting and more complex about SWB. In addition, we need to assure that the studies include separate measures of positive affect, negative affect, and life satisfaction and that they do not simply assess global happiness.

Second, sophisticated research designs beyond cross-sectional surveys should be used much more often: cross-cultural, longitudinal, causal modeling, experience sampling, and experimental approaches. Researchers have only rarely explored the causal status of variables that might influence SWB. Findings suggest that marriage, unemployment, heredity, and physical disability have a causal influence on levels of SWB. For income, researchers even have experimental data. Initial results suggest that job morale might follow from life satisfaction rather than cause it. For most variables, however, researchers still only have cross-sectional correlational data, which shed little light on questions of causal direction. A major task for researchers in the decade ahead should be to use longitudinal studies, causal modeling, experimentation, and quasi-experimentation to unravel the causal network leading to SWB. Rather than continue to use only cross-sectional surveys, which are easy to administer and score, the hope is that researchers will make the added effort to also use non-self-report designs, longitudinal data collection, and other more sophisticated methodologies.

Third, research is needed that examines the interaction of personality and environmental factors. Although there are many studies on the correlations of personality with SWB, and many more on the environmental correlates of happiness, researchers know next to nothing about the interactions of these two classes of variables. Researchers need to find out the role of personality in shaping people's life circumstances and how personality leads people to react differently to the same circumstances.

Finally, more sophisticated research is needed on adaptation to understand this powerful force: when it does and does not occur, its limits, and the processes underlying it. People in ill health, physically unattractive people (Diener, Wolsic, & Fujita, 1995), and victims of crime (Michalos & Zumbo, 1998) often show average levels of SWB, and this probably reflects people's ability to adapt to many conditions. What researchers need to understand is the processes that underlie adaptation and when these processes occur. For example, it may be that people work to change conditions if there is a desire and hope for change but that they alter their goals if change seems hopeless.

### Conclusion

Our prediction is that when a review of SWB is conducted 30 years from now, progress will have been even more rapid than it has been in the past three decades. Hopefully, in 2028 nobody can possibly claim that we know nothing more than the ancient Greeks about subjective well-being. Indeed, since Wilson's review, considerable progress has been made. Wilson believed the happy person to be well-paid, young, educated, religious, and married. We would emphasize that the happy person is blessed with a positive temperament, tends to look on the bright side of things, and does not ruminate excessively about bad events, and is living in an economically developed society, has social confidants, and possesses adequate resources for making progress toward valued goals. Because research in the area is progressing rapidly, however, we know that this description will be rewritten in the decades ahead.

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Received November 17, 1997  
Revision received October 6, 1998  
Accepted October 7, 1998 ■



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