Beyond Money

Toward an Economy of Well-Being

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SUMMARY—*Policy decisions at the organizational, corporate, and governmental levels should be more heavily influenced by issues related to well-being—people's evaluations and feelings about their lives. Domestic policy currently focuses heavily on economic outcomes, although economic indicators omit, and even mislead about, much of what society values. We show that economic indicators have many shortcomings, and that measures of well-being point to important conclusions that are not apparent from economic indicators alone. For example, although economic output has risen steeply over the past decades, there has been no rise in life satisfaction during this period, and there has been a substantial increase in depression and distrust. We argue that economic indicators were extremely important in the early stages of economic development, when the fulfillment of basic needs was the main issue. As societies grow wealthy, however, differences in well-being are less frequently due to income, and are more frequently due to factors such as social relationships and enjoyment at work.*

Important noneconomic predictors of the average levels of well-being of societies include social capital, democratic governance, and human rights. In the workplace, noneconomic factors influence work satisfaction and profitability. It is therefore important that organizations, as well as nations, monitor the well-being of workers, and take steps to improve it.

Assessing the well-being of individuals with mental disorders casts light on policy problems that do not emerge from economic indicators. Mental disorders cause widespread suffering, and their impact is growing, especially in relation to the influence of medical disorders, which is declining. Although many studies now show that the suffering due to mental disorders can be alleviated by treatment, a large proportion of persons with mental disorders go untreated. Thus, a policy imperative is to offer treatment to more people with mental disorders, and more assistance to their caregivers.

Supportive, positive social relationships are necessary for well-being. There are data suggesting that well-being leads to good social relationships and does not merely follow from them. In addition, experimental evidence indicates that people suffer when they are ostracized from groups or have poor relationships in groups. The fact that strong social relationships are critical to well-being has many policy implications. For instance, corporations should carefully consider relocating employees because doing so can sever friendships and therefore be detrimental to well-being.

Desirable outcomes, even economic ones, are often caused by well-being rather than the other way around. People high in well-being later earn higher incomes and perform better at work than people who report low well-being. Happy workers are better organizational citizens, meaning that they help other people at work in various ways. Furthermore, people high in well-being seem to have better social relationships than people low in well-being. For example, they are more likely to get married, stay married, and have rewarding marriages. Finally, well-being is related to health and longevity, although the pathways linking these variables are far from fully understood. Thus, well-being not only is valuable because it feels good, but also is valuable because it has beneficial consequences. This fact makes national and corporate monitoring of well-being imperative.

In order to facilitate the use of well-being outcomes in shaping policy, we propose creating a national well-being index that systematically assesses key well-being variables for representative samples of the population. Variables measured should include positive and negative emotions, engagement, purpose and meaning, optimism and trust, and the broad construct of life satisfaction. A major problem with using current findings on well-being to guide policy is that they derive from diverse and incommensurable measures of different concepts, in a haphazard mix of respondents. Thus, current findings provide an interesting sample of policy-related findings, but are not strong enough to serve as the basis of policy. Periodic, systematic assessment of well-being will offer policymakers a much stronger set of findings to use in making policy decisions.

Our thesis is that well-being should become a primary focus of policymakers, and that its rigorous measurement is a primary policy imperative. Well-being, which we define as peoples' positive evaluations of their lives, includes positive emotion, engagement, satisfaction, and meaning (Seligman, 2002). Although economics currently plays a central role in policy decisions because it is assumed that money increases well-being, we propose that well-being needs to be assessed more directly, because there are distressingly large, measurable slippages between economic indicators and well-being. In this

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report, we outline some of these and propose that well-being ought to be the ultimate goal around which economic, health, and social policies are built.

We also argue that current measurement of well-being is haphazard, with different studies assessing different concepts in different ways, and therefore that a more systematic approach to measurement is needed. We propose that a set of national indicators of well-being be adopted and review evidence showing that these indicators will reveal important information not contained in the economic indicators. Finally, we argue that national indicators of well-being are needed not only because well-being is an important outcome in itself, but also because well-being is so often a cause of other valued outcomes, such as worker productivity and rewarding relationships.

In reviewing the evidence for our propositions, we first describe research on the societal contributors to well-being. Although much more research is needed on the societal correlates of well-being, it is clear that rising income has yielded little additional benefit to well-being in prosperous nations, pointing to one limitation of economic indicators. We also review factors in the workplace that influence well-being at work, and show that well-being on the job in turn predicts positive work behaviors and perhaps profitability. Finally, we review evidence showing that supportive social relationships are essential to well-being. Well-being, in turn, has positive effects on social relationships, as well as mental and physical health.[1] We begin our review by discussing the relation between economic indicators and well-being.

ECONOMIC INDICATORS VERSUS WELL-BEING

Economics now reigns unchallenged in the policy arena, as well as in media coverage of quality-of-life indicators. News magazines and daily newspapers have a section devoted to money, and the *Wall Street Journal* covers economic issues on a daily basis. Economists hold prominent positions in the capitals of the world. When politicians run for office, they speak at length about what they will do, or have done, for the economy. Television presents frequent reports about unemployment, the Dow Jones average, and the national debt. Rarely do the news media report on how depressed, engaged, or satisfied people are. In part, policy and media coverage stems from the fact that economic indicators are rigorous, widely available, and updated frequently, whereas few national measures of well-being exist.

Money, however, is a means to an end, and that end is well-being. But money is an inexact surrogate for well-being, and the more prosperous a society becomes, the more inexact a surrogate income becomes. The measurement of well-being has advanced sufficiently that it is time to grant a privileged place to people's well-being in policy debates, a place at least on a par with monetary concerns. After all, if economic and other policies are important because they will in the end increase well-being, why not assess well-being more directly? The main argument for using only a surrogate, such as money, is that well-being cannot be measured with the same exactitude as money. However, scientists now have good tools with which to index the well-being of societies with considerable precision. Therefore, it is possible to use measurable outcomes to create policies to enhance well-being. Media attention should spotlight how a society is progressing in terms of well-being, and politicians should base their campaigns on their plans for reducing distress, increasing life satisfaction and meaning, enhancing marital and leisure satisfaction, and optimizing engagement at work. Our proposed system of well-being indicators would not supplant economic or other current social indicators, but would supplement and enhance their value by placing them within an overarching framework of well-being, underscoring the shortcomings of economic indicators.

Modern economics grew as a handmaiden to the industrial revolution, and together they produced an explosion in the production of goods and services. Since the time of Adam Smith's *Wealth of Nations*, governments have taken an active role in steering economies, for example, by adopting monetary controls, employment and wage laws, trade tariffs, banking and investment laws, antitrust laws, and income taxes. In recent decades, governments have become increasingly involved in the economies of the developed nations, and virtually all nations now have systems for measuring national production and consumption.

In microeconomics (the study of economics at the level of individual areas of activity), the standard assumption is that, other things being equal, more choices mean a higher quality of life because people with choices can select courses of action that maximize their well-being (Kahneman, 2003; Schwartz, 2004; Varian, 1992). Because income correlates with number of choices, greater income is equivalent to higher well-being. This formulation is standard in economics, where income is seen as the essence of well-being, and therefore measures of income are seen as sufficient indices to capture well-being.

At the time of Adam Smith, a concern with economic issues was understandably primary. Meeting simple human needs for food, shelter, and clothing was not assured, and satisfying these needs moved in lockstep with better economics. However, subsequent industrial developments made these goods and services so widely available that in the 21st century, many economically developed nations, such as the United States, Japan, and Sweden, experience an abundance of goods and services (Easterbrook, 2003). Furthermore, although the industrial revolution led to an explosion of goods and services, it also included elements, such as rising aspirations, that to some degree canceled the benefits to well-being that come with economic growth (Easterlin, 1996).

Because goods and services are plentiful and because simple needs are largely satisfied in modern societies, people today have the luxury of refocusing their attention on the "good life"—a life that is enjoyable, meaningful, engaging, and fulfilling—and using economic and other policies in its service. Such a refocus is justified because there is evidence that as societies become wealthier, they often experience an increase in mental and social problems and a plateau in life satisfaction. People rank happiness and satisfaction ahead of money as a life goal (Diener & Oishi, in press). The purpose of the production of goods and services and of policies in areas such as education, health, the environment, and welfare is to increase well-being. Therefore, well-being is the common desired outcome, and it follows directly that society should measure this outcome to provide a common metric for evaluating policies. Although economic progress can enhance the quality of life even in industrialized nations, it no longer serves as a strong barometer of well-being because there are substantial discrepancies between economic indices and other measures.

Economic measures have seriously failed to provide a full account of quality of life. Later in this monograph (see A System of National

[1]For additional scholarly work that broadly covers findings on well-being, the reader is referred to Argyle (2001); Diener (1984); Diener and Suh (1999); Diener, Suh, Lucas, and Smith (1999); Frey and Stutzer (2002a); Kahneman, Diener, and Schwarz (1999); and Seligman (2002).

Indicators), we review some of the shortcomings of national economic accounts in capturing even the production and consumption of goods and services in nations. However, we want to emphasize here the divergence of economic indicators from indices of well-being. For example, over the past 50 years, income has climbed steadily in the United States, with the gross domestic product (GDP) per capita tripling, and yet life satisfaction has been virtually flat. As can be seen in Figure 1, since World War II there has been a dramatic divergence between real income (after taxes and inflation) and life satisfaction in the United States, and a similar pattern can be seen in the data from other nations, such as Japan.

Even more disparity shows up when ill-being measures are considered. For instance, depression rates have increased 10-fold over the same 50-year period, and rates of anxiety are also rising (Twenge, 2000). Indeed, Twenge reported that the average American child in the 1980s reported greater anxiety than the average child receiving psychiatric treatment in the 1950s. There is a decreasing level of social connectedness in society, as evidenced by declining levels of trust in other people and in governmental institutions (Putnam, 2001a). Because trust is an important predictor of societal stability and quality of life (Helliwell, 2003a), the decreases are of considerable concern.

We predict that psychology will play a central role in measuring national well-being. Both scientists and practitioners will be required to determine how to rigorously assess well-being and how to intervene to change it. Moreover, other behavioral sciences, such as sociology, anthropology, and neuroscience, will play important roles. Furthermore, economists will also be involved. They have recently turned their attention to understanding and monitoring well-being. Economists now examine surveys of happiness and life satisfaction to uncover the effects of factors such as unemployment, income equality, commuting, and smoking. Recent conferences on well-being have been attended as much by economists as by psychologists. The European Union nations now monitor psychological well-being with the Eurobarometer, and the German Socioeconomic Panel Survey provides policymakers with information on income, employment, life satisfaction, and related variables in a large sample of respondents that are being assessed repeatedly over time. Organizations such as the Pew Foundation assess well-being in nations around the globe, and the World Value Survey has assessed happiness and life satisfaction in about 70 nations.

Thus, the beginnings of worldwide monitoring of well-being are evident, and economists and sociologists have been heavily involved in this effort. Psychologists are in an ideal position to develop and improve relevant measures and to design interventions that would be maximally effective in increasing well-being.

THE UNSYSTEMATIC NATURE OF CURRENT FINDINGS AND MEASURES

In the next section, we review many policy-relevant findings that illustrate the divergence between economic indicators and well-being indicators. First, though, we want to discuss some of the shortcomings of the research. It is our contention that a much more systematic approach to the measurement of well-being is needed in order to provide leaders with the best possible well-being indicators. Current findings are based almost entirely on the work of individual researchers, who address their own questions, usually using relatively small, accidental samples of respondents. Furthermore, different investigators measure different concepts (e.g., happiness, stress, distress, life satisfaction, or depression), and it is rare for a broad range of concepts to be assessed in a single study.

In order to examine the number of studies that include multiple well-being concepts, we scanned a large database of publications in psychology journals, PsychLit. Our search found 94,650 publications

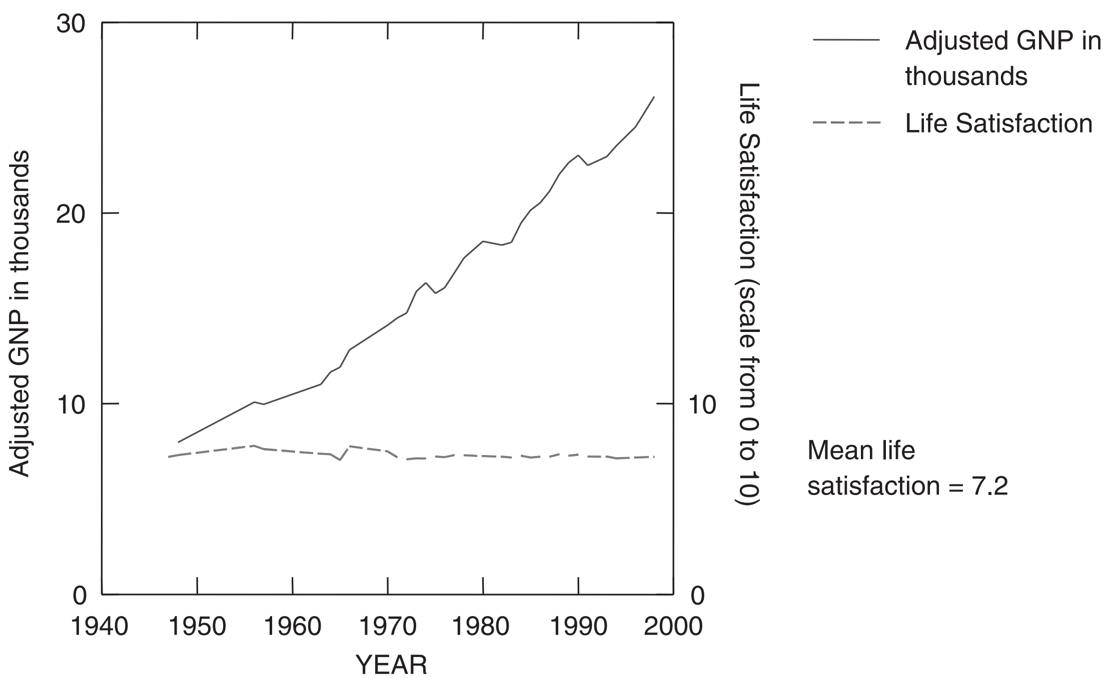

Fig. 1. U.S. gross national product (GNP) and mean life satisfaction from 1947 to 1998.

on "depression" and 4,757 on "life satisfaction" in January 2004, but only 701 of these mentioned both constructs. There were 2,158 publications that discussed "positive affect," but only 93 of these mentioned "life satisfaction." Of the 3,520 publications mentioning "negative affect," only 107 also mentioned "life satisfaction." Current researchers usually assess one or two well-being variables, but rarely measure the broad range of concepts that are relevant to well-being. Thus, it is very unusual for a study to include measures of diverse concepts such as pleasant emotions, life satisfaction, unpleasant emotions, and optimism, despite the fact that these constructs are separable and show different patterns (Lucas, Diener, & Suh, 1996). This shortcoming is readily apparent in the studies that we review in the next section.

In addition, many findings are based on respondents' answers to a single question, and such single-item measures can be unreliable and easily influenced by the testing situation. As we progress through our review, readers will notice that in one area of study we base our conclusions on measures of life satisfaction, in another area we draw conclusions from reports of stress, and in yet another area we review measures of positive emotions. It is not always clear how some of the measures map onto more widely used concepts. For example, how are reports of stress related to negative emotions? This is the nature of the current data—a haphazard mix of different measures of varying quality, usually taken from nonrepresentative samples of respondents. Rarely are data longitudinal, and few data sets are based on intensive experience-sampling measures. In the experience-sampling technique, people's moods and emotions are recorded "on-line" at random moments in everyday life, using a device such as a handheld computer. A similar method is to have people record their feelings and activities at the end of each day. Both methods have the advantage of reducing memory biases in reporting, and allow for the detailed recording of affect within specific situations.

There are excellent reviews of specific concepts such as stress (Cohen, Kessler, & Gordon, 1997), positive and negative affect (Watson, 2000), happiness (Argyle, 2001), and depression (Basco, Krebaum, & Rush, 1997), but these concepts have not been systematically explored in depth in relation to each other in order to determine which concepts are necessary in a combined battery for measuring well-being. The unsystematic nature of the existing data point to the importance of developing a set of national well-being indicators based on the best science and technology available.

Well-being includes pleasure, engagement, and meaning, and the concept of life satisfaction may reflect all of these (Seligman, 2002). The pleasant life is characterized by positive moods, positive emotions, and pleasures. Positive and negative emotions and moods give a person ongoing feedback about whether things are going well or poorly. Moods and emotions can change rapidly because they reflect current evaluations of events. Pleasant emotions signify to the individual that events and circumstances are desirable, and unpleasant emotions signify that they are undesirable (Ortony, Clore, & Collins, 1988). Engagement involves absorption and what is sometimes referred to as flow, focused attention on what one is doing (e.g., "being one with the music"). Boredom, the opposite of engagement, is a lack of interest combined with negative feelings. Meaning is a larger judgment of belonging to and serving something larger than the self. Finally, life satisfaction is a global judgment of well-being based on information the person believes is relevant. Well-being includes all of the evaluations, both cognitive and affective, that people make of their lives and components of their lives. Thus, a comprehensive assessment of well-being must include several separable concepts.

Development of a rigorous and systematic set of well-being indicators is crucial to our argument that economic indicators should be supplemented with well-being indicators because of the relative advantages and disadvantages of economic and well-being indicators. The main advantage of using money to assess the well-being of nations is that it is exact, that is, it has very high internal validity. The main disadvantage is the central substance of this report—money lacks external validity because it fails to track actual well-being in developed nations. In contrast, the main advantage of measuring well-being more directly is its external validity; that is, well-being itself is the true target of the indicators. But the main disadvantage of measuring well-being concerns the issue of internal validity; that is, whether well-being measures truly reflect the quality of life of societies.

Currently societal well-being is assessed by broad, global questions asking people, for example, how happy and satisfied they are, how satisfied they are with domains of life such as marriage and work, and how much they trust others. Near the end of this report, we make suggestions about the measures that should be included in a national well-being index in order to increase precision of measurement. We propose that a national index should employ the global questions now in use, but supplement them with questions targeted at specific aspects of well-being, such as engagement at work, stress due to commuting, levels of depression (among adolescents), and trust in neighbors. In addition, we propose that the indicator system include both a *panel component* (assessing the same group of individuals repeatedly over time) and an intensive experience-sampling component (assessing individuals on a daily basis for a week or 2; see Kahneman, Krueger, Schkade, Schwarz, & Stone, in press). Thus, we are proposing a national system that is much broader and deeper than the current surveys, which base their findings on just a few global items.

SELECTED FINDINGS WITH POLICY RELEVANCE

In order to convince readers that well-being measures have produced important findings with relevance for policy, we review research in six areas related to well-being: societal conditions, income, work, physical health, mental disorders, and social relationships. The findings reveal discrepancies between economic and well-being indicators, and point to conclusions with relevance to policy. Because we believe that social science should be descriptive and not prescriptive, in mentioning specific possible policies we do not mean to advocate them, but rather to give examples of the policies that might follow from the findings.

National and Political Factors Related to Well-Being

Nationwide patterns such as low divorce rates, high rates of membership in voluntary organizations, and high levels of trust are all substantially related to individual well-being. Political characteristics such as democratic institutions, governmental effectiveness, and stability also predict well-being. The wealth of nations substantially correlates with well-being, although there is little effect once income reaches a moderate level. Finally, religious belief appears to buffer people against stressors such as widowhood, unemployment, and low income. The causal direction between societal variables and national

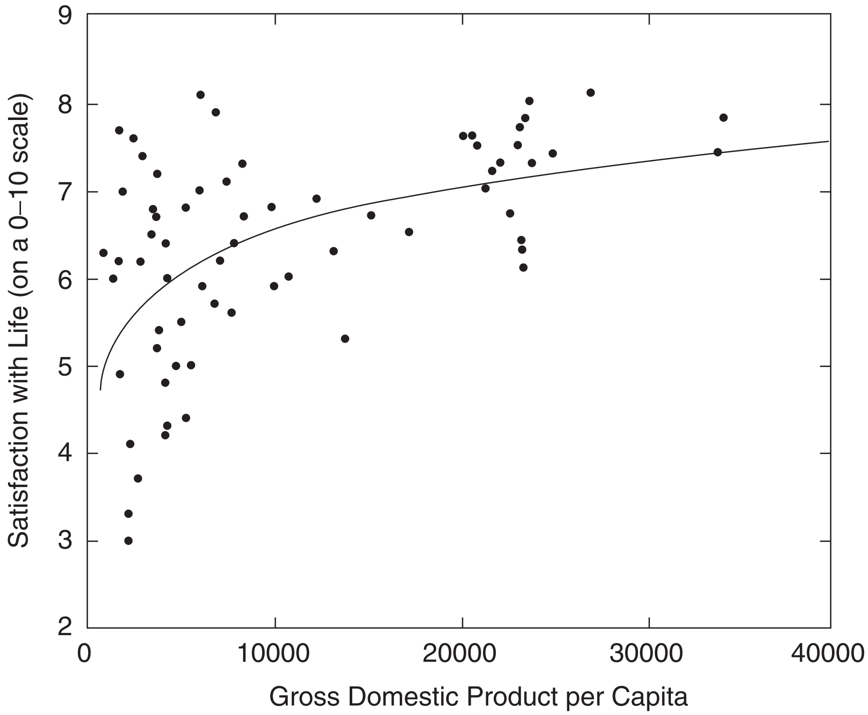

Fig. 2. Satisfaction with life as a function of gross domestic product per capita. Each circle represents the gross domestic product and life satisfaction in a nation. The curve shows a line that describes the relation between income and life satisfaction in these nations.

well-being is not fully understood, but policymakers would be remiss to ignore the findings until the time in the distant future when causal influences are fully confirmed.

The Wealth of Nations

Studies looking at the relation between average well-being and average per capita income across nations have found substantial correlations, ranging from about .50 to .70 (Diener & Biswas-Diener, 2002). The correlations indicate that wealthy nations are happier than less wealthy nations, although the correlations drop substantially when factors such as the quality of government are statistically controlled (Helliwell, 2003a).[2]

Diminishing Returns for Higher Income. Across nations, there are diminishing returns for increasing wealth above U.S. $10,000 per capita income (Frey & Stutzer, 2002a); above that level, there are virtually no increases (Helliwell, 2003a) or only small increases (Schyns, 2003) in well-being. Moreover, health, quality of government, and human rights all correlate with national wealth, and when these variables are statistically controlled, the effect of income on national well-being becomes nonsignificant. Helliwell (2003a), an economist, concluded that people with the highest well-being “are not those who live in the richest countries, but those who live where social and political institutions are effective, where mutual trust is high, and corruption is low” (p. 355). In Figure 2, we show levels of well-being (based on the World Value Survey) in countries of varying incomes. The pattern of the data is clear, and supports the conclusions of Frey and Stutzer: Above a moderate level of income, there are only small increases in well-being. Using the World Value Survey II, we computed the correlation between average life satisfaction and the GDP per capita of nations, restricting the analysis to nations with per capita GDP above U.S. $10,000. The correlation was only .08, confirming the small effect of further income once a moderate level of income is achieved.

National Income Change. What occurs when the income of an entire society rises? Examining 21 nations over time, Hagerty and Veenhoven (2003) found positive significant correlations between changes in income and well-being in 6, and no significant negative correlations. They concluded that the well-being in nations is rising over time, but that the effects of income on well-being are larger in poorer than in richer nations. However, other researchers have concluded that huge increases in income in wealthy nations, often a doubling or even tripling of real income, have often been accompanied by virtually no increases in well-being in these nations (Diener & Biswas-Diener, 2002; Easterbrook, 2003; Easterlin, 1995; Oswald, 1997).

Donovan and Halpern (2003) discussed the changes in well-being that have occurred in a number of nations, explaining that in some cases well-being has risen, in others it has fallen, and in still others it has zigzagged up and down. Most of these data came from wealthy nations, so it is arguable whether increasing incomes have caused any increases whatsoever in well-being in wealthy nations, in part because income has been rising in most nations and it is difficult to know whether the occasional, slow rises in well-being in wealthy nations are due to noneconomic factors such as increasing rights for women

[2]For reviews of this area, readers are referred to Diener and Biswas-Diener (2002), Diener and Oishi (2000), Frey and Stutzer (2003), and Furnham and Argyle (1998).

(Schyns, 1998) or increasing democracy (Barro, 1999). What is very clear is that rises in well-being have not been remotely commensurate with increasing wealth. Furthermore, Frey and Stutzer (2002b) reported that the same income in the United States, adjusted for inflation, bought more happiness in 1973 than in 1995. In other words, in rich nations more and more income has been required over time to remain at the same level of well-being.

As we have already noted, increases in income in wealthy societies have been accompanied by smaller (even nonexistent) rises in well-being than have accompanied income increases in poor nations (Hagerty & Veenhoven, 2003). This pattern is consistent with the decreasing marginal utility of money (i.e., the impact of an added dollar decreases as the total amount of money increases). In contrast, there was a strong trend for well-being to drop in the former Soviet bloc nations when communism was forsaken and incomes dropped precipitously (Inglehart & Klingemann, 2000; Schyns, 2003). Losing income may have a greater influence on well-being than gaining income does.

One reason that increasing income does not increase well-being is probably that rising income creates escalating material desires, so that as time passes, the same level of income that once seemed satisfactory results in frustration, and hence less well-being (Frey & Stutzer, 2002b; van Praag & Frijters, 1999). Stutzer (in press) showed that well-being depends to some degree on the gap between income and material aspirations. Graham and Pettinato (2002) found that in poor nations there are “frustrated achievers” who, despite rapid increases in income, become less happy because their aspirations grow even more quickly than their incomes. Unfortunately, there are no studies of whether increases in well-being that stem from noneconomic sources can serve to stimulate economic gains.

Other Economic Factors. Per capita wealth and income are not the only economic variables associated with well-being. For instance, Di Tella, MacCulloch, and Oswald (2001) found that inflation is a negative predictor of the well-being of nations; low inflation also predicts satisfaction with the governing party (Frey & Stutzer, 2002a). High unemployment predicts the ill-being of nations (Frey & Stutzer, 2002a).

Surprisingly, the level of welfare benefits in a nation does not seem to buffer the effects of unemployment on well-being (Ouweneel, 2002), and Veenhoven (2000) found that the level of social-security benefits in nations was not associated with well-being. Alesina, Di Tella, and MacCulloch (2000) reported that in Europe greater inequality of income is associated with lower well-being, but that in the United States only liberals are made less happy by inequality. Thus, the effects of societal characteristics depend to some extent on the ideological views of respondents.

Governance

In 1995 Diener, Diener, and Diener reported that human rights in nations correlated with average well-being. Unfortunately, income was also highly correlated with human rights, so that it was difficult to disentangle the influences from one another. Nations with democratic governments score high on individual well-being (Donovan & Halpern, 2003). Furthermore, Inglehart and Klingemann (2000) reported a very strong correlation of .78 between the extent of democracy in nations and their levels of well-being. In a comparison of Swiss cantons, Frey and Stutzer (2000, 2002a) found that those with greater direct democracy (e.g., more referenda and direct voting on initiatives) had higher well-being. They suggested that the benefits of democracy to happiness come from the political process itself, not just from the beneficial outcomes of democracy. Conversely, Inglehart and Klingemann argued that general well-being influences democratic governance, and that a sharp drop in well-being can undermine democratic institutions.

Effective and trustworthy governance also correlates with the well-being of nations, and these effects are over and above those of democracy (Helliwell, 2003b). When there is low corruption and effective rule of law, people report greater life satisfaction (Helliwell, 2003a). Freedom has also been found to have a substantial relation to the well-being of nations (Inglehart & Klingemann, 2000). Veenhoven (2000) found that economic freedom had a stronger effect on well-being in poor nations than in wealthy nations, whereas political freedom was more important in wealthier nations than in poor nations.

Welzel, Inglehart, and Klingemann (2003) argued that socioeconomic development, “emancipative cultural change” that increases personal freedoms, and democratization develop together in nations. These factors broaden human choice and control by increasing resources and providing legal rights to freedom of choice. These factors in turn are those that Diener, Diener, and Diener (1995) found predict the well-being of nations—income, human rights, and individualism. Although too many choices (Schwartz, 2004) can undermine well-being, it appears that human rights and democracy benefit well-being.

Stable political organization is needed for well-being, and might be even more crucial in the short run than democratic governance. When the former Soviet bloc nations, once stable dictatorships, became unstable democracies, their well-being dropped substantially (Helliwell, 2003a; Inglehart & Klingemann, 2000). Veenhoven (2002) indicated that in the 1990s, out of 68 societies, Russia, Georgia, Armenia, Ukraine, and Moldavia had the lowest enjoyment of life, from 3.0 to 4.2 on a scale from 1 to 10. This suggests that instability is a source of suffering. However, because the massive changes in the former Soviet bloc countries included faltering economies and large drops in real income, a change in the economic and political systems, and abandonment of a pervasive ideology, it is difficult to isolate the causes of their reduced well-being.

A mild decline in well-being occurred in Belgium from the 1970s to the 1990s, perhaps because of economic factors, but also possibly because the nation split into a federation (Inglehart & Klingemann, 2000). The lowest well-being value ever recorded, 1.6 on a 10-point scale of life satisfaction, occurred following the overthrow of the government of the Dominican Republic. Thus, instability in nations seems to result in lowered levels of well-being.

Social Capital

In *Bowling Alone*, Putnam (2001a) suggested that people prosper in neighborhoods and societies where social capital is high, that is, where people trust one another and are mutually helpful. Putnam reviewed evidence showing that communities with high rates of volunteer activity, club membership, church membership, and social entertaining (all thought to be indirect manifestations of social capital) all had higher well-being than communities that were low in these characteristics. Helliwell (2003a) reported that well-being is high and suicide rates are low where trust in others is high, and he also found that well-being is high where memberships in organizations outside of work are at high levels. Thus, there is evidence that individuals are more likely to experience high well-being when they live in nations with high social capital than when they live in nations with low social capital, a finding that dovetails with the results of studies on individuals' social interactions (reviewed later in this section).

Unfortunately, Putnam (2001a) found that social capital, for example, trust and membership in organizations, is declining in the United States. Twenge (2002) concluded that rising dysphoria in the United States is in part due to the breakdown of social connectedness. Thus, a factor that appears to enhance societal well-being appears to be declining at the same time that wealth is increasing.

Religion

Extensive data support the idea that religious people tend on average to experience greater well-being than nonreligious people (see Diener, Suh, Lucas, & Smith, 1999). For example, Ferriss (2002) reviewed evidence showing that life satisfaction is higher the more frequently people attend church and that people who have religious beliefs report more life satisfaction than people who say they are atheists, and Clark and Lelkes (2003) reported that having religious beliefs buffers individuals against stressors such as unemployment, low income, and widowhood. Recent evidence now points to the same relation between religion and well-being at the national level. Helliwell (2003b) found that across nations, a higher rate of belief in a god is associated with higher average life satisfaction and lower rate of suicide. In addition to belief, church attendance is associated with higher reports of well-being across nations (Clark & Lelkes, 2003; Helliwell, 2003a). A full discussion of the relation between religion and well-being is beyond the scope of this monograph, but the reader is referred to Baumeister (2002).

Conclusions and Cautions

As the evidence stands now, it appears that nations high in average well-being can be characterized as democracies with effective and stable governments, as well as societies that are high in social capital, are religious, and have strong economies with low rates of unemployment and inflation. The lowered well-being scores in the former Soviet bloc nations strongly suggest that political and economic instability can lead to sharp declines in well-being. Equality and welfare benefits appear not to have a universal positive impact when considered across nations with different ideologies. It is evident that wealth does not tell the whole story when it comes to the well-being of nations. Not only are other factors predictive of well-being, but they may surpass wealth in importance, especially for nations that have already achieved a moderate level of prosperity. Well-being reflects additional factors, such as stability and social capital, that are not entirely captured by economic indicators.

There are data suggesting that well-being in nations increases the likelihood of other beneficial outcomes. For instance, Inglehart and Klingemann (2000) suggested that well-being is a necessary precursor for democratic governance. Vázquez, Hernangómez, and Hervás (2004) found that the well-being of societies predicts their members' longevity, even after statistically controlling for national income and infant mortality. It is possible that the arrow of causality goes from well-being to longevity. However, it is also possible that this relation is due to other, unmeasured factors that influence both well-being and longevity. Much more research on how well-being affects societies is needed, but the limited findings to date suggest beneficial outcomes.

A number of cautions are warranted in interpreting the data on the relations between societal and political factors and well-being. Analyses of the well-being of nations are still sparse, and a number of methodological and conceptual questions remain. For example, data are available primarily from the wealthiest nations, and large areas of the world, such as Africa, are underrepresented. The validity of well-being measures has been demonstrated to some degree at the individual level, but the cross-cultural validity of the measures is largely untested, with a few exceptions (Diener, Suh, Smith, & Shao, 1995; Veenhoven, 1994). Furthermore, why factors such as religiosity affect the well-being of societies is not completely understood, and researchers do not know the conditions that may moderate such effects. It may be that having a coherent belief system that gives meaning to one's life, rather than organized religion per se, is responsible for the higher well-being of religious individuals. It will be important to discover which predictors of well-being might be universal, and which depend on the cultural context in which they occur. Most important, researchers need to determine which characteristics, such as democracy, follow from well-being rather than cause it.

In the next section, we turn to studies of individual income. They show that economic success falls short as a measure of well-being, in part because materialism can negatively influence well-being, and also because it is possible to be happy without living a life of luxury, as long as one's needs are met.

Money and Well-Being

Although high personal income is associated with well-being, the relation between these two variables is intricate. People who report that they are happy subsequently earn higher incomes than people who report that they are not happy, a finding that calls into question the direction of causality between income and well-being. To further complicate matters, as the richer nations have grown in wealth, sometimes dramatically, they have usually experienced only small increases in well-being. Respondents in materially poor societies at times have substantial levels of life satisfaction. Rising expectations and desires to some degree cancel the psychological benefits of greater income. Furthermore, there are negative outcomes related to money, such as the deleterious effects of materialism on happiness and the high stress levels felt by adolescents from rich families. The context in which income is experienced, including ideology and people's material desires and values, moderates its effects on well-being. Individuals may achieve higher happiness for themselves by earning higher incomes, when they move upward relative to their material desires and relative to others. However, as everyone's income rises in affluent societies, rising income does not seem to provide a well-being dividend. Thus, there is a clear divergence between economic and well-being indicators, which points to the need for a system of national well-being indicators to complement the economic indicators already in place.

Income Correlates Positively With Well-Being

Dozens of cross-sectional studies reveal that there is a positive correlation between individuals' incomes and their reports of well-being. However, Veenhoven (1991) found that the within-nation correlations between income and well-being are stronger in poorer than in wealthier societies, and this effect has been replicated by other researchers (Diener & Diener, 1995; Diener & Oishi, 2000; Schyns, 2003). For example, Diener, Sandvik, Seidlitz, and Diener (1993) reported the income and well-being correlation to be .13 in the United States, whereas Biswas-Diener and Diener (2001) found that this correlation was .45 in the slums of Calcutta. Similarly, Diener and Diener (1995) discovered a stronger relation between financial satisfaction and life satisfaction in poor than in wealthy countries. Furthermore, as one moves up the income scale in wealthy nations such as Switzerland (Frey & Stutzer, 2002a) and the United States (Diener et al., 1993), there are progressively smaller differences in well-being between successively higher income categories. Helliwell (2003a) found that because of the declining effect of income as one moves up the income ladder, significant variations in well-being occurred in the higher income brackets only in poor nations. In wealthier nations, increases in income were not matched by continuing increases in well-being.

Causal Direction

Researchers attempting to determine the causal influence of income on happiness have examined both lottery winners and participants in negative-income-tax experiments, as well as longitudinal data. (In the negative-income-tax experiments, the federal government supplemented the income of certain low-income people who were randomly assigned to have their income brought up to a certain level. Over time, these people and a control group were tracked for various outcomes.)

Although Brickman, Coates, and Janoff-Bulman (1978) found that a small number of lottery winners were not significantly happier than a matched comparison group, S. Smith and Razzell (1975) found that bettors who won large soccer betting pools in England were significantly more likely to report being very happy than the comparison group. In negative-income-tax studies in which some participants received higher welfare benefits than others, however, greater stress was associated with increased incomes (Thoits & Hannan, 1979). This finding dovetails with one of Smith and Razzell's, because they found that although lottery winners were on average higher in well-being than nonwinners, winners described certain stressors in their lives that resulted from their increased wealth. Thus, the lottery and negative-income-tax studies, which approximate true experiments, present a mixed picture on whether increases in income increase well-being.

If income influences well-being, one would expect that in longitudinal studies, income changes would be followed by changes in well-being. Diener and Biswas-Diener (2002) found that this pattern did not occur in the majority of studies they reviewed. In recent analyses of a large panel study in Germany, we found that people with slowly rising incomes show high levels of well-being, and that individuals with comparable mean levels of income but high year-to-year fluctuations show substantially lower levels of life satisfaction. In this study, people with dramatic rises in income showed increasing well-being; although initially they were lower in well-being than the slow-rise group, by the end of the study their well-being had increased to reach the level of the slow-rise group. People experiencing large downward shifts in income showed large declines in life satisfaction.

Income increases might bring costs as well as benefits. For example, Clydesdale (1997) found more divorce in people whose income had risen than among people whose income was stable. Furthermore, substantial increases in one's income are likely to bring disruptions to one's life, and these might be either positive or negative. This might explain, for example, the mixed results of negative-income-tax and lottery studies.

Longitudinal data indicate that part of the typical correlation between income and well-being is due to well-being causing higher incomes, rather than the other way around. Happy people go on to earn higher incomes than unhappy people. Diener, Nickerson, Lucas, and Sandvik (2002) discovered that higher cheerfulness in the first year of college correlated with higher income 19 years or so later, when respondents reached their late 30s; this effect was greatest for those who came from the most affluent families (see Fig. 3). Marks and Fleming (1999) found that well-being predicted later income in an Australian sample of young adults, and Staw, Sutton, and Pelled (1994) uncovered a weak, but significant, tendency of pleasant emotions at an initial assessment to predict pay at a later time, in an analysis that controlled for income at the initial assessment. Finally, Graham, Eggers, and Sukhtankar (in press) found that happiness predicted future income even after they controlled for current socioeconomic and demographic variables. Thus, longitudinal findings indicate that some part of the association between income and happiness is likely due to happy people going on to earn more money than unhappy people. Kenny (1999) has extended this reasoning to the growth rate of the wealth of nations.

Negative Outcomes of Wealth and Materialism

An edited volume by Kasser and Kanner (2004) has detailed the detrimental effects of materialism, defined as placing a high importance on income and material possessions. The authors documented the problems experienced by materialistic individuals relative to less materialistic individuals: lower self-esteem and greater narcissism, greater amounts of social comparison (i.e., comparing oneself with other people, sometimes for the purpose of evaluating oneself) and less empathy, less intrinsic motivation, and more conflictual relationships (Kasser, Ryan, Couchman, & Sheldon, 2004). Nickerson, Schwarz, Diener, and Kahneman (2003) found that materialism predicted later lower well-being, but that this effect was smallest for those people who earned a high income. Across nations, placing a higher importance on money is associated with lower well-being (Kirkcaldy, Furnham, & Martin, 1998). Materialism might lead to lower well-being because materialistic people tend to downplay the importance of social relationships and to have a large gap between their incomes and material aspirations (Solberg, Diener, & Robinson, 2004). In the study by Nickerson et al., it appeared that placing too much value on money had its negative effect in part because it interfered with social relationships.

However, the causal arrow may go the other way: Unhappiness may drive people to focus on extrinsic goals such as material wealth. Srivastava, Locke, and Bartol (2001) found that materialism was damaging to well-being insofar as it arose from a desire to gain power or flaunt wealth, but not if it arose from a desire for freedom or family security. Malka and Chatman (2003) found that intrinsically oriented individuals (i.e., people who enjoy tasks for their own sake) were less happy than extrinsically oriented individuals (i.e., people who enjoy tasks for the external rewards they bring) at higher income levels. Because people who value income tend to earn more money than people who do not, the deleterious effects of materialism can be offset to some degree by the positive experience of a higher income (Nickerson, Kahneman, Diener, & Schwarz, 2004).

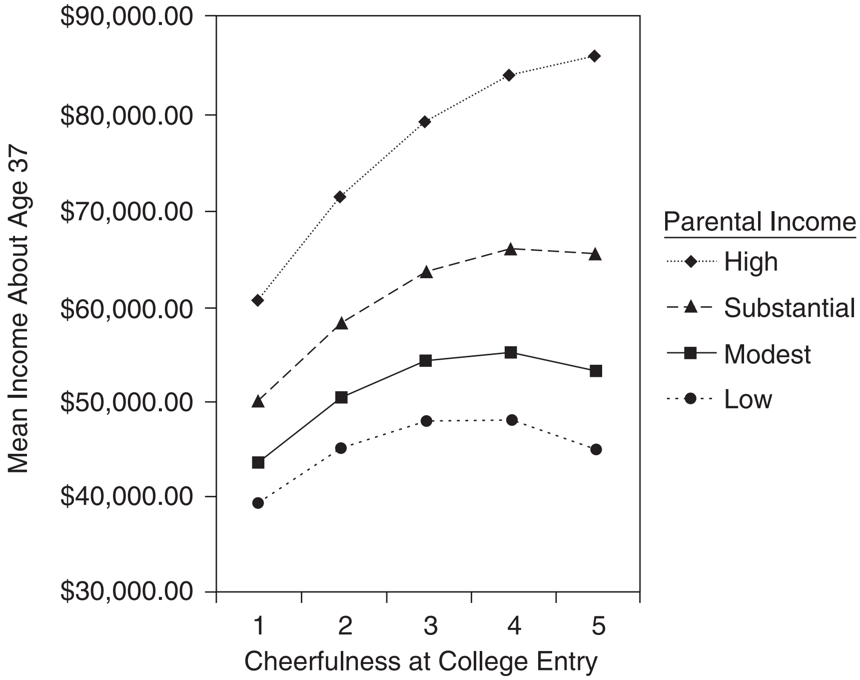

Fig. 3. **Mean income at about age 37 as a function of cheerfulness and parents' income at the time of entry into college. Results shown here are for students whose parents' income fell within ranges that can be characterized as low, modest, substantial, or high.**

Not only materialism, but wealth itself has been found in a few studies to produce negative effects. Hagerty (2000) found that when personal income was statistically controlled, individuals living in higher-income areas in the United States were lower in happiness than people living in lower-income areas. This suggests that wealthy individuals are fortunate if they live in middle-class areas rather than in wealthy enclaves. Similarly, Putnam (2001b) found that higher statewide income was associated with lower well-being once individual income was statistically controlled. The negative effects of wealthy communities might partly be explained by their higher materialism (Stutzer, in press).

In a longitudinal study in which students were followed through high school and beyond, Csikszentmihalyi and Schneider (2000) found that adolescents from affluent suburbs were on average less happy, and reported lower self-esteem, than those from middle-class neighborhoods and inner-city slums. Because the measures were direct, based on recording of moods as they occurred, the results of this study are particularly compelling. The negative effects of affluence on adolescents were reviewed by Luthar (2003), who suggested that high expectations for achievement and relative isolation from adults can both lead to lower well-being among teenagers from financially well-off families. Luthar maintained that aspects of the wealthy lifestyle, such as privacy and competition (which can lead to lack of interpersonal intimacy), can harm the well-being of adults as well. Thus, high income is not an unalloyed benefit.

The Contextual Effects of Income

The effects of income on well-being depend on context, pointing once again to the fact that economic indicators by themselves are insufficient to index the quality of life. Although researchers have usually searched for invariant connections between money and happiness, there is increasing evidence that psychological factors such as values and ideology moderate the connection. So, for example, Clark (2003) reported that the effects of income are smaller among religious believers than among nonbelievers. Di Tella and MacCulloch (1999) reported evidence indicating that unemployment harms the well-being of respondents with a left-wing political orientation more than inflation does. In contrast, inflation harms the well-being of respondents with a right-wing ideology more than unemployment does. Bjørnskov (2003) found that income equality correlates negatively with national well-being, largely because in Latin American nations income is distributed unequally and the people are satisfied.

Malka and Chatman (2003) found that business students who were most motivated by money were happier on the job years later the more income they earned, but that those who were intrinsically motivated were actually lower in life satisfaction and positive affect years later the more income they earned. Research on unemployment also highlights the fact that income alone is not a simple predictor of well-being. Helliwell (2003a) discovered that unemployment had negative effects on well-being in rich and poor nations, but the effects were more severe in wealthier nations. Because welfare benefits are more generous in wealthier nations, the strong negative effects of unemployment in richer societies compared with poorer societies are likely caused not by difficulties in meeting material needs, but by psychological factors such as a decrease in self-respect. In implicating psychological factors, this pattern in the link between well-being and unemployment across nations is consistent with the fact that the effects of income on well-being are stronger for men than for women (e.g., Adelmann, 1987; Ross & Huber, 1985) because both findings point to the importance of identity and values in the effects work and money have on well-being.

Clark and Oswald (1996) found that job satisfaction depends not on absolute pay, but on pay relative to other workers with the same education and job classification. People are more satisfied when they compare themselves with others who have lower income than they do. So, for example, respondents' satisfaction with a given level of income is lower if other people in their household earn more than if other household members earn less (Neumark & Postlewaite, 1998). People's satisfaction with their incomes depends also on the incomes of others in their organization and in their occupation (G.D.A. Brown, Gardner, Oswald, & Qian, 2003). Also suggesting that social comparison is a moderating factor is the finding that unemployment is associated more strongly with lower well-being in regions where unemployment is low than where it is high (Clark, 2001).

In Table 1, we present data on the life satisfaction of a number of groups. Respondents from the Forbes list of the 400 richest Americans are relatively high in well-being (Diener, Horwitz, & Emmons, 1985), yet the Maasai of East Africa are almost equally satisfied (Biswas-Diener, Vittersø, & Diener, 2003). The Maasai are a traditional herding people who have no electricity or running water, and they live in huts made from dung. These results thus underscore the fact that luxury is not necessary for high well-being. Slum dwellers in Calcutta are less satisfied with their lives, although still above the neutral point on the rating scale, perhaps sustained by the pleasures of family, religion, and work. In contrast, homeless people in Fresno, California, report very low levels of well-being. We speculate that meeting one's physical needs and one's desires might be the crucial moderator of the effects of income on well-being. What is clear is that income per se does not directly drive well-being.

Recall that increasing wealth is associated with only a slight rise in well-being once nations have a moderate level of per capita income. A research imperative is thus to determine what contextual factors influence the effects of income on well-being. Whatever these factors turn out to be, it is likely that the effects of income on well-being are strongly moderated by cultural context, and therefore that well-being must be directly assessed to be measured accurately.

TABLE 1
Life Satisfaction for Various Groups

Group	Rating
Forbes magazine's "richest Americans"	5.8
Pennsylvania Amish	5.8
Inughuit (Inuit people in northern Greenland)	5.8
African Maasai	5.7
Swedish probability sample	5.6
International college-student sample (47 nations in 2000)	4.9
Illinois Amish	4.9
Calcutta slum dwellers	4.6
Fresno, California, homeless	2.9
Calcutta pavement dwellers (homeless)	2.9

Note. Respondents indicated their agreement with the statement ''You are satisfied with your life'' using a scale from 1 (complete disagreement) to 7 (complete agreement); 4 is a neutral rating.

Conclusions and Cautions

Many people feel that they would be happier if they had more income and additional material goods, and there is some mixed evidence to support this claim. Within-nation correlations generally do show small positive associations ($\sim$.15) between income and well-being, and the average reported well-being is higher in wealthy societies than in poor nations. Furthermore, an individual might increase his or her well-being by gaining income relative to other people. In other words, the intuition that one will be happier with more rather than less income might be correct, but this effect occurs only at the individual level and is negated to the extent that everyone's incomes and desires increase. In addition, there have been slight trends upward in well-being in some nations (e.g., Denmark) over the past decades, but not in others (e.g., Japan). But the effects of wealth are not large, and they are dwarfed by other influences, such as those of personality and social relationships.

What might explain the pattern of findings on income and well-being? First, although people's material desires seem to catch up to their incomes and cancel the benefits of higher incomes to some degree, it appears that wealthier individuals have a smaller gap between income and desires than do poor people (Stutzer, in press; van Praag & Frijters, 1999). Rising aspirations seem to nullify only about 70% of increased income (Frey & Stutzer, 2002b). Second, happy people tend to earn higher incomes than unhappy people. Finally, income might correlate with well-being insofar as basic needs are fulfilled, and this explanation is consonant with the evidence showing much stronger effects of income in poorer than in wealthier income groups.

Despite evidence linking income and well-being, economic growth seems to have topped out in its capacity to produce more well-being in developed nations. Thus, although nations will certainly continue to pursue economic growth, in part because of the other benefits besides those that might accrue to well-being (Diener & Diener, 1995), efforts and policies to raise income in wealthy nations are unlikely to increase well-being and might even undermine factors (such as rewarding social relationships or other cherished values) that have higher leverage for producing enhanced well-being.

Thus, when the sciences of economics and of well-being come face-to-face, they sometimes conflict. If the well-being findings simply mirrored those for income and money—with richer people invariably being much happier than poorer people—one would hardly need to measure well-being, or make policy to enhance it directly. But income, a good surrogate historically when basic needs were unmet, is now a weak surrogate for well-being in wealthy nations. What the divergence of the economics and well-being measures demonstrates is that well-being indicators add important information that is missed by economic indicators. Economic development will remain an important priority, but policies fostering economic development must be supplemented by policies that will have a stronger impact on well-being.

Productivity and Well-Being

Job satisfaction and positive mood at work both contribute to the productivity of organizations. Happy employees are better organizational citizens than unhappy employees; they change jobs less frequently, and they shirk less. The costs of unhappy workers to economic productivity are enormous. Policies aimed at producing a happier workforce make sense both because they can enhance well-being in an important realm of life and because they can increase economic productivity and profitability. In an economy of life satisfaction, work should no longer be considered something to be endured in order to obtain income, but rather should be considered a potentially rewarding experience in its own right. When the workplace is properly structured to increase well-being, profits will likely rise. Thus, well-being at work not only is desirable as an end in itself, but also can help to produce greater economic productivity.

Well-Being at Work

Some people consider paid work to be an unpleasant activity that must be suffered in order to earn money. Research, however, indicates that people obtain pleasure from their jobs, even from mundane jobs (Csikszentmihalyi, 1997), and that in many cases they enjoy work activities more than leisure or home life. Dow and Juster (1985) and Juster (1985) found that many working activities are preferred to many nonwork activities. Although Kahneman et al. (in press) found that work was not as pleasant as sex or socializing after work, they did find that it was on average experienced as pleasant. Paid work activities can provide not only enjoyable activities, but also a structure for the day, social contact, a means of achieving respect, and a source of engagement, challenge, and meaning.

A long-standing issue in organizational psychology is the degree to which the happy worker is a good worker. Because early research suggested that the relation between job satisfaction and productivity was small (Iaffaldano & Muchinsky, 1985; Vroom, 1964), many researchers lost interest in the question. In the past decade, however, organizational researchers have altered their conclusions. For one thing, they recognized certain errors in the early reviews, and also realized that seemingly small correlations (e.g., Iaffaldano and Muchinsky reported an average of .17 across studies) could amount to huge productivity differences when applied to organizations and to nations. In addition, scientists noticed that certain types of behaviors are consistently related to engagement at work. Job satisfaction is reliably related to organizational citizenship (helping other employees and the organization in ways not specifically related to one's assigned tasks) and the absence of bad citizenship (e.g., stealing from the employer; e.g., Borman, Penner, Allen, & Motowidlo, 2001; Organ & Ryan, 1995). For instance, Bateman and Organ (1983) reported that the more satisfied employees are, the more practical, helpful, and friendly they are, and Miles, Borman, Spector, and Fox (2002) found that the relation between job satisfaction and organizational citizenship can be sizable. Furthermore, studies reveal that experiencing more positive emotions on the job is associated with both better performance and higher levels of organizational citizenship (e.g., Barrick & Mount, 1993; Deluga & Mason, 2000; George, 1990; George & Brief, 1992).

Spector (1997) reviewed evidence showing that satisfied workers have lower turnover and absenteeism than nonsatisfied workers, and are more punctual, cooperative, and helpful to other workers. Carsten and Spector (1987) found that the relation between job satisfaction and turnover can be substantial when unemployment rates are low.

George (1995) found that workers' and managers' positive affect both contributed to performance in the sales staff of a large retail company. In a study in which workers at a technical-support center recorded their moods when prompted as they performed their daily activities, Miner (2001) found that those who were in a pleasant mood performed better than those who were not. He also found that more frequent unpleasant mood was correlated with more withdrawal and lower levels of organizational citizenship (e.g., helping other workers), and that low job satisfaction predicted job absences and turnover. Judge, Thoreson, Bono, and Patton (2001) conducted the most thorough analysis of the literature on job satisfaction and job performance to date and estimated that the underlying correlation between the two is about .30 overall, but higher in relatively complex jobs. Judge et al. maintained that this correlation is large, given the error that is inherent in both satisfaction and performance measures, as well as the organizational benefits of high worker morale. However, a limitation of many studies included in the analysis is that supervisors' ratings were used to measure productivity, and these are subject to several sources of bias.

Well-being of employees also predicts customer satisfaction. Harter, Schmidt, and Hayes (2002) found that the happiness of workers with their jobs correlated with the loyalty of customers, and Fleming (2000) found that customer loyalty and profitability changed together over time. Swaroff (2000) found that the satisfaction of both patients and physicians was correlated with better financial outcomes for a hospital, and Srinivasan and Pugliese (2000) estimated that lack of customer loyalty cost a large bank chain $44 million a year because of customers closing accounts. Thus, one link between employee satisfaction and profitability is that customers are likely to be satisfied when employees are happy in their jobs.

Causality

Could it be that the superior performance of happy workers is due simply to their dispositions, and that workplace characteristics have little or nothing to do with their performance? For example, studies (Diener et al., 2002; Staw, Bell, & Clausen, 1986) have found that measures of dispositional happiness predict people's feelings about their jobs decades later, suggesting that temperament has a long-term influence on job satisfaction. Similarly, after reviewing the literature, Judge and Larsen (2001) reported that the evidence supports the conclusion that dispositions influence job satisfaction. Despite the effects of personality on attitudes toward work, however, it appears that worker satisfaction also depends on characteristics of the workplace (e.g., Roberts, Caspi, & Moffitt, 2003; Watson & Slack, 1993). H.M. Weiss, Nicholas, and Daus (1999) found that positive affect on the job, as well as dispositional happiness, predicts job satisfaction. In a longitudinal study, Spector, Chen, and O'Connell (2000) found that job stressors produce strain in workers beyond the strain explained by temperament. Finally, when outcomes are assessed at the level of organizational work units, benefits are seen. Harter et al. (2002) analyzed a large number of specific divisions within corporations and found that those in which employees were satisfied and engaged were also those with lower turnover and accident rates, and higher productivity and profitability. Because this analysis was based on units, which were aggregates of many workers, individual personality traits are likely to have had less of an influence than in analyses based on individuals. Thus, although personality undoubtedly plays an important role, job satisfaction is influenced by factors in addition to personality.

Causality between well-being on the job and the productivity of the organization is likely to work in both directions (Côté, 1999; Harter, 2000). Among the evidence for causation running from well-being to productivity is a laboratory study by Staw and Barsade (1993). Using an in-basket test (i.e., a test in which participants must quickly handle a large number of standard business situations), they found that happy participants performed better than unhappy participants on interpersonal, managerial, and decision-making tasks. In this case, the happiness could not arise from the "job" because all participants performed the same tasks under the same conditions, and it appears that the happy participants' positive affect was responsible for their superior performance. Second, within-person data showing correlations between mood and performance (e.g., Miner, 2001) suggest that happiness contributes to better performance because they cannot be attributed to the personality of the worker, or to the influence of long-term productivity on mood. In a pioneering study in this area, Hersey (1932) found that workers performed better on days when they were in a good mood than on days when they were in a bad mood, although it is possible in this case that productivity led to better moods.

Longitudinal research provides yet another type of evidence suggesting a causal influence of workplace happiness on productivity. Harter (2000) measured employee engagement using a questionnaire developed by the Gallup Organization (items assessed, e.g., positive relationships with supervisors) and found that employee engagement predicted employee turnover and customer loyalty at a later time period, whereas the association between performance and later engagement was much smaller. The causal path from employee engagement to net sales of the organization went in both directions. Schneider, Hanges, Smith, and Salvaggio (2003) found that financial success of companies and job satisfaction each predicted the other significantly, although the path from financial success to job satisfaction was the stronger one. Koys (2001) found that across time, employees' attitudes predicted organizational effectiveness, but that organizational effectiveness did not predict job attitudes such as work satisfaction at a later time. Kohn and Schooler (1982) found that the nature of the work predicted worker depression over time, and Staw et al. (1994) found that positive affect predicted higher pay and better supervisors' ratings at a later time. In a causal modeling study, Judge (1991) found that job satisfaction predicted lower rates of absenteeism, shirking, and tardiness. Finally, Wright and Bonett (1997) found that emotional exhaustion on the job predicted work performance.

In sum, it is likely that the positive effects of well-being at work on performance go beyond the effects of personality. The well-being of workers results in positive organizational citizenship, customer satisfaction, and perhaps even greater productivity. Because specific workplace variables are known to enhance well-being at work, organizational policies can raise workers' well-being and thereby enhance organizational citizenship and possibly profitability.

Spillover From Work

Feelings about work leak into other realms of life. Rice, Near, and Hunt (1980) reviewed 23 studies and found a reliable association between life satisfaction and work satisfaction for both males and females, with the correlation being stronger for men. Heller, Judge, and Watson (2002) also tested the spillover hypothesis and found that life satisfaction and job satisfaction are correlated, but that this correlation drops when personality variables are statistically controlled. In a 12-year panel study, Rogers and May (2003) found that marital quality and job satisfaction are related over time. Similarly, Kang (2001) found spillover from the job to marriage. In a daily diary study, positive experiences at work reduced conflictual marital interactions that day, and conflictual marital interactions reduced the positivity of work experience the next day (Doumas, Margolin, & John, 2003). In a longitudinal study, Grebner, Semmer, and Elfering (2003) found that employees' evaluations of working conditions produce changes in well-being reported on-line; for example, lack of job control predicts lack of energy on non-workdays. Thus, work satisfaction can spill over into home-life satisfaction and vice versa.

Unemployment

Unemployment so often has deleterious effects on well-being that it deserves a separate discussion. Many researchers have found that the unemployed have lower levels of well-being (e.g., Clark & Oswald, 1994; Di Tella et al., 2001; Helliwell, 2003a) and higher levels of suicide (Kposowa, 2001) than the employed. Shams and Jackson (1994) reported that the longer individuals were unemployed, the lower their well-being, and Viinamaeki, Koskela, and Niskanen (1996) found increasing levels of depression over time in the unemployed. Clark (2001) found that unemployment was associated with more negative effects in communities where unemployment was low than in communities where unemployment was high.

But might unhappy people be more likely to be unemployed than happy people? That is, might unhappiness cause unemployment? Two studies on the same large longitudinal data set (Clark, Diener, Georgellis, & Lucas, 2004; Lucas, Clark, Georgellis, & Diener, 2004) suggest that people who are later unemployed do not start out with low life satisfaction. Rather, their life satisfaction drops dramatically around the time of their layoff. Furthermore, they do not recover to their former levels of life satisfaction even after several years, even after most of them have obtained a new job with pay almost equal to their pay before being laid off. These findings suggest that the unemployed are "scarred" by the experience of losing their jobs. Creed and Macintyre (2001) found that unemployed people experienced lowered well-being because they lacked time structure and feelings of purpose.

Causes of Worker Well-Being

Many possible causes of worker well-being have been investigated, and a host of factors have been implicated, from low noise levels (Raffaello & Maass, 2003) to positive behaviors of the supervisor (Harter, Schmidt, & Killham, 2003). Factors such as workload (Groenewegen & Hutten, 1991), person-job fit (e.g., Bretz & Judge, 1994; De Fruyt, 2002; Rounds, 1990; Rounds, Dawis, & Lofquist, 1987), management's communication style (Dooley, 1996), and the variety of skills used on the job (Glisson & Durick, 1988) also influence job satisfaction. Using a longitudinal design and external ratings of job conditions, Grebner et al. (2003) found that job control (i.e., feelings of control over one's work) correlated with greater well-being on the job, whereas job stressors correlated with lower well-being on the job.

After reviewing the literature on work satisfaction, Warr (1999) concluded that rewarding jobs tend to have the following characteristics:

- Opportunity for personal control
- Opportunity for using skills
- Variety of tasks
- Physical security
- Supportive supervisor
- Respect and high status
- Interpersonal contact
- Good pay and fringe benefits
- Clear requirements and information on how to meet them

Conclusions and Cautions
The majority of adults spend many waking hours at work. Work policies are often structured to maximize productivity and minimize costs, and issues concerning the quality of work life are usually considered only if they serve one of these goals. However, wealthy societies have now reached such a level of productivity that having engaging, rewarding work is a concern for increasing numbers of workers and can influence their productivity and retention on the job. Recrafting jobs so that they are maximally engaging, rewarding, and meaningful, but still compatible with the mission of the organization, will become a priority of future employers as the top workers are increasingly drawn to organizations that take seriously the goal of producing life satisfaction among their workers.

Well-being at work is likely to interact with other variables in producing its positive effects. Abbott (2003) found that employees working in difficult conditions nevertheless performed well, and that employee morale did not invariably predict the performance of organizations, indicating that the larger motivational context of work will influence the effects of workers' morale. Karasek (2001) suggested that jobs should be redesigned to include well-being as a goal. In a work-redesign experiment, Griffin (1991) altered the tasks of bank tellers to make the job more intrinsically rewarding and professional. Satisfaction and commitment showed short-term increases only, whereas performance increased only later in the 2-year study. Pleasant affect might be most helpful in jobs that involve sales and supervision, because characteristics that are useful in these jobs, such as flexibility and sociability, are enhanced by positive emotions; in contrast, happiness might be less helpful in other types of vocations, such as those requiring vigilance for errors (Lucas & Diener, 2003). Thus, there is a need for more research on how and when positive job attitudes and positive affect on the job lead to better performance. Nevertheless, the preponderance of evidence points to the fact that happy work units tend to be productive work units.

If worker well-being increases productivity, it is important to consider policies that will increase well-being at work. For instance, flextime, on-site day-care facilities, plans for allowing employees to work at home, employee stock options, and generous family-leave policies can all enhance job satisfaction if they are properly implemented. Similarly, training supervisors to give appropriate praise and feedback, facilitating friendships on the job, and providing the tools workers need are likely to enhance job satisfaction (Harter et al., 2003). Finally, selecting workers so that their personality characteristics, strengths, and interests fit the job will likely enhance worker well-being (e.g., Bretz & Judge, 1994).

Physical Health and Well-Being
In general, positive states of well-being correlate with better physical health (e.g., Hilleras, Jorm, Herlitz, & Winblad, 1998; Murrell, Salsman, & Meeks, 2003; Ostir, Markides, Black, & Goodwin, 2000). Correlations between objective physical health (i.e., health as assessed by medical personnel) and well-being are low in broad samples of respondents, in part because people appear to adapt over time to many illnesses and because most people are relatively healthy. However, certain illnesses that interfere with daily functioning produce marked decrements in well-being. In addition, reports of global well-being and ill-being correlate positively and negatively, respectively, with longevity, and subjective health (i.e., how people evaluate their own health) predicts mortality even when differences in objective health are statistically controlled. The intensity of physical pain is magnified by feelings of ill-being. Furthermore, psychosocial interventions can enhance the well-being of ill people, and possibly even increase longevity. Thus, well-being and absence of ill-being predict better later health, but the mixed nature of the data indicates that the association between well-being and physical health is influenced by variables that are not yet understood. Well-being is an important outcome to be considered in studies of and policies regarding physical health because it signifies quality of life, but it also is important because of its implications for health and health care costs.

Physical Health Affects Well-Being
Not surprisingly, self-reported health is related to well-being, as revealed in an analysis of the literature conducted by Okun, Stock, Haring, and Witter (1984), as well as in more recent studies (e.g., Lyubomirsky & Lepper, 2003). Marmot (2003) reported correlations of about .60 between low life satisfaction and subjective poor health in the Whitehall samples of people in the British civil service. The relation between objective health and well-being is usually much smaller, however (e.g., Brief, Butcher, George, & Link, 1993; Okun & George, 1984). Nevertheless, severe health problems that interfere with daily functioning can lower well-being, sometimes substantially so, as can lethal illnesses. For example, Verbrugge, Reoma, and Gruber-Baldini (1994) found that the well-being of people with serious illnesses, such as congestive heart failure, declined over 1 year. Even though people with serious illnesses are likely to be above neutral in well-being, their well-being is often lower than that of matched control subjects (e.g., a group of people who are the same age and sex as the ill subjects), and even lower if they have multiple conditions, such as diabetes and heart failure (e.g., Mehnert, Krauss, Nadler, & Boyd, 1990). Furthermore, people with serious illnesses do not invariably adapt to them. In a longitudinal study of patients with congestive heart failure or acute myocardial infarction, mean levels of anxiety and depression remained substantially elevated (compared with levels before the patients became ill) 1 year after diagnosis (van Jaarsveld, Sanderman, Miedema, Ranchor, & Kempen, 2001).

Other illnesses are associated with substantially more negative affect. For example, Stilley et al. (1999) found that nearly half of transplant recipients report clinically significant levels of distress, and more than half of patients with AIDS or cancer are clinically depressed (Van Servellen, Sarna, Padilla, & Brecht, 1996). Depression and anxiety are prevalent in women with HIV and often reach clinical levels (van Servellen et al., 1998).

Not only life-threatening diseases, but also illnesses that restrict activities and cause pain can lower well-being. Patients with fibromyalgia and rheumatoid arthritis show more depression and anxiety, and lower life satisfaction, than control subjects (Celiker & Borman, 2001), and Evers, Kraaimaat, Geenen, and Bijlsma (1997) found that lessening of inflammation in arthritis patients was accompanied by lessening in anxiety and depression.

Well-Being Affects Physical Health and Pain
There is also evidence that causality might run from well-being to health. As mentioned earlier, Vázquez et al. (2004) found that longevity is greater in nations where well-being is high, even after controlling statistically for national income and infant mortality; because of the statistical controls in this study, the results suggest the possibility

of causation from well-being to health. One study found that patients with end-state renal failure were more likely to survive for 4 years if they were happy than if they were not (Devins, Mann, Mandin, & Leonard, 1990). Conversely, negative emotions often predict worse health outcomes. A study of cardiac patients demonstrated that those with mood disturbances such as depression were particularly likely to show increasingly poor functioning over time and worsening of cardiac symptoms (Clarke, Frasure-Smith, Lespérance, & Bourassa, 2000). In a 4-year longitudinal study of nursing-home residents, patients at the same level of objective physical health lived longer the higher their self-esteem and the lower their levels of depressive symptoms at an initial assessment. In other longitudinal studies, optimism has been associated with longevity. In a Mayo Clinic study of patients in the early 1950s, optimistic patients lived about 8 years longer on average than pessimistic patients (Maruta, Colligan, Malinchoc, & Offord, 2000; Peterson, Seligman, Yurko, Martin, & Friedman, 1998); in another study, hope was associated with increased survival time in cancer patients (Faller, Buelzebruck, Schilling, Drings, & Lang, 1997). Parker, Thorslund, and Nordstrom (1992) found that life satisfaction predicted mortality in old people (i.e., those ages 75 to 84), but not in the very old (i.e., those over 85), suggesting that well-being might have different effects depending on stage of life or the severity of health problems.

Optimism has consistently been found to predict outcomes in cardiovascular disease. For example, greater optimism is associated with lowered reports of symptoms of angina in cardiac patients (Fitzgerald, Prochaska, & Pransky, 2000), as well as greater longevity and lowered rates of nonfatal heart attacks (Kubzansky, Sparrow, Vokonas, & Kawachi, 2001). In a longitudinal study, Kubzansky et al. (2002) found that people with an optimistic explanatory style had better pulmonary function than people with a more pessimistic style, and showed a slower decline in health over 8 years. This finding is consistent with evidence showing that pleasant emotions can undo the influence of unpleasant emotions on cardiovascular parameters (Fredrickson & Levenson, 1998; Fredrickson, Mancuso, Branigan, & Tugade, 2000). In a review of studies on coronary heart disease, Carney, Rich, and Jaffe (1995) found that depression (which is reliably related to lack of optimism) predicted increased illness and mortality and attributed this finding to the fact that depressed people do not follow treatment regimens as well as nondepressed people, smoke more, have higher blood pressure, and have poorer physiological functioning. Thus, behavioral as well as physiological pathways are likely to link well-being to health. Other studies have shown that happy people act in healthier ways than unhappy people do. For example, individuals who report high well-being exercise more and engage in more physical activity than people who report low well-being (Audrain, Schwartz, Herrera, Golman, & Bush, 2001; Lox, Burns, Treasure, & Wasley, 1999).

Can well-being affect the course of cancer? Spiegel and Giese-Davis (2003) reviewed the evidence relating depression to cancer and drew several conclusions. First, they concluded that severe depression might raise the risk for cancer, although the data are mixed on this question. Second, they argued that depression may speed up the progression of cancer, as well as reduce longevity, although again, the data are not completely consistent (see also Faller et al., 1997; Naughton et al., 2002). When psychosocial support is given to cancer patients, the support can alleviate pain and depression, and perhaps even increase survival time. Of 10 studies on survival time that Spiegel and Giese-Davis reviewed, 5 showed a benefit from psychosocial interventions, and none showed that such interventions had a detrimental effect on outcomes. Thus, it appears that the reported beneficial effects of psychosocial interventions are not due to chance. Spiegel and Giese-Davis concluded: “There is growing evidence of a relationship between depression and cancer incidence and progression” (p. 278).

In studies of mortality from all causes, well-being predicts longevity. Low life satisfaction was found to predict all-cause mortality in a large and representative sample of adults in the United States (Fiscella & Franks, 1997). Similarly, Danner, Snowdon, and Friesen (2001) found that pleasant emotions expressed at age 22 as women entered a Catholic convent predicted their longevity after age 75. Nuns with high levels of pleasant emotions in young adulthood lived on average more than 9 years longer than nuns with low levels of pleasant emotions in young adulthood. Although this study found that only pleasant affect predicted longevity, and negative affect did not, other studies have found roles for negative affect in a variety of negative health outcomes. For example, a longitudinal study in Scandinavia found that low life satisfaction predicted fatal accidents (Koivumaa-Honkanen, Honkanen, Koskenvuo, Viinamaki, & Kaprio, 2002), and, as already noted, depression has been associated with reduced survival time among patients with cancer and coronary heart disease.

In a large sample of older Americans, Ostir et al. (2000) found that respondents who were high in positive emotions were twice as likely to survive through the 2-year follow-up of the study as those who were low in positive emotions; factors such as chronic health conditions, smoking, diet, and marital status were controlled in the statistical analysis. Ostir et al. also found that high levels of positive emotions were associated with a greatly reduced risk of becoming disabled. In a classic study, Ulrich (1984) studied postoperative patients who were assigned to hospital rooms with a pleasant or unpleasant view. Those who had a view of trees, as opposed to a brick wall, were more rapidly discharged, suggesting that the pleasant view caused faster recovery.

Additional evidence indicates that recovery from diverse health problems is affected by well-being. Kopp et al. (2003) found that preoperative well-being predicted better recovery from surgery. The well-being of people when they entered a whiplash rehabilitation program predicted whether these patients were doing paid work 2 years later (Heikkilä, Heikkilä, & Eisemann, 1998). Patients who had surgery for osteoarthritis of the knee reported greater functional improvement at 3 and 12 months after the surgery if they were low in anxiety and depression before the surgery (Faller, Kirschner, & König, 2003).

Does well-being influence pain and whether people seek treatment for pain? People who are low in well-being have a more difficult time coping with pain than people who are high in well-being, and retrospectively overestimate their levels of pain (Keefe, Lumley, Anderson, Lunch, & Carson, 2001). Zelman, Howland, Nichols, and Cleeland (1991) found that people put into a positive mood showed greater pain tolerance than control subjects, and this finding was replicated by Cogan, Cogan, Waltz, and McCue (1987).

People put into a pleasant mood also show lower blood pressure reactivity to a stressor than participants in whom a positive mood was not induced (T.W. Smith, Ruiz, & Uchino, 2001). The number of daily stressors experienced correlates with increases in joint pain in patients with rheumatoid arthritis (Affleck et al., 1997). Zautra et al. (1998) extended this finding by showing that stress is related to changes in the immune system, which are in turn followed by inflammation and increased pain. Patients' indicators of immune activity were higher in a week when they experienced high conflict with their spouses than in a baseline week. This pattern was not found, however, in women who had relatively good relationships with their spouses. Although the connection between stress and pain is not direct and is not found in every study, the existing evidence demonstrates that a connection exists.

Experimental evidence reveals that the immune system is influenced by people's well-being; rigorous evidence sometimes points to a beneficial effect of positive emotions and sometimes points to a negative influence for unpleasant emotions. Cohen and his colleagues conducted an impressive set of studies showing that happy people are less susceptible to cold and flu viruses than unhappy people are. For instance, Cohen, Doyle, Turner, Alper, and Skoner (2003) found that people who reported high levels of positive emotions were at a reduced risk of developing cold symptoms when exposed to cold viruses. The least happy third of the participants in this study were 2.9 times more likely to develop a cold than the happiest third, controlling for sex, age, and other factors. In further studies, Cohen and his colleagues found that self-reported stress was associated with increased inflammation following exposure to a flu virus (Cohen, Doyle, & Skoner, 1999), and that both the tendency to chronically experience negative emotions (sometimes referred to as negative affectivity) and exposure to severe or chronic problems resulted in lowered immune response (Cohen, Miller, & Rabin, 2001). The lower immune response due to the experience of problems occurred upon reexposure to the flu virus, and was most pronounced among the elderly. Finally, Marsland, Cohen, Rabin, and Manuck (2001) found a lowered antibody response to the hepatitis virus among people high in negative affectivity.

Other researchers have extended the findings of Cohen and his colleagues. For instance, Solomon, Segerstrom, Grohr, Kemeny, and Fahey (1997) found increases in immune function after positive moods and decreases in immune function after negative moods. Kamen-Siegel, Rodin, Seligman, and Dwyer (1991) reported that optimistic old people had better immune function than pessimistic old people. The results from a within-person longitudinal analysis show that people's immunity is stronger on days when they are in a good mood than on days when they are in a bad mood (Stone, Cox, Valdimarsdottir, Jandorf, & Neale, 1987). Vitaliano et al. (1998) found that among cancer patients, experiencing more daily uplifts (small positive events) and fewer daily hassles (small negative events) was correlated with having more natural killer cells (immune cells that attack invading pathogens), and Lyons and Chamberlain (1994) found that positive events lowered people's incidence of respiratory infections. We view these studies as most likely showing a causal effect of mood because experimental manipulations of moods are followed by similar changes in immune strength (Futerman, Kemeny, Shapiro, & Fahey, 1994; McClelland & Cheriff, 1997).

Conclusions and Cautions

Our review of this extensive literature has not been exhaustive by any means, but instead was designed to give readers a sense of the links that seem to exist between well-being and physical health. It is surprising that people with ill health often adjust so well to their condition and report positive levels of well-being—this is a tribute to human psychological resilience. It does appear, however, that severe health conditions often impair well-being to a degree. In addition, well-being appears to predict future health and longevity, sometimes powerfully. The pathways of this influence are unknown but may involve both physiological (e.g., immune activity) and behavioral (e.g., more exercise) factors. A major task for future research is to explore these pathways. It is very encouraging that psychosocial interventions can in some cases increase the well-being of sick individuals, and perhaps even extend life.

Mental Disorders

Mental disorder is another arena in which historical trends in well-being have been startlingly and strongly opposite the trends in economics: As developed nations have become wealthier, mental health has either dropped sharply or stayed the same. This is an area where governmental and institutional policies can make an enormous difference to well-being. Mental disorders lower well-being, and for many disorders there exist specific treatments, both psychotherapies and medications, that can reduce symptoms and improve well-being. Empirical data have undermined the notion that mental disorders are persistent, unrelievable, and incurable, and it is now realized that people with mental disorders often improve over time and with treatment, and that they can achieve significant improvements in quality of life. Thus, beyond relieving suffering, increasing well-being is becoming an essential part of the treatment and measurement of mental disorders, providing an additional window through which to view the effectiveness of mental health interventions. Although economic indicators can help show the costs of mental disorders, well-being indicators are essential for understanding the full costs of these disorders, as well as the substantial value of treatments and interventions. Furthermore, high well-being is likely to buffer against the incidence of at least some mental disorders.

Mental Disorders Are a Major Cause of Low Well-Being

Mental disorders are widespread, and perhaps growing in frequency, in modern society. A structured psychiatric interview was administered to a national sample of adults in the United States just over a decade ago. Almost 50% of the respondents reported having had at least one mental disorder in their lifetime, and nearly 30% reported a disorder during the past year (Kessler et al., 1994). The rate of experiencing a disorder during the past month was an astonishing 18.2% (Kessler & Frank, 1997). Similarly, Jenkins et al. (1997) found that according to standard interpretational criteria, 16% of young adults in a national British sample could be classified as having a "neurotic" disorder during the past week. About half of the disorders were a mix of anxiety and depression (Jenkins et al., 2003). In a study conducted in Ireland, 2.4% of the population had been clinically depressed during the past month, and 6.0% during the past year; 12.2% had experienced a mental disorder of some type during the past year (McConnell, Bebbington, McClelland, Gillespie, & Houghton, 2002).

As medical illnesses have yielded to prevention and treatment in recent decades, mental disorders have risen in the rankings of major causes of suffering. For example, a single mental disorder, depression, is the third leading cause (after arthritis and heart disease) of loss in quality-adjusted life years (a measure of longevity that factors in quality of life), ranking above cancers, stroke, diabetes, and obstructive lung disease (Unutzer et al., 2000). Murray and Lopez (1997) estimated that by 2020 depression will be the second leading cause in the world for disability-adjusted life years (an alternative measure of longevity factoring in loss of ability to do the normal tasks of everyday life), being the first cause of disease burden in the developed societies and the third leading cause in poorer nations.

Not only is mental disorder common, but it almost always causes poor well-being (e.g., Packer, Husted, Cohen, & Tomlinson, 1997). Much research has been conducted on two major forms of mental illness, depression and anxiety, and this work has shown that these disorders lead to significant decrements in well-being. This is not surprising, because these disorders directly worsen people's evaluations of the world, the future, and themselves. Koivumaa-Honkanen, Honkanen, Antikainen, and Hintikka (1999) found that people with depression or anxiety disorders tend to have low life satisfaction. Spitzer et al. (1995) found that people with mood disorders have a lower quality of life than people with arthritis, cardiac disease, pulmonary disease, or diabetes. Although bipolar disorder is sometimes thought to be a pleasant kind of euphoria, this is distinctly false, and individuals with this disorder report significantly lower levels of well-being than others (Arnold, Witzeman, Swank, McElroy, & Keck, 2000).

Other forms of mental disorders, such as schizophrenia, also lower well-being. For example, Koivumaa-Honkanen et al. (1999) found that life satisfaction tends to be low among people with schizophrenia, although they generally have higher life satisfaction than people with depression and anxiety disorders. Suslow, Roestel, Ohrmann, and Arolt (2003) found that schizophrenics reported more fear and disgust than nonschizophrenics, and that anger and guilt increased with the chronicity of the disease. Suicide rates are 20 to 50 times higher among schizophrenics than in the general population (Pinikahana, Happell, & Keks, 2003). The level of well-being schizophrenics report depends on the overall severity of their symptoms (Bradshaw & Brekke, 1999). Conversely, in one of our studies (Diener & Seligman, 2002), we found that the happiest people showed very low levels of symptoms of mental illness. Our very happy respondents scored low on most pathology scales of the Minnesota Multiphasic Personality Inventory, such as Hysteria, Schizophrenia, and Hypochondriasis.[3]

A significant amount of family suffering also occurs because of mental disorders. Schulz, Visintainer, and Williamson (1990) reviewed evidence showing that the cumulative effects of caring for someone with mental illness increase the caregiver's chances for a psychological disorder, as well as physical illness. Martens and Addington (2001) found that family members are stressed substantially by having to care for a relative with schizophrenia. The parents of drug addicts experience higher levels of stress compared with other parents (Andrade, Sarmah, & Channabasavanna, 1989). Having a parent with depression or another mental disorder may contribute to the likelihood of depression (Hammen, 2000).

In stark contrast to the improvement in economic statistics over the past 50 years, there is strong evidence that the incidence of depression has increased enormously over the same time period. This is a very revealing paradox. People usually think that depression is intimately related to bad life circumstances, but things have never been better objectively. The hands on the doomsday clock are farther away from midnight than ever before since its debut. Worldwide, there are fewer soldiers dying on the battlefield than at any time in the past hundred years. A smaller percentage of children are now dying of starvation than at any time in human history. There is more purchasing power, more music, more education, more books, worldwide instant communication, and more entertainment than ever before. But contrary to the economic statistics, all the statistics on depression and demoralization are getting worse. These facts indicate that depression is not about poor objective circumstances, and if policymakers rely only on economic statistics, they will completely miss this erosion of well-being.

Four lines of evidence point to a huge increase in depression over the past 50 years: First, the Epidemiological Catchment Area (ECA) study sampled a large and representative group of Americans from catchment areas in the United States and Canada and showed that people born earlier in the 20th century experienced much less depression in their lifetime than people born later (Robins et al., 1984). The data are remarkable. People born around 1910 had only a 1.3% chance of having experienced a major depressive episode, even though by the time of the study they had had at least 75 years to develop the disorder. In contrast, those born after 1960 already had a 5.3% chance, even though they had been alive for only 25 years. Each succeeding cohort in each area had a higher rate of depression than cohorts before it. There were huge differences in the rates of depression across cohorts, suggesting a roughly 10-fold increase in risk for depression across generations.

Second, a massive international study showed similar rises in depression (Cross National Collaborative Group, 1992). In this study, a sample of almost 40,000 adults from the United States, Puerto Rico, Germany, France, Italy, Lebanon, New Zealand, and Taiwan had diagnostic interviews. All national groups showed dramatic increases in risk for depression across the 20th century, despite tremendous economic growth in almost all of these locations.

Third, diagnostic studies of relatives of people who have clinically severe depression show that younger relatives are much more susceptible to depression than older relatives (Klerman et al., 1985). Thousands of relatives of 523 people with affective disorders were given a structured diagnostic interview to determine the prevalence of major depressive disorders in this sample. Consider, for example, women born in 1950 versus women born before 1910. By age 30, about 65% of the women born in 1950 had had one depressive episode, whereas fewer than 5% of the women in the 1910 cohort had had such an episode by the time they were 30. For almost all age groups, a more recent year of birth conferred more and earlier risk for major depressive disorder. Overall, we estimate the risk increased at least 10-fold across two generations.

Fourth, a study of the Old Order Amish living in Lancaster County, Pennsylvania, showed very low rates of unipolar depression (Egeland & Hostetter, 1983). The Amish are an ultraconservative Protestant sect descended entirely from thirty 18th-century progenitors. No electricity is permitted in their homes, they use horses and buggies for transportation, alcoholism and crime are virtually unknown in this community, and pacifism is absolute. Using diagnostic interviews, researchers found 41 active cases of major depressive disorder in this group for the 5-year period from 1976 to 1980; this is a 5-year prevalence of about 0.5% (there were about 8,000 adult Amish in the area). If we compare this rate with the parallel figures from the ECA study, we can roughly estimate that the Amish have about 1/5 to 1/10 the risk for unipolar depression that neighboring Americans from modern cultures do. In addition, despite the lack of luxury amenities, the Amish are satisfied with their lives (see Table 1).

[3]The Minnesota Multiphasic Personality Inventory (MMPI) is an instrument for measuring personality and psychological adjustment. Most of its scales assess tendencies toward various forms of psychopathology.

Sadly, it is young people who are now particularly at risk. Forty years ago, the average age for the first episode of depression was 29.5 (Beck, 1967), and depression was unusual in adolescence. Now it typically attacks its victims for the first time when they are teenagers. For example, Lewinsohn and his colleagues gave diagnostic interviews to 1,710 randomly selected adolescents living in western Oregon and found that by age 14, 7.2% of the youngest adolescents, those born in 1972 through 1974, had experienced a severe depression; in contrast, 4.5% of the older adolescents, those born in 1968 through 1971, had experienced severe depression (Lewinsohn, Rohde, Seeley, & Fischer, 1993). The high percentage of youth experiencing severe depression at such a young age is surprising and dismaying. Depression tends to recur, and a first onset during the teen years typically results in several more episodes in a lifetime than a first onset in middle age.

Is Increasing Depression a Measurement Artifact?

Is the dramatic increase in depression over the past 50 years an artifact? Three possible reasons why this trend might be an artifact are salient: First, perhaps diagnosis has improved, and depression is now better recognized because it is the "flavor of the month." Second, troubles that used to be thought of as an inevitable part of "life" may now be thought of as a disease that ought to be cured, so what people label as depression now may not have been so labeled before. Third, memory of recent events is better than memory of distant events, and depressive episodes from long ago may simply have been forgotten by the respondents in the studies showing rises in the incidence of depression.

The first and second potential reasons are both undercut by the same argument. In the studies investigators did not ask, "Were you ever depressed?" Rather, they asked questions that covered the complete series of symptoms for depression, for example, "Was there ever a time in your life when you tried to kill yourself?" "Was there ever a time in your life when you cried every day for two weeks?" Then from the answers to these specific symptom questions, a diagnosis was made. So the increasing rates and earlier incidence of depression that were reported were not based on how respondents labeled their experiences, but were based on behaviorally based items. It also seems unlikely that the results are an artifact of memory, because no such fading of memories was found for delusions and hallucinations, or for alcoholic binges; these do not show an increase over time that would indicate that memories of symptoms long ago were systematically forgotten. So the order of magnitude increase in depression over the past 50 years is likely a real phenomenon and not an artifact of the measures.

Many Psychological Interventions Are Effective

Although mental disorders are common, are on the rise, and cause significant decrements in well-being, many disorders are treatable. In a large-scale study of psychological treatments, Seligman (1995) found that clients benefit substantially from psychotherapy. Fourteen of the major mental disorders are relievable, and two (blood and injury phobia, panic disorder) are virtually curable by specific forms of medications or psychotherapies. From a review of studies, Tramontana (1981) concluded that about 75% of adolescents improve in psychotherapy, about twice as many as improve without receiving therapy. The benefits of psychotherapy were also demonstrated in a study by Gloaguen, Cottraux, Cucherat, and Blackburn (1998), who found that cognitive therapy is more effective in treating depression than antidepressants, and more likely to prevent long-term relapse (see also Steinbrueck, Maxwell, & Howard, 1983). Westen (2001) reported that treatments for panic disorders are effective and have lasting effects; treatments for depression and generalized anxiety have significant short-term effects, but these might not last over time. Kashdan and Herbert (2001) reviewed the literature on the treatment of social anxiety in children and found that various forms of cognitive behavior therapy are efficacious.

Numerous studies demonstrate that interventions not only reduce symptoms, but also increase well-being. For instance, McCrady, Stout, Noel, Abrams, and Nelson (1991) found that a treatment for alcoholism that involved the spouse led to gradual improvements in abstinence, as well as higher reports of well-being and lower rates of marital separation. Longabaugh et al. (1983) found that two treatments for alcoholism that involved spouses were equally effective in producing abstinence, but that the treatment that allowed patients to go home at nights and on weekends rather than remain hospitalized led to reports of higher well-being. This is but one example of well-being measures providing information beyond what can be gleaned from recovery rates and economic indicators.

It is an important methodological point, however, that the mental illness tradition and the well-being tradition have barely shaken hands. Mental illness investigators only infrequently measure well-being and are content with measures of suffering and its diminution. Such measures almost certainly underestimate the benefits of treatments and miss entirely the likelihood that increased well-being plays a role in the treatment and prevention of mental illness. We strongly recommend the use of both well-being indicators and the usual symptom measures in the future study of mental illness.

Despite the fact that therapy is effective, a large percentage of people with mental problems go untreated, even in wealthy, industrialized societies. For example, McConnell et al. (2002) found that in Ireland, care was provided for only 29% of episodes of mental illness, and care for certain problems, such as anxiety disorders, was provided much less frequently. Kessler et al. (1994) found that in the United States, the majority of individuals with psychological disorders fail to obtain treatment, and even individuals with three or more disorders receive treatment less than half of the time.

Policy Implications

Both economic and well-being analyses of mental disorders lead to the conclusion that these problems are significant and costly. Economic statistics alone, however, completely fail to capture the decrease in well-being caused by mental disorders, particularly because mental disorders have increased substantially over the same period that developed economies have tripled. The two types of statistics are complementary in shedding light on different aspects of the problem, as well as interventions. For instance, an economic analysis shows the monetary costs of mental disorders and the dollar benefits of various forms of treatment, whereas a well-being analysis captures the tremendous suffering caused by mental disorders and the benefits to well-being that treatments provide. It is interesting to note that higher rates of mental illness and ill-being experienced in a society can increase GDP if more money is spent on hospitalization, crime prevention, and imprisonment of individuals with disorders. Paradoxically, a mounting problem in well-being might increase economic indicators, and the increase in GDP does not indicate whether the money is spent effectively.

The most important policy implication of the increased incidence of mental disorders is that people with these disorders should obtain more help in getting treatment. Although such treatment can be expensive, failure to treat individuals can be costly, both in terms of well-being and in terms of losses in productivity, increases in crime, and so forth. Although interventions do not always permanently cure mental disorders, they can nevertheless often boost well-being. A related implication is that all studies on the outcome of treatment ought to include measures of well-being in addition to mere symptom relief, and these should be used in evaluating the effectiveness of interventions (Lehman, 1996).

New policies could help the family members of people with mental problems. For example, policies can establish and support more assisted-living arrangements—board-and-care programs, apartments where support is provided, and group homes (e.g., Nelson, Hall, & Walsh-Bowers, 1999)—in order to reduce the burden on caregivers and increase the well-being and security of the patients. Rimmerman, Treves, and Duvdevany (1999) found that mothers who are caregivers to adult children experience reduced psychological distress if the children participate in day treatment. In a quasi-experimental longitudinal study, Zarit, Stephens, Townsend, and Greene (1998) found that the use of adult day care for people with dementia reduced stress and improved psychological well-being in caregivers. These are but two of many examples showing that aid to caregivers can increase their well-being.

Conclusions About Mental Disorder and Well-Being

Many forms of mental disorder reduce well-being, and there are effective therapies that both alleviate the symptoms of the disorder and increase well-being. Remarkably, mental illness, particularly depression, has increased substantially over the same period that economic statistics have risen substantially. Decreasing the suffering and increasing the well-being of people with mental disorders should be a priority of any society that takes well-being seriously. Because such a high percentage of mental disorder and the attendant suffering goes unrecognized and untreated, we argue that monitoring well-being in addition to rates of disorder in the population as a whole would be very beneficial to a humane society that is committed to enhancing well-being for all citizens. We also urge that mental illness investigators include well-being measures in their studies. Furthermore, it is imperative that researchers uncover the roots of the rising levels of depression and anxiety so that preventive actions can be taken. Finally, research on effective treatments for mental disorders must be a top priority.

Social Relationships

The quality of people's social relationships is crucial to their well-being. People need supportive, positive relationships and social belonging to sustain well-being. Baumeister and Leary (1995) reviewed evidence showing that the need to belong, to have close and long-term social relationships, is a fundamental human need, and that well-being depends on this need being well met. People need social bonds in committed relationships, not simply interactions with strangers, to experience well-being. Economic indicators do not correlate well with the quality of social relationships and hence omit this key contribution to well-being. In some cases, policies based solely on economic analyses can harm social relationships and thereby decrease well-being. Furthermore, high well-being may abet positive social relationships.

Social Relationships Are Essential to Well-Being

Numerous studies support the conclusion that social relationships are essential to well-being. In our study of very happy people (Diener & Seligman, 2002), we found that every single respondent in our happiest group had excellent social relationships. Park, Peterson, and Seligman (2003) found that of 24 character strengths, those that best predict life satisfaction are the interpersonal ones. Examining data from both representative surveys of adolescents and adults and focus-group discussions, Lansford (2000) found that high-quality social relationships bolster well-being. Schilling and Wahl (2002) found that the rural elderly in Germany had larger family networks than the elderly people living in cities, and those family networks were partly responsible for the higher life satisfaction of the rural elderly.

People experience more positive emotions when they are with others than when they are alone (Pavot, Diener, & Fujita, 1990); although people have slightly more negative emotions when in social than in nonsocial situations, positive affect is substantially higher on average in social situations. Furthermore, both extraverts and introverts experience a higher amount of pleasant emotions in social situations. Menec (2003) found that frequency of participating in social activities is associated with greater happiness, better functioning, and lower mortality in the elderly.

Thoits and Hewitt (2001) found that people high in life satisfaction and happiness were more likely than others to be community volunteers. Harlow and Cantor (1996) found that older adults' participation in community service and other social activities was associated with greater life satisfaction, after statistically controlling for social support, individual differences in personality variables, health, and prior life satisfaction. Participation in these activities was most important for people who were no longer working. In addition, being married and having contact with one's children and siblings was a significant predictor of life satisfaction, as were congeniality and organizational membership. Social and community service had the strongest relation with life satisfaction (except for prior life satisfaction). Analyses controlling for prior satisfaction showed that organizational membership, congeniality, and social participation all predicted later life satisfaction.

Although receiving social support is often emphasized as a means of coping with stressors, evidence shows that giving support to other people might be at least as important. Fromm (1956) maintained that fully functioning adults not only need to be loved, but also need to love. In a study supporting this thesis, S.L. Brown, Nesse, Vinokur, and Smith (2003) found that giving social support is more important to longevity than receiving social support, and Herzberg et al. (1998) found that difficulties in giving social support to others is a risk factor for interpersonal stress. They measured interpersonal competencies, including the ability to provide emotional support to others, and found that various forms of interpersonal competence inversely predicted interpersonal stress a year later, even when psychopathology and the initial level of interpersonal stress were controlled.

Poor Social Relationships

Not only does companionship predict more positive outcomes, but lack of it predicts diverse problems. Hintikka, Koskela, Kontula, Koskela, and Viinamaeki (2000) found that both men and women with more friends had lower levels of mental distress than men and women with fewer friends. In a national survey on rates of mental illness in Great Britain, Jenkins et al. (1997) found that the highest rates of mental problems were found among unmarried people, single parents, and people living alone. Women with a confidant are less likely to be depressed and are more satisfied with their lives than women who lack a confidant (Antonucci, Lansford, & Akiyama, 2001). Elderly individuals who do not have confidants or companions report lower well-being than those who do, even when demographic, health, and economic factors are controlled (Chappell & Badger, 1989). Although all these correlations might be due to either relationships affecting well-being or the reverse, results we review later suggest that the influences are reciprocal.

Social isolation correlates substantially with low well-being (e.g., Argyle, 1987; Baumeister, 1991). Loneliness stems from a lack of confidants and friends, and in turn increases the risk of psychological problems, physical impairment, and low life satisfaction (Bowling, Edelmann, Leaver, & Hoekel, 1989). People feel lonely when their relationships are severed, and they feel anxious at the prospect of losing important relationships (e.g., Leary, 1990). Negative emotions result when people are excluded from social groups (e.g., Barden, Garber, Leiman, Ford, & Masters, 1985), and individuals with close social bonds suffer if they are separated for long periods of time (Baumeister & Leary, 1995). For example, wives of men who work on submarines often experience increased physical illness and depression during their spouses' absences (Beckman, Marsella, & Finney, 1979). Williams (2001) showed that ostracism from social groups can have a devastating impact on people, and that exclusion even from relatively unimportant groups can create strong negative feelings. Relocating to a new community increases risk for distress and depression among women (Magdol, 2002).

Hammen and her colleagues (e.g., Hammen, 1999; Hammen & Brennan, 2002) suggested that interpersonal problems are a root cause of depression. For example, women who have been depressed, but are not currently so, are less likely than women who have never had depression to be stably married; have more problematic relationships with their children, friends, and family; are more insecure in their beliefs about others; and experience lower marital satisfaction. It appears that the lack of strong and positive interpersonal ties can lead to depression, and that some part of the relationship problems of depressed people might stem from shortcomings in social skills. Hammen (1996) suggested that the majority of depression is caused by interpersonal problems arising from beliefs about others, stressful interpersonal events, dysfunctional social behaviors, and conflictual family relationships. Thus, social relationships constitute another major factor affecting well-being and ill-being that is not captured by economic indicators.

Marriage

Marriage serves as a major vehicle for companionship in Western societies, and marital dissolution is usually accompanied by emotional turmoil, depression, hostility, and loneliness, even when the marriage has become unhappy (Price & McKenry, 1988; R.S. Weiss, 1979). Mental-hospital admissions are highest in separated and divorced individuals, intermediate in the unmarried, and lowest in married individuals (Bloom, White, & Asher, 1979). Happily married individuals are less likely to have physical health problems or psychological difficulties than unmarried persons (DeLongis, Folkman, & Lazarus, 1988), and mortality rates are consistently higher for widowed, single, and divorced individuals than they are for married people (Lynch, 1979). People who are happily married experience less unemployment than those with troubled marriages (Forthofer, Markman, Cox, Stanley, & Kessler, 1996).

Research on widows also reveals the importance of social relationships to well-being. Stroebe, Stroebe, Abakoumkin, and Schut (1996) found that widows were more depressed than a comparison group of women who had not lost their husbands, and that depression was higher even several years postbereavement. Longitudinal findings support these cross-sectional data. Lucas, Clark, Georgellis, and Diener (2003) found that widows' life satisfaction dropped substantially prior to and after their husbands' deaths. More important, it took many years for life satisfaction to rise back near former levels, and it never quite returned to those levels.

Figure 4 shows the life satisfaction of individuals in the German Socioeconomic Panel Survey who underwent divorce or widowhood. In most longitudinal studies, participants are lost over time, and the samples at different time points may differ in ways that could affect the results. However, the data shown in the figure are based on changes within individuals, so the results are not affected by such problems. It is clear from the graph that divorce and widowhood both affect life satisfaction for many years. In the case of divorce, problems in the relationship lower life satisfaction for years before dissolution of the marriage, and in the case of both widowhood and divorce, there is decreased life satisfaction for many years afterward.

Causality

The literature supporting a link between supportive social relationships and well-being is strong. Perhaps the most important question is whether the direction of causality goes from social relationships to well-being. Certainly, the idea that high well-being leads to good relationships is also plausible. There is evidence, for example, that

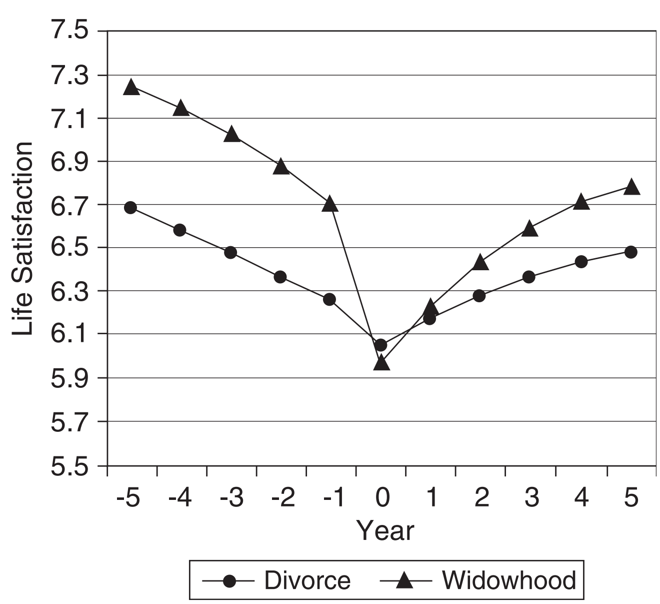

Fig. 4. **Satisfaction with life across the 5 years before and after a divorce or the death of a spouse.**

compared with people who stay single, people who marry are likely to be more satisfied with life in the first place, long before they marry (Lucas et al., 2003). Also, Cunningham (1988a, 1988b) reported evidence that people put into a pleasant mood became more sociable.

Several lines of evidence, however, point also to a causal arrow going from relationships to well-being. First, there is longitudinal evidence (e.g., Fig. 4) showing that people who lose an important relationship experience lower well-being, and that it takes them years to return near baseline. Second, data from controlled experiments isolate social exclusion or ostracism as causal. Third, a suggestive but interesting finding concerns individuals whose hearing is restored. Nehra, Mann, Sharma, and Verma (1997) found that after people with moderate to high hearing loss acquired hearing aids, their subjective well-being improved, and symptoms of anxiety and depression decreased. These results might have been due to better social involvement, at least in part. Finally, within-person data indicate that it is not just that happy people have better relationships than unhappy people. Rather, the same individuals are happier on average when they are with others than when they are alone (Pavot et al., 1990). These results again suggest that positive social contact causes well-being. Indeed, Kahneman et al. (in press) found that in only 1 of 15 activities of daily living (i.e., praying) was *affect balance* (positive minus negative emotions) greater when people were alone rather than with others. People seemed to enjoy the other 14 activities, such as exercising, resting, commuting, and working around the house, more when others were present than when they were alone.

Watson (2000) concluded that the relation between social relationships and mood is much stronger for positive moods than for negative ones: He found a within-person correlation of .24 between pleasant affect and social interaction, but only a −.08 correlation between unpleasant moods and social interaction. He also reviewed evidence of causality: For example, when people interacted with others in assigned social relationships, their positive affect increased (see also McIntyre, Watson, Clark, & Cross, 1991).

Thus, the causal path from social relationships to well-being moves in both directions. Our focus here, though, is on fostering well-being, and although it is clear that positive social relationships are an important cause of well-being, they are largely missed by economic indicators. Furthermore, it could be that some societal characteristics that foster economic growth in fact interfere with social relationships and therefore lower well-being. Again, it is clear that well-being indicators are a needed complement to current economic and social indicators.

Policy Implications

Current social indicators can capture phenomena such as crime, marriage and divorce, environmental problems (such as pollution), longevity and infant mortality, gender equality in schools, and the amount of land devoted to parks. Thus, social indicators can capture aspects of quality of life that add to the portrait drawn by economic indicators. Nevertheless, these social indicators fail to fully capture the well-being of nations because they do not reflect people's actual experiences—the quality of their relationships, the regulation of their emotions, whether they experience work as engaging, and whether feelings of isolation and depression permeate their daily living. In other words, the social indicators are important, but they do not fully capture well-being.

We do not mean to oversimplify the relation between social contact and well-being. People differ in their need for companions, and social relationships can be controlling and negative rather than rewarding. There are many open questions, such as what the most important aspects of social contact are, and whether the rewarding nature of friendships is absolute or depends on people's expectations. Another question is whether other forms of companionship can take the place of traditional marriage in modern societies. It does appear, however, that social relationships are centrally important to well-being.

Governments cannot solve most problems of social relationships. For example, they cannot prevent widowhood. Nevertheless, because strong social relationships are critical to well-being, there are policies that businesses, governments, and other institutions should consider. For example, the military and corporations should relocate employees and their families only when it is absolutely essential to do so, or when an employee requests it. Automatic moves every few years leave individuals without strong community ties, and with fewer close friends in times of crisis. Also, organizations should respect people's friendship patterns at work, and not try to eliminate friendship opportunities in the mistaken idea that employees will work harder if they are not distracted by the presence of friends. Indeed, research by the Gallup Organization shows that people who work in units where they have a "best friend" perform better than those who do not have a best friend in their unit (Harter et al., 2002). Recognizing the profit in having happy workers, companies are increasingly implementing policies that recognize the family needs of employees, such as their need for bereavement and parental leaves of absence.

School curricula can explicitly educate young people about the importance of long-lasting social relationships and how to increase their chances for a rewarding marriage. Given that not every student will enter a traditional marriage, education about how to develop and nurture supportive and intimate social relationships in general is an educational imperative. Social skills should be a standard component of primary and secondary education.

Mobility is now a hallmark of American society. Yet this mobility has costs in the form of loosened social ties, reduced community involvement, and lower trust. A number of pathologies seem to spring from the lack of a "moral net," the extended family that reinforces and enforces cultural norms (Naroll, 1983). Marginal individuals such as the chronically mentally ill may suffer the most from the lack of strong and extended family ties. Twenge (2002) concluded that increasing levels of dysphoria in modern societies are due not only to environmental stressors, but also to decreasing social connectedness. Thus, policies that encourage long-distance mobility and discourage individuals from forming long-lasting community ties can be dangerous to well-being. Similarly, socialization that emphasizes individual entitlements in lieu of aiding family, friends, and community will likely harm the well-being of society.

A SYSTEM OF NATIONAL INDICATORS

There was a time, when many basic needs were unmet, that economic indicators were a very good first approximation of how well a nation was doing. As nations became wealthier and basic needs were largely met, economic indicators increasingly missed their target. We have argued to this point that national economic indicators alone are now "out of sync" with national well-being in the developed nations. While wealth has trebled over the past 50 years, for example, well-being has been flat, mental illness has increased at an even more rapid rate, and data, not just nostalgic reminiscences, indicate that the social fabric is more frayed than it was in leaner times. These inadequacies lead us to advocate that an ongoing system of indicators be instituted by governments and organizations to track well-being over time. It is clear that policymakers now care about well-being, in addition to economics, because policies are being created on the basis of mere guesses and romantic sentiments about what will enhance well-being (e.g., family leave). These guesses are undoubtedly correct in some cases, but they are incorrect in other cases. For this reason, ongoing measurement of well-being in representative samples and in diverse domains of life is required to confirm or disconfirm the efficacy of policies instituted to increase well-being.

The precursors of national well-being measures are in place. These nascent measures are emerging from large-scale national surveys of well-being, surveys of mental health, and many smaller studies focused on particular groups and specific domains of life. For example, the German Socioeconomic Panel, which is a large, ongoing annual survey of life satisfaction in Germany, and the Eurobarometer, which is conducted at regular intervals in the European Union nations, include well-being questions. However, we are proposing something much more ambitious and deep—a full-scale set of measures, including experience sampling of certain subsamples, that will be sensitive to changes of well-being and ill-being in the major domains of life, such as work and health, as well as narrower measures of trust, stress, meaning, and other components of well-being. We can now outline the scope of this project in broad terms. Although large, it will cost only a tiny fraction of what the current system of economic indicators costs. A set of national indicators of well-being should

- Include questions that are relevant to policy
- Broadly and representatively sample various stakeholder groups in a nation
- Include measures of broad facets of well-being, such as life satisfaction, having purpose and meaning in life, trust, engagement, depression, and positive and negative emotions
- Include narrower well-being measures related to different aspects of life, such as work, health, family, community, and leisure
- Include permanent measures that are used in all samples, as well as topical measures and samples that focus on specific current policy issues
- Include in-depth measures over time on subsamples in order to measure experience as it occurs and not rely on people's recall of that experience
- Track subsamples longitudinally to provide a better understanding of changes across time

In our review, we did not systematically discuss the various aspects of well-being (e.g., pleasant emotions vs. engagement or finding meaning and purpose in life) in each domain. Not only would this be beyond the scope of this report, but rarely have studies used a full set of measures. Although we often discussed "life satisfaction," this was primarily because a measure of this global construct is most often included in existing surveys, not because we want to promote life satisfaction as the key well-being variable. A national indicator should include several global indicators, such as life satisfaction, but it should also target positive and negative emotions in specific areas, such as work life, health, social relationships, and mental health, and it should be fine-grained, breaking life satisfaction down into its constituent parts.

What variables should be assessed in a national index? This will require serious discussion among scholars, as well as further research. We (Seligman, 2002) have suggested that well-being includes positive emotions and moods (The Pleasant Life), engagement (The Good Life), and having meaning in life (The Meaningful Life).

Other investigators have outlined well-being components using statistical approaches, such as factor analysis. For example, Lucas et al. (1996) found that life satisfaction, positive affect, and negative affect are separable but related concepts when assessed by multiple methods. There are many additional variables that might be desirable in a set of national well-being indicators, including pleasant emotions within domains such as work and marriage, trust in strangers versus friends, depression and anxiety, and moods during various activities of daily life.

Economic indicators have evolved over many decades through collaborations among many economists. In contrast, there have been very few systematic research projects to refine well-being measures and fully validate their meaning. Thus, we propose not only the implementation of a beginning set of national measures, but also a large-scale research program to refine indicators of well-being.

A national system of well-being measures will cost millions of dollars each year. This cost, however, is tiny compared with the cost of economic measures, which are now glaringly inadequate as measures of how developed nations are doing. The benefits promise to be enormous. They will include policy changes that over time will increase most people's well-being. If such a system works even to a small degree in the United States, the total benefits would be large in a nation of 280 million people.

Revisiting the Advantages of Well-Being Measures and Shortcomings of Economic Measures

If a national system of well-being indicators were instituted, what new information would be obtained that is not already captured in economic indicators? After all, mental disorders produce lower productivity as well as lower well-being, and thus perhaps economic indicators suffice to alert policymakers to the problems in this area, as well as in other areas. The most important contribution of a national system of well-being indicators would be that they could focus the attention of policymakers and the public specifically on well-being, and not simply on the production of goods and services; one of the main benefits of well-being measures is that they add a valuable perspective beyond a cost-benefit market analysis in evaluating societal structures and interventions.

Not only would a set of national well-being indicators provide answers to important questions, but they would ensure that certain questions were addressed by policymakers. In Table 2, we show some issues that are addressed by economists in our six domains, and examples of questions that the well-being approach would raise about these same domains. The examples illustrate how national indicators of well-being would draw interest to a new set of questions that complement those issues that are framed by economists. These questions would reframe some policy questions, and in some cases raise new questions.

In the realm of mental health, for example, policymakers would be led by well-being indicators to consider family suffering and burden, as well as the suffering of the individuals involved, when evaluating

TABLE 2
Examples of the Types of Questions Stimulated by the Economic and Well-Being Approaches

Domain	Economic approach	Well-being approach
Society	How can the government stimulate economic growth?	How does economic growth influence well-being?
	How does central bank policy influence unemployment and inflation?	How does governance influence well-being?
Income	How does income inequality influence economic growth?	Does income inequality influence well-being?
	How do tax rates influence economic growth?	How does unemployment affect well-being?
Work	How does pay influence productivity?	What makes a job enjoyable and engaging?
	What are the causes of unemployment?	Are happy workers more or less productive than unhappy workers?
Physical health	How much is productivity reduced by illness?	Do individuals who report high well-being have better health than those who report low well-being?
	What are the monetary costs and benefits of various treatments for diseases?	What illnesses most interfere with happiness?
Mental disorders	How do mental disorders interfere with productivity?	How much misery do mental disorders cause?
	How costly are mental disorders to society?	Does therapy enhance the well-being of persons with mental disorders?
Social relationships	How do couples jointly determine their participation in the labor market?	Why are married people on average happier than unmarried people?
	How are resources distributed within a household?	How does geographic mobility influence well-being?

mental health interventions. Economic analyses focus policymakers on lost workdays and the costs of mental treatment, but do not capture factors such as whether treatments enhance well-being and whether well-being buffers against mental illness. When people continue to work despite their disorders, economic indicators can totally miss the suffering that is present. People with depression or anxiety disorders, for example, sometimes continue to function in the workplace, but are miserable. Furthermore, the economic indicators give no hint as to why the productivity of these individuals might be low. Although an economic analysis suggests that people should use their disposable wealth to alleviate their own suffering, it is likely that many factors besides income determine when people receive mental health services.

The effects of national well-being measures would go beyond the effects on government policymakers. A well-being approach to the assessment of people with mental disorders could lead to strong public sentiment to include adequate treatment for mental disorders in health insurance and health-maintenance organization plans. In focusing attention on the immense suffering and lack of functioning caused by mental disorders, well-being measures would serve to highlight the need for multiple approaches and large-scale interventions to help individuals with mental disorders and perhaps reduce the frequency of such disorders.

Social relationships is an area that shows the importance of a variable that has not been captured by economic indicators. Many people intuitively realize that family and friends are important to happiness, but national attention continually gets focused on economic indicators that are widely reported in the media. In considering what vocation to pursue, for example, students easily can obtain extensive information about potential income, but very little information about how meaningful or engaging particular jobs will be. Indeed, because of the lack of systematic well-being indicators, young adults might not systematically compare professions and consider how engaging the work is or how much stress it involves. If they do consider how engaging, meaningful, or stressful the work is, they are likely to have garnered this information from a favorite television drama series rather than from systematic research findings.

Economic models are built on the assumption that people choose alternatives to maximize their well-being. But one problem with these models is that people do not necessarily realize what might enhance their well-being best; instead, they make choices on the basis of hunches and cultural prescriptions. Thus, a system of well-being indicators would make economic indicators more efficient by providing better information that people could use to make choices. Currently, people have clear information on how to pursue their economic goals. One reason these goals may seem to take on such importance is that it might not be as clear to them how to achieve higher well-being. A set of national indicators could provide information that would make the pursuit of well-being an informed pursuit.

We envision that economic and well-being indicators will often be used in tandem. Economic growth is considered to be very important in most nations. A central question is when, and to what degree, economic growth produces increases in well-being, and when it works against well-being. Only by supplementing economic indices with well-being indicators can one hope to answer such questions.

By understanding some of the limitations of economic indicators, one can better appreciate the complementary role of well-being indicators. In some cases, economic measures are assumed to serve as a proxy for well-being. However, if certain types of consumption enhance well-being and other types of consumption do not, this fact is lost when all goods and services are lumped together. For example, the consumption of certain status goods might not enhance well-being among people who have a competitive nature, because relative position will remain the same despite the growth of these goods; in contrast, the well-being provided by public parks and green spaces might not be constrained by relative position. Direct measures of well-being will allow researchers to examine how various forms of consumption enhance quality of life. For example, it might be that better schools and reduced commuting enhance well-being, whereas status goods, construction of prisons, and cigarette consumption decrease well-being in the long run, but all are given equal weight in national GDP. Direct measures of well-being will allow analysis of these effects.

Well-being indicators can supplement economic indicators, particularly when the economic indicators have large blind spots. For example, GDP is used as a measure of the material well-being of a society because it is designed to capture market production and therefore the goods and services that are produced and consumed in a society. But, for example, GDP substantially underestimates levels of well-being in a society because it does not fully capture production and consumption in some important areas. Housework and other household production (e.g., cooking, laundry, and child care) are not included in these indicators, and are counted in GDP only when they are purchased from outside the home. Thus, a rise in GDP in this sector might not signify an actual rise in material quality of life, but might signify only altered lifestyles (e.g., hiring child care rather than providing it oneself) that might or might not represent improving quality of life (and does not even necessarily indicate that the amount of goods and services produced and consumed has even risen). We are not arguing that household production should be compensated by the government, or that it is necessarily better for well-being than services provided outside the home. What we are describing is the paradox that the very same types of activities and services may or may not count in GDP, depending on who performs them. Because household production can represent as much as 25 to 50% of an economy (Frey & Stutzer, 2002a), it is widely recognized by economists that this represents a blind spot in the GDP measure. Household production and leisure can add approximately 150% to the conventional GDP measures, although this figure varies dramatically across societies and across time, making it difficult to make comparisons.

Another example of overlooked production in national accounts of GDP are the shadow economies in many nations, the production and exchange of goods and services that are not reported to government agencies (Frey & Stutzer, 2002a). For example, people might pay cash for services to avoid taxes, and these services could then go uncounted by authorities. In some nations, the shadow economy is as large as 75% of the economy reported to officials, making GDP a very inaccurate figure in these instances. Volunteer activity (e.g., in schools and among the poor) is also omitted from the GDP. "Regrettables" such as police protection, prisons, some legal services, mental health services, purchases of cigarettes, gambling, and commuting also are part of GDP even though high expenditures on these things do not necessarily mean a high quality of life. Although a nation's expenditures on regrettables can be salutary in some respects, as is the case for money spent treating mental disorders, money spent on regrettables indexes problems that interfere with well-being.

Non-market goods in general, and social interventions in particular, are not counted in national income, although they can substantially influence well-being. As two economists, Frey and Stutzer (2002a), wrote: "These and other shortcomings of national product are generally known, but the concept is still the center of political, economic, and media attention" (p. 37).

The substantial limitations of GDP make it a measure with a large margin of error when it serves as an index of quality of life. Issues related to household production, volunteer activity, shadow economic activities, and spending on regrettables are known to economists, but not recognized by the public. Other economic indicators, such as the consumer price index, also have nontrivial limitations. The price of goods, for example, is based on marginal demand, so that goods with great value to well-being are given little value if they are plentiful, even though they may contribute substantially to well-being. Furthermore, practical measurement problems, such as how to value new goods, plague economic indicators.

Another limitation of indices of national income such as GDP is that they do not include externalities, side effects of production and consumption that do not result in market transactions. For example, the environmental costs of factories and consumption are not subtracted from national accounts. Another shortcoming of economic measures in terms of their links to well-being is that they rest on models of rational choice, which posit that people follow a set of logical rules when making economic choices. However, recent work (e.g., Kahneman, 1994; Schwartz, 2004; Sunstein & Thaler, in press) in psychology and economics reveals that people do not always make rational choices, and that a surfeit of choices does not necessarily enhance well-being. Furthermore, people are not adept at predicting their future affect in different situations (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998), and therefore economic choices do not necessarily enhance well-being. Thus, measures of well-being are needed because of the inherent limitations of economic measures as reflections of well-being. Furthermore, it is possible that a strong emphasis on economic growth can interfere with well-being (Easterlin, 1996; Lane, 2000).

In sum, well-being measures will add information needed by leaders, as well as by all citizens, to make informed choices in a wealthy society. When people evaluate different possible courses of action—at the individual, corporate, and governmental levels—well-being measures can add a perspective that is not fully captured by existing indicators. In addition, well-being measures will prove important because the psychological Heisenberg principle is at work—what a society measures will in turn influence the things that it seeks. If a society takes great effort to measure productivity, people in the society are likely to focus more attention on productivity, sometimes to the detriment of other values. If a society systematically and regularly assesses well-being, people will focus more of their attention on well-being, and learn more about its causes.

The Desirable Outcomes of High Well-Being

Why is more well-being an important goal for a nation? First, existing evidence indicates that across the board, people high in well-being function more effectively than people low in well-being: They are likely to have more successful relationships, to be more productive at work, to have higher incomes, and to have better physical and mental health. Table 3 summarizes several benefits of high well-being reviewed earlier in this report—advantages that are valued by most individuals. Second, well-being is a meter that tells individuals that their lives are on track, and that they are achieving their goals and accomplishing valued ends. In a democratic society that respects the

TABLE 3
Likely Advantages Accruing to Individuals With High Well-Being

Domain	Advantages
Society	Well-being of the populace might facilitate democratic governance.
Income	Happy people later earn higher incomes than unhappy people.
Work	Satisfied and happy workers are better organizational citizens than unhappy workers.
	Work units with high satisfaction have more satisfied customers than units with low satisfaction.
	Satisfaction of work units may correlate with productivity and profitability.
Physical health	High well-being may correlate with longevity.
	Individuals low in well-being have compromised immune systems and are more likely to have certain diseases compared with individuals high in well-being.
Mental disorders	The happiest individuals score low in psychopathology.
Social relationships	High well-being is associated with increased probability of marrying and staying happily married. It is also associated with increased numbers of friends and social support.

importance of individual choice, better well-being is an inherent goal—more basic, as the Declaration of Independence contends, than higher income. Finally, national well-being is important because it serves as a global measure of how successful a nation is in fulfilling the needs, the goals, and the values of its citizens.

Are Well-Being Indicators Politically Neutral?

An important question is whether well-being indicators would foster a leftist (or rightist) agenda, and therefore represent a specific political agenda. For example, a number of findings on well-being point to government interventions that might alleviate suffering and increase well-being (e.g., more adequately subsidizing treatment of mental illness), and some interventions requiring government expenditures are associated with a liberal political philosophy. However, many well-being findings point to societal expenditures that are compatible with a conservative viewpoint. For example, market democracies have much more well-being than totalitarian dictatorships, so military expenditures that protect and extend democracy will increase global well-being. Another example is the well-being that rests on strong family and friendship ties. We are not advocating marriage for everyone just because married people on average are happier than unmarried people, but we do argue that government policies should be aimed at cementing strong social ties. This could mean offering tax breaks to married couples (a conservative proposal), and it could mean adopting marriage for gay and lesbian couples (a liberal position). The findings that religious individuals tend to report higher well-being than nonreligious people, that inequality does not invariably result in lower well-being, and that the offspring of unstable and terminated marriages report lower life satisfaction than the offspring of intact marriages (Gohm, Oishi, Darlington, & Diener, 1998) are also congruent with conservative values. Conversely, liberals can take heart in other specific findings, such as that unemployment has lasting negative effects, that certain social-service programs offered by the government are likely to reduce ill-being, and that increased income is likely to raise the well-being of poor people more than it does the well-being of the well-off. Again, we do not mean to imply that governments should directly support religion, or that huge inequalities are fine; we do mean to say that well-being can add another perspective to policy debates in these areas.

So we believe that measures of well-being are—and must be—exactly as neutral politically as are economic indicators. The indicators are descriptive, not prescriptive, and must remain so. They simply yield facts that can be used either by the left or by the right, and therefore they provide an added way to better assess the claims of various political viewpoints by revealing how policies actually influence well-being. Furthermore, well-being is not the only criterion that liberals and conservatives use in deciding which policies to advocate. For instance, liberals might advocate for greater equality in society regardless of whether it increases well-being.

What of the noninterventionist view that the government that governs best governs least? Would this antipaternalism not be hostile to collecting well-being measures on a national level? First, it should be noted that taking economic indicators should be as antithetical or compatible with noninterventionist philosophy as taking well-being indicators. Second, of all people, noninterventionists would be well served by having available measures of well-being. After all, if lack of interventions enhances well-being, this ought to be manifested in the measures. Furthermore, even people who believe that governments should rarely intervene in everyday affairs might nevertheless accept that the measures have value to corporations for making work life more engaging and enjoyable, to local institutions for providing better parks and facilities, and to individuals for making informed choices about their well-being. What is appropriate for individuals and organizations might not be appropriate for central governments; yet measures of well-being can serve a wide constituency at multiple levels, and thus need not be connected with central-government interventions.

One objection to our argument is that the economy interconnects everyone, whereas happiness might be more of a private, individual affair. If so, it could be argued that it is more justifiable for governments to intervene in the economy than in matters related to well-being. However, well-being can be influenced strongly by what other people do, and by the conditions in society. Take the unhappy state of present-day Russia, for example. The loss of stability in that nation substantially depressed the well-being of the society. Although temperament and individual choices can strongly influence well-being, just as they can influence an individual's economic prosperity, community and societal conditions can also substantially influence people's well-being. As in all things political, balancing societal well-being against spending on luxury goods is likely to give rise to tensions, and well-being indicators will yield valuable information to help resolve such debates.

Will Well-Being Replace Money?

We titled this monograph "Beyond Money," not "Instead of Money." It would be sophomoric to believe that people will soon forsake their desires for substantial amounts of goods and services. In the introduction, we suggested that economic models served well when needs went largely unmet, but that these models are less relevant in a time of plenty. However, the money economy has too strong a proven track record for either individuals or nations to quickly abandon it. Not only have capitalism and the industrial revolution at times led to rampant consumerism, but they have allowed large advances in sanitation, education, health, parks, and even, perhaps, virtue (Easterbrook, 2003). At the individual level, the economic model allows people to structure their time in the pursuit of concrete goals, and to readily track progress toward specific goals. It is possible that people derive considerable well-being from goal pursuits related to earning income, and from the activities of consumption, and therefore even a well-being economy will include these activities. Thus, although laments about how economic activity can interfere with family and religion are often heard, it is likely that the economic model will remain dominant for many decades to come. We do not contest this fact of life.

Well-being is not a panacea that will in itself solve all of the world's problems. Even if well-being one day becomes the dominant paradigm, it must be supplemented by other values of societies, and people must be socialized for humane values for the well-being economy to be a desirable concept.

One challenge for a society based on well-being is that individuals do not have ready and concrete models of how to pursue the goal of greater well-being, other than following the economic model. When people are asked what would improve the quality of their lives, the most frequent response is higher income (Campbell, 1981). It is not clear to people how they would achieve greater positive emotions and life satisfaction. Until there are concrete and proven steps toward these noneconomic aims, people are unlikely to abandon the dominant economic paradigm. Thus, psychologists need to demonstrate compellingly the malleable factors that can increase well-being before the well-being paradigm can replace the economic one. In addition, it should not be forgotten that the theoretical models on which the economic model is based are in many cases more sophisticated than current scientific models of well-being. Therefore, although an economy focused on well-being might be an important long-term goal, in the short term it is sufficient to suggest that well-being indicators will complement economic ones.

THE CENTRAL PLACE OF PSYCHOLOGY IN CREATING NATIONAL WELL-BEING

We reviewed in the previous sections several of the factors that lead to well-being—to frequent pleasant emotions and engagement, to finding meaning and satisfaction in life, and to low levels of stress and depression. The existing findings suggest the following partial formula for high well-being:

- Live in a democratic and stable society that provides material resources to meet needs
- Have supportive friends and family
- Have rewarding and engaging work and an adequate income
- Be reasonably healthy and have treatment available in case of mental problems
- Have important goals related to one's values
- Have a philosophy or religion that provides guidance, purpose, and meaning to one's life

CONCLUDING REMARKS

If high well-being is the overarching goal of all nations, national indicators of well-being are crucial to assessing the impact of national and corporate policies. Rudimentary indicators of well-being are now available, and they provide the fascinating findings reviewed here. But much better measures are needed.

Economic indicators have for the most part served society well. However, these indicators have glaring shortcomings as approximations, even first approximations, of well-being. Scientists are now in the position to assess well-being directly, and therefore should establish a system of national measures of well-being to supplement the economic measures. Indeed, it can be argued that the well-being measures should be the central ones, and that the economic indices are best understood in their relation to enhancing well-being. We have reviewed a number of important factors that influence well-being but are not captured by existing indicators, and we have shown the benefits of well-being in producing a successful society. It is time to grant well-being a prominent place in policy discussions.

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REFERENCES

Abbott, J. (2003). Does employee satisfaction matter: A study to determine whether low employee morale affects customer satisfaction and profits in the business-to-business sector. *Journal of Communication Management*, *7*, 333–339.

Adelmann, P.K. (1987). Occupational complexity, control, and personal income: Their relation to psychological well-being in men and women. *Journal of Applied Psychology*, *72*, 529–537.

Affleck, G., Urrows, S., Tennen, J., Higgins, P., Pav, D., & Aloisi, R. (1997). A dual pathway model of daily stressor effects on rheumatoid arthritis. *Annals of Behavioral Medicine*, *19*, 161–170.

Alesina, A., Di Tella, R., & MacCulloch, R. (2000). *Inequality and happiness: Are Europeans and Americans different?* (National Bureau of Economic Research Working Paper 8198). Cambridge, England: Cambridge University Press.

Andrade, C., Sarmah, P.L., & Channabasavanna, S.M. (1989). Psychological well-being and morbidity in parents of narcotic-dependent males. *Indian Journal of Psychiatry*, *31*, 122–127.

Antonucci, T.C., Lansford, J.E., & Akiyama, H. (2001). Impact of positive and negative aspects of marital relationships and friendships on well-being of older adults. *Applied Developmental Science*, *5*, 68–75.

Argyle, M. (1987). *The psychology of happiness*. London: Methuen.

Argyle, M. (2001). *The psychology of happiness* (2nd ed.). New York: Routledge.

Arnold, L., Witzeman, K., Swank, M., McElroy, S., & Keck, P. (2000). Health-related quality of life using the SF-36 in patients with bipolar disorder compared with patients with chronic back pain and the general population. *Journal of Affective Disorders*, *57*, 235–239.

Audrain, J., Schwartz, M., Herrera, J., Golman, P., & Bush, A. (2001). Physical activity in first degree relatives of breast cancer patients. *Journal of Behavioral Medicine*, *24*, 587–603.

Barden, R.C., Garber, J., Leiman, B., Ford, M.E., & Masters, J.C. (1985). Factors governing the effective remediation of negative affect and its cognitive and behavioral consequences. *Journal of Personality and Social Psychology*, *49*, 1040–1053.

Barrick, M.R., & Mount, M.K. (1993). Autonomy as a moderator of the relationships between the big five personality dimensions and job performance. *Journal of Applied Psychology*, *78*, 111–118.

Barro, R.J. (1999). Determinants of democracy. *Journal of Political Economy*, *107*, S158–S183.

Basco, M.R., Krebaum, S.R., & Rush, A.J. (1997). Outcome measures of depression. In H.H. Strupp & L.M. Leonard (Eds.), *Measuring patient changes in mood, anxiety, and personality disorders: Toward a core battery* (pp. 191–245). Washington, DC: American Psychological Association.

Bateman, T.S., & Organ, D.W. (1983). Job satisfaction and the good soldier: The relation between affect and employee "citizenship." *Academy of Management Journal*, *261*, 587–595.

Baumeister, R.F. (1991). *Meanings of life*. New York: Guilford Press.

Baumeister, R.F. (Ed.). (2002). Religion and psychology [Special issue]. *Psychological Inquiry*, *13*(3).

Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*, 497–529.

Beck, A. (1967). *Depression*. New York: Hoeber.

Beckman, K., Marsella, A.J., & Finney, R. (1979). Depression in the wives of nuclear submarine personnel. *American Journal of Psychiatry*, *136*, 524–526.

Biswas-Diener, R., & Diener, E. (2001). Making the best of a bad situation: Satisfaction in the slums of Calcutta. *Social Indicators Research*, *55*, 329–352.

Biswas-Diener, R., Vittersø, J., & Diener, E. (2003). *Most people are pretty happy, but there is cultural variation: The Inughuit, the Amish, and the Maasai*. Manuscript submitted for publication.

Bjørnskov, C. (2003). The happy few: Cross-country evidence on social capital and life satisfaction. *Kyklos*, *56*, 3–16.

Bloom, B.L., White, S.W., & Asher, S.J. (1979). Marital disruption as a stressful life event. In G. Levinger & O.C. Moles (Eds.), *Divorce and separation: Context, causes, and consequences* (pp. 184–200). New York: Basic Books.

Borman, W.C., Penner, L.A., Allen, T.D., & Motowidlo, S.J. (2001). Personality predictors of citizenship performance. *International Journal of Selection and Assessment*, *9*, 52–69.

Bowling, A.P., Edelmann, R.J., Leaver, J., & Hoekel, T. (1989). Loneliness, mobility, well-being and social support in a sample of over 85 year olds. *Personality and Individual Differences*, *10*, 1189–1192.

Bradshaw, W., & Brekke, J.S. (1999). Subjective experience in schizophrenia: Factors influencing self-esteem, satisfaction with life, and subjective distress. *American Journal of Orthopsychiatry*, *69*, 254–260.

Bretz, R.D., & Judge, T.A. (1994). Person/organization fit and the Theory of Work Adjustment: Implications for satisfaction, tenure, and career success. *Journal of Vocational Behavior*, *44*, 32–54.

Brickman, P., Coates, D., & Janoff-Bulman, R. (1978). Lottery winners and accident victims: Is happiness relative? *Journal of Personality and Social Psychology*, *36*, 917–927.

Brief, A.P., Butcher, A.H., George, J.M., & Link, K.E. (1993). Integrating bottom-up and top-down theories of subjective well-being: The case of health. *Journal of Personality and Social Psychology*, *64*, 646–653.

Brown, G.D.A., Gardner, J., Oswald, A., & Qian, J. (2003, June). *Rank dependence in pay satisfaction*. Paper presented at the Brookings/Warwick Conference, Washington, DC.

Brown, S.L., Nesse, R.M., Vinokur, A., & Smith, D.M. (2003). Providing social support may be more beneficial than receiving it: Results from a prospective study of mortality. *Psychological Science*, *14*, 320–327.

Campbell, A. (1981). *The sense of well-being in America*. New York: McGraw-Hill.

Carney, R.M., Rich, M.W., & Jaffe, A.S. (1995). Depression as a risk factor for cardiac events in established coronary heart disease: A review of possible mechanisms. *Annals of Behavioral Medicine*, *17*, 142–149.

Carsten, J.M., & Spector, P.E. (1987). Unemployment, job satisfaction and employee turnover: A meta-analytic test of the Michinsky model. *Journal of Applied Psychology*, *72*, 374–381.

Celiker, R., & Borman, P. (2001). Fibromyalgia versus rheumatoid arthritis: A comparison of psychological disturbance and life satisfaction. *Journal of Musculoskeletal Pain*, *9*, 35–45.

Chappell, N.L., & Badger, M. (1989). Social isolation and well-being. *Journal of Gerontology*, *44*, S169–S176.

Clark, A.E. (2001). What really matters in a job? Hedonic measurement using quit data. *Labour Economics*, *8*, 223–242.

Clark, A.E. (2003). Unemployment as a social norm: Psychological evidence from panel data. *Journal of Labor Economics*, *21*, 323–351.

Clark, A.E., Diener, E., Georgellis, Y., & Lucas, R.E. (2004). *Lags and leads in life satisfaction: A test of the baseline hypothesis*. Manuscript submitted for publication.

Clark, A.E., & Lelkes, O. (2003). *Keep the faith: Is social capital just an instrument?* Unpublished manuscript, Départment et Laboratoire d'Economic Theoretique et Appliquée, Paris, France.

Clark, A.E., & Oswald, A.J. (1994). Unhappiness and unemployment. *Economic Journal*, *104*, 648–659.

Clark, A.E., & Oswald, A.J. (1996). Satisfaction and comparison income. *Journal of Public Economics*, *61*, 359–381.

Clarke, S.P., Frasure-Smith, N., Lespérance, F., & Bourassa, M.G. (2000). Psychosocial factors as predictors of functional status at 1 year in patients with left ventricular dysfunction. *Research in Nursing & Health*, *23*, 290–300.

Clydesdale, T.T. (1997). Family behaviors among early U.S. baby boomers: Exploring the effects of religion and income change, 1965–1982. *Social Forces*, *76*, 605–635.

Cogan, R., Cogan, D., Waltz, W., & McCue, M. (1987). Effects of laughter and relaxation on discomfort thresholds. *Journal of Behavioral Medicine*, *10*, 139–144.

Cohen, S., Doyle, W.J., & Skoner, D.P. (1999). Psychological stress, cytokine production, and severity of upper respiratory illness. *Psychosomatic Medicine*, *61*, 175–180.

Cohen, S., Doyle, W.J., Turner, R.B., Alper, C.M., & Skoner, D.P. (2003). Emotional style and susceptibility to the common cold. *Psychosomatic Medicine*, *65*, 652–657.

Cohen, S., Kessler, R.C., & Gordon, L.U. (Eds.). (1997). *Measuring stress: A guide for health and social scientists*. New York: Oxford University Press.

Cohen, S., Miller, G.E., & Rabin, B.S. (2001). Psychological stress and antibody response to immunization: A critical review of the human literature. *Psychosomatic Medicine*, *63*, 7–18.

Côté, S. (1999). Affect and performance in organizational settings. *Current Directions in Psychological Science*, *8*, 65–68.

Creed, P.A., & Macintyre, S.R. (2001). The relative effects of deprivation of the latent and manifest benefits of employment on the well-being of unemployed people. *Journal of Occupational Health Psychology*, *6*, 324–331.

Cross National Collaborative Group. (1992). The changing rate of major depression: Cross national comparisons. *Journal of the American Medical Association*, *268*, 3098–3105.

Csikszentmihalyi, M. (1997). *Finding flow*. New York: Basic Books.

Csikszentmihalyi, M., & Schneider, B. (2000). *Becoming adult: How teenagers prepare for the world of work*. New York: Basic Books.

Cunningham, M.R. (1988a). Does happiness mean friendliness? Induced mood and heterosexual self-disclosure. *Personality and Social Psychology Bulletin*, *14*, 283–297.

Cunningham, M.R. (1988b). What do you do when you're happy or blue? Mood, expectancies and behavioral interest. *Motivation and Emotion*, *12*, 309–331.

Danner, D.D., Snowdon, D.A., & Friesen, W.V. (2001). Positive emotions in early life and longevity: Findings from the nun study. *Journal of Personality and Social Psychology*, *80*, 804–813.

De Fruyt, F. (2002). A person-centered approach to P-E fit questions using a multiple-trait model. *Journal of Vocational Behavior*, *60*, 73–90.

DeLongis, A., Folkman, S., & Lazarus, R.S. (1988). The impact of daily stress on health and mood: Psychological and social resources as mediators. *Journal of Personality and Social Psychology*, *54*, 486–495.

Deluga, R.J., & Mason, S. (2000). Relationship of resident assistant conscientiousness, extraversion, and positive affect with rated performance. *Journal of Research in Personality*, *34*, 225–235.

Devins, G.M., Mann, J., Mandin, H., & Leonard, C. (1990). Psychosocial predictors of survival in end-stage renal disease. *Journal of Nervous and Mental Disease*, *178*, 127–133.

Di Tella, R., & MacCulloch, R. (1999). *Partisan social happiness* [Mimeograph]. Boston: Harvard Business School.

Di Tella, R., MacCulloch, R.J., & Oswald, A.J. (2001). Preferences over inflation and unemployment: Evidence from surveys of happiness. *American Economic Review, 91*, 335–341.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*, 542–575.

Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being? A literature review and guide to needed research. *Social Indicators Research*, *57*, 119–169.

Diener, E., Diener, C., & Diener, M. (1995). Factors predicting the subjective well-being of nations. *Journal of Personality and Social Psychology*, *69*, 851–864.

Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem. *Journal of Personality and Social Psychology*, *68*, 653–663.

Diener, E., Horwitz, J., & Emmons, R.A. (1985). Happiness of the very wealthy. *Social Indicators Research*, *16*, 263–274.

Diener, E., Nickerson, C., Lucas, R.E., & Sandvik, E. (2002). Dispositional affect and job outcomes. *Social Indicators Research*, *59*, 229–259.

Diener, E., & Oishi, S. (2000). Money and happiness: Income and subjective well-being across nations. In E. Diener & E.M. Suh (Eds.), *Culture and subjective well-being* (pp. 185–218). Cambridge, MA: MIT Press.

Diener, E., & Oishi, S. (in press). Are Scandinavians happier than Asians? Issues in comparing nations on subjective well-being. In F. Columbus (Ed.), *Politics and economics of Asia*. Hauppauge, NY: Nova Science.

Diener, E., Sandvik, E., Seidlitz, L., & Diener, M. (1993). The relationship between income and subjective well-being: Relative or absolute? *Social Indicators Research*, *28*, 195–223.

Diener, E., & Seligman, M.E.P. (2002). Very happy people. *Psychological Science*, *13*, 80–83.

Diener, E., & Suh, E. (1999). National differences in subjective well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 434–450). New York: Russell Sage Foundation.

Diener, E., Suh, E.M., Lucas, R.E., & Smith, H.E. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *125*, 276–302.

Diener, E., Suh, E.M., Smith, H., & Shao, L. (1995). National differences in reported well-being: Why do they occur? *Social Indicators Research*, *34*, 7–32.

Donovan, N., & Halpern, D. (2003, November). *Life satisfaction: The state of knowledge and implications for government*. Paper presented at the Conference on Well-Being and Social Capital, Harvard University, Cambridge, MA.

Dooley, B. (1996). At work away from work. *Psychologist*, *9*, 155–158.

Doumas, D.M., Margolin, G., & John, R.S. (2003). The relationship between daily marital interaction, work, and health-promoting behaviors in dual-earner couples: An extension of the work-family spillover model. *Journal of Family Issues*, *24*, 3–20.

Dow, G.K., & Juster, F.T. (1985). Goods, time and well-being: The joint dependence problem. In F.T. Juster & F.P. Stafford (Eds.), *Time, goods and well-being* (pp. 397–413). Ann Arbor, MI: Institute for Social Research.

Easterbrook, G. (2003). *The progress paradox: How life gets better while people feel worse*. New York: Random House.

Easterlin, R.A. (1995). Will raising the incomes of all increase the happiness of all? *Journal of Economic Behavior and Organization*, *27*, 35–47.

Easterlin, R.A. (1996). *Growth triumphant: The twenty-first century in historical perspective*. Ann Arbor: University of Michigan Press.

Egeland, J., & Hostetter, A. (1983). Amish Study: I. Affective disorders among the Amish. *American Journal of Psychiatry*, *140*, 56–61.

Evers, A.W., Kraaimaat, F.W., Geenen, R., & Bijlsma, J.W.J. (1997). Determinants of psychological distress and its course in the first year after diagnosis in rheumatoid arthritis patients. *Journal of Behavioral Medicine*, *20*, 489–504.

Faller, H., Buelzebruck, H., Schilling, S., Drings, P., & Lang, H. (1997). Do psychological factors influence survival in cancer patients? Findings of an empirical study with lung cancer patients. *Psychotherapie, Psychosomatik, Medizinische Psychologie*, *47*, 206–218.

Faller, H., Kirschner, S., & König, A. (2003). Psychological distress predicts functional outcomes at three and twelve months after total knee arthroplasty. *General Hospital Psychiatry*, *25*, 372–373.

Ferriss, A.L. (2002). Religion and the quality of life. *Journal of Happiness Studies*, *3*, 199–215.

Fiscella, K., & Franks, P. (1997). Does psychological distress contribute to racial and socioeconomic disparities in mortality? *Social Science & Medicine*, *45*, 1805–1809.

Fitzgerald, T.E., Prochaska, J.O., & Pransky, G.S. (2000). Health risk reduction and functional restoration following coronary revascularization: A prospective investigation using dynamic stage typology clustering. *International Journal of Rehabilitation and Health*, *5*, 99–116.

Fleming, J.H. (2000). Relating employee engagement and customer loyalty to business outcomes in the retail industry. *The Gallup Research Journal*, *3*(1), 103–115.

Forthofer, M.S., Markman, H.J., Cox, M., Stanley, S., & Kessler, R.C. (1996). Associations between marital distress and work loss in a national sample. *Journal of Marriage and the Family*, *58*, 597–605.

Fredrickson, B.L., & Levenson, R.W. (1998). Positive emotions speed recovery from the cardiovascular sequelae of negative emotions. *Cognition and Emotion*, *12*, 191–220.

Fredrickson, B.L., Mancuso, R.A., Branigan, C., & Tugade, M.M. (2000). The undoing effect of positive emotions. *Motivation and Emotion*, *24*, 237–258.

Frey, B.S., & Stutzer, A. (2000). Happiness prospers in democracy. *Journal of Happiness Studies*, *1*, 79–102.

Frey, B.S., & Stutzer, A. (2002a). *Happiness and economics: How the economy and institutions affect human well-being*. Princeton, NJ: Princeton University Press.

Frey, B.S., & Stutzer, A. (2002b). What can economists learn from happiness research? *Journal of Economic Literature*, *40*, 402–435.

Frey, B.S., & Stutzer, A. (2003). *Economic consequences of mispredicting utility.* Unpublished manuscript, University of Zurich, Zurich, Switzerland.

Fromm, E. (1956). *The art of loving*. New York: Harper & Row.

Furnham, A., & Argyle, M. (1998). *The psychology of money*. London: Routledge.

Futerman, A.D., Kemeny, M.E., Shapiro, D., & Fahey, J.L. (1994). Immunological and physiological changes associated with induced positive and negative mood. *Psychosomatic Medicine*, *56*, 499–511.

George, J.M. (1990). Personality, affect, and behavior in groups. *Journal of Applied Psychology*, *75*, 107–116.

George, J.M. (1995). Leader positive mood and group performance: The case of customer service. *Journal of Applied Social Psychology*, *25*, 778–794.

George, J.M., & Brief, A.P. (1992). Feeling good—doing good: A conceptual analysis of the mood at work-organizational spontaneity relationship. *Psychological Bulletin*, *112*, 310–329.

Gilbert, D.T., Pinel, E.C., Wilson, T.D., Blumberg, S.J., & Wheatley, T.P. (1998). Immune neglect: A source of durability bias in affective forecasting. *Journal of Personality and Social Psychology*, *75*, 617–638.

Glisson, C., & Durick, M. (1988). Predictors of job satisfaction and organizational commitment in human service organizations. *Administrative Science Quarterly*, *33*, 61–81.

Gloaguen, V., Cottraux, J., Cucherat, M., & Blackburn, I.M. (1998). A meta-analysis of the effects of cognitive therapy in depressed patients. *Journal of Affective Disorders*, *49*, 59–72.

Gohm, C., Oishi, S., Darlington, J., & Diener, E. (1998). Culture, parental conflict, parental marital status, and the subjective well-being of young adults. *Journal of Marriage and the Family*, *60*, 319–334.

Graham, C., Eggers, A., & Sukhtankar, S. (in press). Does happiness pay? An exploration based on panel data from Russia. *Journal of Economic Behavior and Organization*.

Graham, C., & Pettinato, S. (2002). Frustrated achievers: Winners, losers and subjective well-being in new market economies. *Journal of Development Studies*, *38*(4), 100–140.

Grebner, S., Semmer, N.K., & Elfering, A. (2003). *Working conditions and three types of well-being: A longitudinal study with self-report and rating data*. Manuscript submitted for publication.

Griffin, R.W. (1991). Effects of work redesign on employee perceptions, attitudes, and behaviors: A long-term investigation. *Academy of Management Journal*, *34*, 425–435.

Groenewegen, P.P., & Hutten, J.B. (1991). Workload and job satisfaction among general practitioners: A review of the literature. *Social Science and Medicine*, *32*, 1111–1119.

Hagerty, M.R. (2000). Social comparisons of income in one's community: Evidence from national surveys of income and happiness. *Journal of Personality and Social Psychology*, *78*, 746–771.

Hagerty, M.R., & Veenhoven, R. (2003). Wealth and happiness revisited: Growing wealth of nations does go with greater happiness. *Social Indicators Research*, *64*, 1–27.

Hammen, C. (1996). Stress, families, and the risk for depression. In C. Mundt, M.J. Goldstein, K. Hahlweg, & P. Fiedler (Eds.), *Interpersonal factors in the origin and course of affective disorders* (pp. 101–112). London: Gaskell/Royal College of Psychiatrists.

Hammen, C. (1999). The emergence of an interpersonal approach to depression. In T. Joiner & J.C. Coyne (Eds.), *The interactional nature of depression: Advances in interpersonal approaches* (pp. 21–35). Washington, DC: American Psychological Association.

Hammen, C. (2000). Interpersonal factors in an emerging developmental model of depression. In S.L. Johnson, A.M. Hayes, T.M. Field, N. Schneiderman, & P. McCabe (Eds.), *Stress, coping, and depression* (pp. 71–88). Mahwah, NJ: Erlbaum.

Hammen, C., & Brennan, P.A. (2002). Interpersonal dysfunction in depressed women: Impairments independent of depressive symptoms. *Journal of Affective Disorders*, *72*, 145–156.

Harlow, R.E., & Cantor, N. (1996). Still participating after all these years: A study of life task participation in later life. *Journal of Personality and Social Psychology*, *71*, 1235–1249.

Harter, J.K. (2000). The linkage of employee perception to outcomes in a retail environment: Cause and effect? *The Gallup Research Journal*, *3*(1), 25–38.

Harter, J.K., Schmidt, F.L., & Hayes, T.L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology*, *87*, 268–279.

Harter, J.K., Schmidt, F.L., & Killham, E.A. (2003). *Employee engagement, satisfaction, and business-unit-level outcomes: A meta-analysis*. Princeton, NJ: Gallup Organization.

Heikkilä, H., Heikkilä, E., & Eisemann, M. (1998). Predictive factors for the outcome of a multidisciplinary pain rehabilitation programme on sick-leave and life satisfaction in patients with whiplash trauma and other myofascial pain: A follow-up study. *Clinical Rehabilitation*, *12*, 487–496.

Heller, D., Judge, T.A., & Watson, D. (2002). The confounding role of personality and trait affectivity in the relationship between job and life satisfaction. *Journal of Organizational Behavior*, *23*, 815–835.

Helliwell, J.F. (2003a). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modelling*, *20*, 331–360.

Helliwell, J.F. (2003b). *Well-being and social capital: Does suicide pose a puzzle?* Unpublished manuscript, University of British Columbia, Vancouver, British Columbia, Canada.

Hersey, R.B. (1932). *Worker's emotions in shop and home: A study of individual workers from the psychological and physiological standpoint*. Philadelphia: University of Pennsylvania Press.

Herzberg, D.S., Hammen, C., Burge, D., Daley, S.E., Davila, J., & Lindberg, N. (1998). Social competence as a predictor of chronic interpersonal stress. *Personal Relationships*, *5*, 207–218.

Hilleras, P.K., Jorm, A.F., Herlitz, A., & Winblad, B. (1998). Negative and positive affect among the very old: A survey on a sample age 90 years or older. *Research on Aging*, *20*, 593–610.

Hintikka, J., Koskela, T., Kontula, O., Koskela, K., & Viinamaeki, H. (2000). Men, women and friends: Are there differences in relation to mental well-being? *Quality of Life Research*, *9*, 841–845.

Iaffaldano, M., & Muchinsky, P. (1985). Job satisfaction and performance: A meta-analysis. *Journal of Applied Psychology*, *97*, 251–273.

Inglehart, R., & Klingemann, H.-D. (2000). Genes, culture, democracy, and happiness. In E. Diener & E.M. Suh (Eds.), *Culture and subjective well-being* (pp. 165–184). Cambridge, MA: MIT Press.

Jenkins, R., Bebbington, P., Brugha, T., Farrell, M., Lewis, G., & Meltzer, H. (2003). British Psychiatric Morbidity Survey. *International Review of Psychiatry*, *15*, 14–18.

Jenkins, R., Lewis, G., Bebbington, P., Brugha, T., Farrell, M., Gill, B., & Meltzer, H. (1997). The National Psychiatric Morbidity Surveys of Great Britain—initial findings from the household survey. *Psychological Medicine*, *27*, 775–789.

Judge, T.A. (1991). Job satisfaction as a reflection of disposition: Investigating the relationship and its effect on employee adaptive behaviors. *Dissertation Abstracts International A: Humanities and Social Sciences*, *52*(3), 996. (UMI No. AAT 9114284)

Judge, T.A., & Larsen, R.J. (2001). Dispositional affect and job satisfaction: A review and theoretical extension. *Organizational Behavior and Human Decision Processes*, *86*, 67–98.

Judge, T.A., Thoreson, C.J., Bono, J.E., & Patton, G.K. (2001). The job satisfaction-job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, *127*, 376–407.

Juster, F.T. (1985). Preferences for work and leisure. In F.T. Juster & F.P. Stafford (Eds.), *Time, goods, and well-being*. Ann Arbor, MI: Institute for Social Research.

Kahneman, D. (1994). New challenges to the rationality assumption. *Journal of Institutional and Theoretical Economics*, *150*, 18–36.

Kahneman, D. (2003, January). *Puzzles of well-being*. Paper presented at the annual meeting of the American Economics Association, Washington, DC.

Kahneman, D., Diener, E., & Schwarz, N. (Eds.). (1999). *Well-being: The foundations of hedonic psychology*. New York: Russell Sage Foundation.

Kahneman, D., Krueger, A.B., Schkade, D., Schwarz, N., & Stone, A. (in press). Toward national well-being accounts. *American Economic Review*.

Kamen-Siegel, L., Rodin, J., Seligman, M.E., & Dwyer, J. (1991). Explanatory style and cell-mediated immunity in elderly men and women. *Health Psychology*, *10*, 229–235.

Kang, S.N. (2001). The relationship between job and marital satisfaction: Overall and facet satisfaction among professionals. *Dissertation Abstracts International B: Sciences and Engineering*, *62*(6), 2958. (UMI No. AAI 3017289)

Karasek, R. (2001). Toward a psychosocially healthy work environment: Broader roles for psychologists and sociologists. In N. Schneiderman, M.A. Speers, J.M. Silva, H. Tomes, & J.H. Gentry (Eds.), *Integrating behavioral and social sciences with public health* (pp. 267–292). Washington, DC: American Psychological Association.

Kashdan, T.B., & Herbert, J.D. (2001). Social anxiety disorder in childhood and adolescence: Current status and future directions. *Clinical Child and Family Psychology Review*, *4*, 37–61.

Kasser, T., & Kanner, A.D. (Eds.). (2004). *Psychology and consumer culture: The struggle for a good life in a materialistic world*. Washington, DC: American Psychological Association.

Kasser, T., Ryan, R.M., Couchman, C.E., & Sheldon, K.M. (2004). Materialistic values: Their causes and consequences. In T. Kasser & A.D. Kanner (Eds.), *Psychology and consumer culture: The struggle for a good life in a materialistic world* (pp. 11–28). Washington, DC: American Psychological Association.

Keefe, F.J., Lumley, M., Anderson, T., Lunch, T., & Carson, K.L. (2001). Pain and emotion: New research directions. *Journal of Clinical Psychology*, *57*, 587–607.

Kenny, C. (1999). Does growth cause happiness, or does happiness cause growth? *Kyklos*, *52*, 3–26.

Kessler, R.C., & Frank, R.G. (1997). The impact of psychiatric disorders on work loss days. *Psychological Medicine*, *27*, 861–873.

Kessler, R.C., McGonagle, K.A., Zhao, S., Nelson, C.B., Hughes, M., Eshleman, S., Wittchen, H.-U., & Kendler, K.S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Comorbidity Survey. *Archives of General Psychiatry*, *51*, 8–19.

Kirkcaldy, B.D., Furnham, A., & Martin, T. (1998). National differences in personality, socio-economic, and work-related attitudinal variables. *European Psychologist*, *3*, 255–262.

Klerman, G.L., Lavori, P.W., Rice, J., Reich, T., Endicott, J., Andreasen, N.C., Keller, M.B., & Hirschfield, R.M.A. (1985). Birth cohort trends in rates of major depressive disorder among relatives of patients with affective disorder. *Archives of General Psychiatry*, *42*, 689–693.

Kohn, M.L., & Schooler, C. (1982). Job conditions and personality: A longitudinal assessment of their reciprocal effects. *American Journal of Sociology*, *87*, 1257–1286.

Koivumaa-Honkanen, H.T., Honkanen, R., Antikainen, R., & Hintikka, J. (1999). Self-reported life satisfaction and treatment factors in patients with schizophrenia, major depression and anxiety disorder. *Acta Psychologica Scandinavica*, *95*, 377–384.

Koivumaa-Honkanen, H.T., Honkanen, R., Koskenvuo, M., Viinamaki, H., & Kaprio, J. (2002). Life satisfaction as a predictor of fatal injury in a 20-year follow-up. *Acta Psychiatrica Scandinavica*, *105*, 444–450.

Kopp, M., Bonatti, H., Haller, C., Rumpold, G., Söllner, W., Holzner, B., Schweigkofler, H., Aigner, F., Hinterhuber, H., & Gunther, V. (2003). Life satisfaction and active coping style are important predictors of recovery from surgery. *Journal of Psychosomatic Research*, *55*, 371–377.

Koys, D.J. (2001). The effects of employee satisfaction, organizational citizenship behavior, and turnover on organizational effectiveness: A unit-level, longitudinal study. *Personnel Psychology*, *54*, 101–114.

Kposowa, A. (2001). Unemployment and suicide: A cohort analysis of social factors predicting suicide in the US National Longitudinal Mortality Study. *Psychological Medicine*, *31*, 127–138.

Kubzansky, L.D., Sparrow, D., Vokonas, P., & Kawachi, I. (2001). Is the glass half empty or half full? A prospective study of optimism and coronary heart disease in the Normative Aging Study. *Psychosomatic Medicine*, *63*, 910–916.

Kubzansky, L.D., Wright, R.J., Cohen, S., Weiss, S., Rosner, B., & Sparrow, D. (2002). Breathing easy: A prospective study of optimism and pulmonary function in the Normative Aging Study. *Annals of Behavioral Medicine*, *24*, 345–353.

Lane, R.E. (2000). *The loss of happiness in market democracies*. New Haven, CT: Yale University Press.

Lansford, J.E. (2000). Family relationships, friendships, and well-being in the United States and Japan. *Dissertation Abstracts International B: Sciences and Engineering*, *61*(3), 1673. (UMI No. AAT 9963831)

Leary, M.R. (1990). Responses to social exclusion: Social anxiety, jealousy, loneliness, depression, and low self-esteem. *Journal of Social and Clinical Psychology*, *9*, 221–229.

Lehman, A.F. (1996). Measures of quality of life among persons with severe and persistent mental disorders. *Social Psychiatry and Psychiatric Epidemiology*, *31*, 78–88.

Lewinsohn, P., Rohde, P., Seeley, J.R., & Fischer, S.A. (1993). Age-cohort changes in the lifetime occurrence of depression and other mental disorders. *Journal of Abnormal Psychology*, *102*, 110–120.

Longabaugh, R., McCrady, B., Fink, E., Stout, R., McAuley, T., Doyle, C., & McNeill, D. (1983). Cost effectiveness of alcoholism treatment in partial vs. inpatient settings: Six-month outcomes. *Journal of Studies on Alcohol*, *44*, 1049–1071.

Lox, C.L., Burns, S.P., Treasure, D.C., & Wasley, D.A. (1999). Physical and psychological predictors of exercise dosage in healthy adults. *Medicine and Science in Sports and Exercise*, *31*, 1060–1064.

Lucas, R.E., Clark, A.E., Georgellis, Y., & Diener, E. (2003). Re-examining adaptation and the setpoint model of happiness: Reactions to changes in marital status. *Journal of Personality and Social Psychology*, *84*, 527–539.

Lucas, R.E., Clark, A.E., Georgellis, Y., & Diener, E. (2004). Unemployment alters the set point for life satisfaction. *Psychological Science*, *15*, 8–13.

Lucas, R.E., & Diener, E. (2003). The happy worker: Hypotheses about the role of positive affect in worker productivity. In M.R. Barrick & A.M. Ryan (Eds.), *Personality and work* (pp. 30–59). San Francisco: Jossey Bass.

Lucas, R.E., Diener, E., & Suh, E.M. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology*, *71*, 616–628.

Luthar, S.S. (2003). The culture of affluence: Psychological costs of material wealth. *Child Development*, *74*, 1581–1593.

Lynch, J.J. (1979). *The broken heart: The medical consequences of loneliness*. New York: Basic Books.

Lyons, A., & Chamberlain, K. (1994). The effects of minor events, optimism and self-esteem on health. *British Journal of Clinical Psychology*, *33*, 559–570.

Lyubomirsky, S., & Lepper, H.S. (2003). *What are the differences between happiness and self-esteem?* Manuscript submitted for publication.

Magdol, L. (2002). Is moving gendered? The effects of residential mobility on the psychological well-being of men and women. *Sex Roles*, *47*, 553–560.

Malka, A., & Chatman, J.A. (2003). Intrinsic and extrinsic orientations as moderators of the effect of annual income on subjective well-being: A longitudinal study. *Personality and Social Psychology Bulletin*, *29*, 737–746.

Marks, G.N., & Fleming, N. (1999). Influences and consequences of well-being among Australian young people: 1980–1995. *Social Indicators Research*, *46*, 301–323.

Marmot, M. (2003, June). *The social gradient in health and well-being*. Paper presented at the Brookings Warwick Conference “Why inequality matters: Lessons for policy from the economics of happiness,” Washington, DC.

Marsland, A.L., Cohen, S., Rabin, B.S., & Manuck, S.B. (2001). Associations between stress, trait negative affect, acute immune reactivity, and antibody response to hepatitis B injection in healthy young adults. *Health Psychology*, *20*, 4–11.

Martens, L., & Addington, J. (2001). The psychological well-being of family members of individuals with schizophrenia. *Social Psychiatry and Psychiatric Epidemiology*, *36*, 128–133.

Maruta, T., Colligan, R.C., Malinchoc, M., & Offord, K.P. (2000). Optimists vs. pessimists: Survival rate among medical patients over a 30-year period. *Mayo Clinic Proceedings*, *75*, 140–143.

McClelland, D.C., & Cheriff, A.D. (1997). The immunoenhancing effects of humor on secretory IgA and resistance to respiratory infections. *Psychology and Health*, *12*, 329–344.

McConnell, P., Bebbington, P., McClelland, R., Gillespie, K., & Houghton, S. (2002). Prevalence of psychiatric disorder and the need for psychiatric care in Northern Ireland: Population study in the District of Derry. *British Journal of Psychiatry*, *181*, 214–219.

McCrady, B.S., Stout, R., Noel, N., Abrams, D., & Nelson, H.F. (1991). Effectiveness of three types of spouse-involved behavioral alcoholism treatment. *British Journal of Addiction*, *86*, 1415–1424.

McIntyre, C.W., Watson, D., Clark, L.A., & Cross, S.A. (1991). The effect of induced social interaction on positive and negative affect. *Bulletin of the Psychonomic Society*, *29*, 67–70.

Mehnert, T., Krauss, H.H., Nadler, R., & Boyd, M. (1990). Correlates of life satisfaction in those with disabling conditions. *Rehabilitation Psychology*, *35*, 3–17.

Menec, V.H. (2003). The relation between everyday activities and successful aging: A 6-year longitudinal study. *Journals of Gerontology*, *58B*, S74–S82.

Miles, D.E., Borman, W.E., Spector, P.E., & Fox, S. (2002). Building an integrative model of extra role work behaviors: A comparison of counterproductive work behavior with organizational citizenship behavior. *International Journal of Selection and Assessment*, *10*, 51–57.

Miner, A.G. (2001). *Experience sampling events, moods, behaviors, and performance at work*. Unpublished doctoral dissertation, University of Illinois, Urbana-Champaign.

Murray, C., & Lopez, A. (1997). Alternative projections of mortality and disability by cause 1999–2020: Global Burden of Disease Study. *Lancet*, *349*, 1498–1504.

Murrell, S.A., Salsman, N.L., & Meeks, S. (2003). Educational attainment, positive psychological mediators, and resources for health and vitality in older adults. *Journal of Aging and Health*, *15*, 591–615.

Naroll, R. (1983). *The moral order: An introduction to the human situation*. Beverly Hills, CA: Sage.

Naughton, M.J., Herndon, J.E., II, Shumaker, S.A., Miller, A.A., Kornblith, A.B., Chao, D., & Holland, J. (2002). The health-related quality of life and survival of small-cell lung cancer patients: Results of a companion study to CALGB 9033. *Quality of Life Research*, *11*, 235–248.

Nehra, A., Mann, S.B.S., Sharma, S.C., & Verma, S.K. (1997). Psychosocial functions before and after the use of hearing aids in acquired hearing loss patients. *Indian Journal of Clinical Psychology*, *24*, 75–81.

Nelson, G., Hall, G.B., & Walsh-Bowers, R. (1999). Predictors of adaptation of people with psychiatric disabilities in group homes, supportive apartments, and board-and-care homes. *Psychiatric Rehabilitation Journal*, *22*, 381–389.

Neumark, D., & Postlewaite, A. (1998). Relative income concerns and the rise in married women's employment. *Journal of Public Economics*, *70*, 157–183.

Nickerson, C., Kahneman, D., Diener, E., & Schwarz, N. (2004). *Correlates and consequences of wanting money*. Unpublished manuscript, University of Illinois, Urbana-Champaign.

Nickerson, C., Schwarz, N., Diener, E., & Kahneman, D. (2003). Zeroing in on the dark side of the American dream: A closer look at the negative consequences of the goal for financial success. *Psychological Science*, *14*, 531–536.

Okun, M.A., & George, L.K. (1984). Physician- and self-ratings of health, neuroticism and subjective well-being among men and women. *Personality and Individual Differences*, *5*, 533–539.

Okun, M.A., Stock, W.A., Haring, M.J., & Witter, R.A. (1984). The social activity/subjective well-being relation: A quantitative synthesis. *Research on Aging*, *6*, 45–65.

Organ, D.W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology*, *48*, 775–802.

Ortony, A., Clore, G.L., & Collins, A. (1988). *The cognitive structure of emotions*. New York: Cambridge University Press.

Ostir, G.V., Markides, K.S., Black, S.A., & Goodwin, J.S. (2000). Emotional well-being predicts subsequent functional independence and survival. *Journal of the American Geriatrics Society*, *48*, 473–478.

Oswald, A.J. (1997). Happiness and economic performance. *Economic Journal*, *107*, 1815–1831.

Ouweneel, P. (2002). Social security and well-being of the unemployed in 42 nations. *Journal of Happiness Studies*, *3*, 167–192.

Packer, S., Husted, J., Cohen, S., & Tomlinson, G. (1997). Psychopathology and quality of life in schizophrenia. *Journal of Psychiatry & Neuroscience*, *22*, 231–234.

Park, N., Peterson, C., & Seligman, M.E.P. (2003). *Character strengths and well-being*. Manuscript submitted for publication.

Parker, M.G., Thorslund, M., & Nordstrom, M.-L. (1992). Predictors of mortality for the oldest old: A 4-year follow-up of community-based elderly in Sweden. *Archives of Gerontology and Geriatrics*, *14*, 227–237.

Pavot, W., Diener, E., & Fujita, F. (1990). Extraversion and happiness. *Personality and Individual Differences*, *11*, 1299–1306.

Peterson, C., Seligman, M.E.P., Yurko, K.H., Martin, L.R., & Friedman, H.S. (1998). Catastrophizing and untimely death. *Psychological Science*, *9*, 127–130.

Pinikahana, J., Happell, B., & Keks, N.A. (2003). Suicide and schizophrenia: A review of literature for the decade (1990–1999) and implications for mental health nursing. *Issues in Mental Health Nursing*, *24*, 27–43.

Price, S.J., & McKenry, P.C. (1988). *Divorce*. Beverly Hills, CA: Sage.

Putnam, R. (2001a). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.

Putnam, R.D. (2001b). Social capital: Measurement and consequences. In J.F. Helliwell (Ed.), *The contribution of human and social capital to sustained economic growth and well-being* (pp. 117–135). Ottawa, Ontario, Canada: Human Resources Development Canada.

Raffaello, M., & Maass, A. (2003). Chronic exposure to noise in industry: The effects on satisfaction, stress symptoms, and company attachment. *Environment and Behavior*, *34*, 651–671.

Rice, R.W., Near, J.P., & Hunt, R.G. (1980). The job-satisfaction/life-satisfaction relationship: A review of empirical research. *Basic and Applied Social Psychology*, *1*, 37–64.

Rimmerman, A., Treves, G., & Duvdevany, I. (1999). Psychological distress and well-being of mothers of adults with a psychiatric disability: The effects of day treatment, social support networks, and maternal involvement. *Psychiatric Rehabilitation Journal*, *22*, 263–269.

Roberts, B.W., Caspi, A., & Moffitt, T.E. (2003). Work experiences and personality development in young adulthood. *Journal of Personality and Social Psychology*, *84*, 582–593.

Robins, L.N., Helzer, J.E., Weissman, M.M., Orvaschel, H., Gruenberg, E., Burke, J.D., & Regier, D.A. (1984). Lifetime prevalence of specific psychiatric disorders in three sites. *Archives of General Psychiatry*, *41*, 949–958.

Rogers, S.J., & May, D.C. (2003). Spillover between marital quality and job satisfaction: Long-term patterns and gender differences. *Journal of Marriage and the Family*, *65*, 482–495.

Ross, C.E., & Huber, J. (1985). Hardship and depression. *Journal of Health and Social Behavior*, *26*, 312–327.

Rounds, J.B. (1990). The comparative and combined utility of work value and interest data in career counseling with adults. *Journal of Vocational Behavior*, *37*, 32–45.

Rounds, J.B., Dawis, R.V., & Lofquist, L.H. (1987). Measurement of person-environment fit and prediction of satisfaction in the Theory of Work Adjustment. *Journal of Vocational Behavior*, *31*, 297–318.

Schilling, O., & Wahl, H.W. (2002). Family networks and life-satisfaction of older adults in rural and urban regions. *Kolner Zeitschrift für Soziologie und Sozialpsychologie*, *54*, 304–317.

Schneider, B., Hanges, P.J., Smith, D.B., & Salvaggio, A.N. (2003). Which comes first: Employee attitudes or organizational financial and market performance? *Journal of Applied Psychology*, *88*, 836–851.

Schulz, R., Visintainer, P., & Williamson, G.M. (1990). Psychiatric and physical morbidity effects of caregiving. *Journal of Gerontology*, *45*, P181–P191.

Schwartz, B. (2004). *The paradox of choice: Why more is less*. New York: Ecco.

Schyns, P. (1998). Crossnational differences in happiness: Economic and cultural factors explored. *Social Indicators Research*, *43*, 3–26.

Schyns, P. (2003). *Income and life satisfaction: A cross-national and longitudinal study*. Delft, The Netherlands: Eburon.

Seligman, M.E.P. (1995). The effectiveness of psychotherapy: The Consumer Reports study. *American Psychologist*, *50*, 965–974.

Seligman, M.E.P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. New York: Free Press.

Shams, M., & Jackson, P.R. (1994). The impact of unemployment on the psychological well-being of British Asians. *Psychological Medicine*, *24*, 347–355.

Smith, S., & Razzell, P. (1975). *The pools' winners*. London: Calibon Books.

Smith, T.W., Ruiz, J.M., & Uchino, B. (2001). Mental activation of supportive ties reduces blood pressure reactivity to stress. *Psychosomatic Medicine*, *63*, 114.

Solberg, E.C., Diener, E., & Robinson, M. (2004). Why are materialists less satisfied? In T. Kasser & A.D. Kanner (Eds.), *Psychology and consumer culture: The struggle for a good life in a materialistic world* (pp. 29–48). Washington, DC: American Psychological Association.

Solomon, G.F., Segerstrom, S.C., Grohr, P., Kemeny, M., & Fahey, J. (1997). Shaking up immunity: Psychological and immunologic changes after a natural disaster. *Psychosomatic Medicine*, *59*, 114–127.

Spector, P.E. (1997). *Job satisfaction: Application, assessment, cause, and consequences*. Thousand Oaks, CA: Sage.

Spector, P.E., Chen, P.Y., & O'Connell, B.J. (2000). A longitudinal study of relations between job stressors and job strains while controlling for prior negative affectivity and strains. *Journal of Applied Psychology*, *85*, 211–218.

Spiegel, D., & Giese-Davis, J. (2003). Depression and cancer: Mechanisms and disease progression. *Biological Psychiatry*, *54*, 269–282.

Spitzer, R.L., Kroenke, K., Linzer, M., Hahn, S.R., Williams, J.B., deGruy, F.V., Brody, D., & Davies, M. (1995). Health-related quality of life in primary care patients with mental disorders. *Journal of the American Medical Association*, *274*, 1511–1517.

Srinivasan, R., & Pugliese, A. (2000). Customer satisfaction, loyalty, and behavior. *The Gallup Research Journal*, *3*(1), 79–90.

Srivastava, A., Locke, E.A., & Bartol, K.M. (2001). Money and subjective well-being: It's not the money, it's the motives. *Journal of Personality and Social Psychology*, *80*, 959–971.

Staw, B.M., & Barsade, S.G. (1993). Affect and managerial performance: A test of the sadder-but-wiser vs. happier-and-smarter hypothesis. *Administrative Science Quarterly*, *38*, 304–331.

Staw, B.M., Bell, N.E., & Clausen, J.A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly*, *31*, 56–77.

Staw, B.M., Sutton, R.I., & Pelled, L.H. (1994). Employee positive emotion and favorable outcomes at the workplace. *Organization Science*, *5*, 51–71.

Steinbrueck, S.M., Maxwell, S.E., & Howard, G.S. (1983). A meta-analysis of psychotherapy and drug therapy in the treatment of unipolar depression with adults. *Journal of Counseling and Clinical Psychology*, *51*, 856–863.

Stilley, C.S., Dew, M.A., Stukas, A.A., Switzer, G.E., Manzetti, J.D., Keenan, R.J., & Griffith, B.P. (1999). Psychological symptom levels and their correlates in lung and heart-lung transplant recipients. *Psychosomatics*, *40*, 503–509.

Stone, A.A., Cox, D.S., Valdimarsdottir, H., Jandorf, L., & Neale, J.M. (1987). Evidence that secretory IgA antibody is associated with daily mood. *Journal of Personality and Social Psychology*, *52*, 988–993.

Stroebe, W., Stroebe, M., Abakoumkin, G., & Schut, H. (1996). The role of loneliness and social support in adjustment to loss: A test of attachment versus stress theory. *Journal of Personality and Social Psychology*, *70*, 1241–1249.

Stutzer, A. (in press). The role of income aspirations in individual happiness. *Journal of Economic Behavior and Organization*.

Sunstein, C.R., & Thaler, R.H. (in press). Libertarian paternalism is not an oxymoron. *University of Chicago Law Review*.

Suslow, T., Roestel, C., Ohrmann, P., & Arolt, V. (2003). The experience of basic emotions in schizophrenia with and without affective negative symptoms. *Comprehensive Psychiatry*, *44*, 303–310.

Swaroff, J.B. (2000). Validating "The Gallup Path": A study of the links between loyalty and financial outcomes in healthcare. *The Gallup Research Journal*, *3*(1), 41–46.

Thoits, P., & Hannan, M. (1979). Income and psychological distress: The impact of an income-maintenance experiment. *Journal of Health and Social Behavior*, *20*, 120–138.

Thoits, P.A., & Hewitt, L.N. (2001). Volunteer work and well-being. *Journal of Health and Social Behavior*, *42*, 115–131.

Tramontana, M.G. (1981). Critical review of research on psychotherapy outcome with adolescents: 1967–1977. In S. Chess & A. Thomas (Eds.), *Annual progress in child psychiatry & child development* (pp. 521–550). New York: Brunner/Mazel.

Twenge, J.M. (2000). The age of anxiety? The birth cohort change in anxiety and neuroticism, 1952–1993. *Journal of Personality and Social Psychology*, *79*, 1007–1021.

Twenge, J.M. (2002). Birth cohort, social change, and personality: The interplay of dysphoria and individualism in the 20^{th} century. In D. Cervone & W. Mischel (Eds.), *Advances in personality science* (pp. 196–218). New York: Guilford Press.

Ulrich, R.S. (1984). View through a window may influence recovery from surgery. *Science*, *224*, 420–421.

Unutzer, J., Patrick, D., Diehr, P., Simon, G., Grembowski, D., & Katon, W. (2000). Quality adjusted life years in older adults with depressive symptoms and chronic medical disorders. *International Psychogeriatrics*, *12*, 15–33.

van Jaarsveld, C., Sanderman, R., Miedema, I., Ranchor, A.V., & Kempen, G.I.J.M. (2001). Changes in health-related quality of life in older patients with acute myocardial infarction or congestive heart failure: A prospective study. *Journal of the American Geriatrics Society*, *49*, 1052–1058.

van Praag, B.M.S., & Frijters, P. (1999). The measurement of welfare and well-being: The Leyden Approach. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 413–433). New York: Russell Sage Foundation.

van Servellen, G., Sarna, L., Nyamathi, A., Padilla, G., Brecht, M.-L., & Jablonski, K.J. (1998). Emotional distress in women with symptomatic HIV disease. *Issues in Mental Health Nursing*, *19*, 173–189.

van Servellen, G., Sarna, L., Padilla, G., & Brecht, M.-L. (1996). Emotional distress in men with life-threatening illness. *International Journal of Nursing Studies*, *33*, 551–565.

Varian, H.R. (1992). *Microeconomic analysis*. New York: Norton.

Vázquez, C., Hernangómez, L., & Hervás, G. (2004). Longevidad y emociones positivas [Longevity and positive emotions]. In L. Salvador, A. Cano, & J.R. Cabo (Eds.), *Longevidad: Tratado integral sobre salud en la segunda mitad de la vida* (pp. 752–761). Madrid, Spain: Panamericana.

Veenhoven, R. (1991). Is happiness relative? *Social Indicators Research*, *24*, 1–34.

Veenhoven, R. (1994). *World database of happiness: Correlates of happiness: 7837 findings from 603 studies in 69 nations 1911–1994* (3 vols.). Rotterdam, The Netherlands: RISBO.

Veenhoven, R. (2000). Well-being in the welfare state: Level not higher, distribution not more equitable. *Journal of Comparative Policy Analysis*, *2*, 91–125.

Veenhoven, R. (2002). *Average happiness in 68 nations in the 1990s: How much people enjoy their life-as-a-whole*. Retrieved April 12, 2004, from World Database of Happiness Web site: http://www.eur.nl/fsw/research/happiness/hap_nat/nat_fp.htm

Verbrugge, L.M., Reoma, J.M., & Gruber-Baldini, A.L. (1994). Short-term dynamics of disability and well-being. *Journal of Health and Social Behavior*, *35*, 97–117.

Viinamaeki, H., Koskela, K., & Niskanen, L. (1996). Rapidly declining mental well-being during unemployment. *European Journal of Psychiatry*, *10*, 215–221.

Vitaliano, P.P., Scanlan, J.M., Ochs, H.D., Syrjala, K., Siegler, I.C., & Snyder, E.A. (1998). Psychosocial stress moderates the relationship of cancer history with natural killer cell activity. *Annals of Behavioral Medicine*, *20*, 199–208.

Vroom, V.H. (1964). *Work and motivation*. New York: Wiley.

Warr, P. (1999). Well-being and the workplace. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 392–412). New York: Russell Sage Foundation.

Watson, D. (2000). *Mood and temperament*. New York: Guilford Press.

Watson, D., & Slack, A.K. (1993). General factors of affective temperament and their relation to job satisfaction over time. *Organizational Behavior and Human Decision Processes*, *54*, 181–202.

Weiss, H.M., Nicholas, J.P., & Daus, C.S. (1999). An examination of the joint effects of affective experiences and job beliefs on job satisfaction and variations in affective experiences over time. *Organizational Behavior and Human Decision Processes*, *78*, 1–24.

Weiss, R.S. (1979). The impact of marital separation. In G. Levinger & O.C. Moles (Eds.), *Divorce and separation: Context, causes, and consequences* (pp. 201–210). New York: Basic Books.

Welzel, C., Inglehart, R., & Klingemann, H.D. (2003). The theory of human development: A cross-cultural analysis. *European Journal of Political Research*, *42*, 341–379.

Westen, D. (2001). A multidimensional meta-analysis of treatments for depression, panic, and generalized anxiety disorder: An empirical examination of the status of empirically supported therapies. *Journal of Consulting and Clinical Psychology*, *69*, 875–899.

Williams, K.D. (2001). *Ostracism: The power of silence*. New York: Guilford Press.

Wright, T.A., & Bonett, D.G. (1997). The role of pleasantness and activation-based well-being in performance prediction. *Journal of Occupational Health Psychology*, *2*, 212–219.

Zarit, S.H., Stephens, M.A.P., Townsend, A., & Greene, R. (1998). Stress reduction for family caregivers: Effects of adult day care use. *Journals of Gerontology*, *53B*, S267–S277.

Zautra, A.J., Hoffman, J.M., Matt, K.S., Yocum, D., Potter, P.T., Castro, W.L., & Roth, S. (1998). An examination of individual differences in the relationship between interpersonal stress and disease activity among women with rheumatoid arthritis. *Arthritis Care & Research*, *11*, 271–279.

Zelman, D.C., Howland, E.W., Nichols, S.N., & Cleeland, C.S. (1991). The effects of induced mood on laboratory pain. *Pain*, *46*, 105–111.