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Abstract

What is a good society? Philosophers from Plato to Bentham have argued that a good society is a happy society—namely, a society in which most citizens are happy and free from fear. Since the publication of *The Wealth of Nations* by Adam Smith in 1776, most economists have implicitly assumed that a happy society is a materially wealthy society. Thus, gross national product and related indices became the most popular indicators of the well-being of nations from the 1950s to date. Recently, however, prominent economists as well as political scientists, sociologists, and psychologists have shown that a happy society is not only a materially wealthy society but also a society in which citizens can trust one another, have a sense of freedom, and have close social relationships. The inquiry into the psychological wealth of nations, or the subjective well-being of nations, helps answer a fundamental question in philosophy and social sciences for millennia: “What is a good society?”

Keywords

culture, well-being, wealth, social support

In 1776, Adam Smith published his monumental book *The Wealth of Nations*, creating the foundation of modern quantitative economics (Smith, 1776/2003). *The Wealth of Nations* is still widely read and quoted by economists today (Krueger, 2003). Smith was concerned with the economic activities of individuals and society and provided deep insights into the measurement of and international differences in material wealth. It is well-known that other founders of modern economics, such as Jeremy Bentham (1789/2008) and John Stuart Mill (1871/2007), were deeply concerned with the happiness of individuals and society as a whole, or the psychological wealth of nations. Bentham (1789/2008), for instance, famously defined utilitarianism as follows:

By the principle of utility is meant that principle which approves or disapproves of every action whatsoever, according to the tendency which it appears to have to augment or diminish the happiness of the party whose interest is in question: or, what is the same thing in other words, to promote or to oppose that happiness. (p. 1)

Bentham (1789/2008) went on to argue that “The business of government is to promote the happiness of the society, by punishing and rewarding” (p. 46), which defines the utilitarian perspective on morality and law.

Whereas Bentham’s (1789/2008) and Mill’s (1871/2007) utilitarianism remained the dominant theory in moral philosophy (Rawls, 1971/1999), economists in the 20th century were mainly interested in the material wealth of nations and monetary exchanges rather than psychological aspects of economic activities (see Vaggi & Groenewegen, 2003, for a historical survey). Pioneers of macroeconomics such as Knut Wicksell and John Maynard Keynes, for instance, focused on issues such as interest rate, inflation, and unemployment. Arthur Cecil Pigou (1932), an influential Cambridge economist, also argued that social welfare, or Bentham’s greatest happiness principle, could and should be measured by money, further invalidating the use of self-reports and the first-person perspective in economics. Thus, neither self-reported well-being nor aggregates of it were considered a proper method of measuring well-being in mainstream economics (Graham, 2005). The main assumption was that increasing individuals’ and nations’ wealth would increase well-being because wealth allows individuals to maximize their well-being.

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Recently, however, several prominent economists have begun investigating the psychological wealth of nations, or the subjective well-being of nations, fully incorporating the first-person perspective and self-reports of well-being (see Easterlin, 1974, for a pioneering work; see Frey, 2008, and Layard, 2005, for recent reviews). In this article, we review recent developments in interdisciplinary research on the psychological wealth of nations. Specifically, we present a brief historical survey of the shift in interest among economists and other social scientists from the purely material wealth of nations to the psychological wealth of nations. We then highlight key issues in the discussion of the psychological wealth of nations.

The Creation of Gross National Product (GNP) and Its Discontent

Smith (1776/2003) proposed that the wealth of nations be measured by the “produce of the whole labour of the society” and the “quantity of capital stock” (pp. 4–5). Smith famously observed that the division of labor was a pivotal factor contributing to the wealth of a nation by multiplying the efficiency of societal outputs. Later, the recipient of the 1971 Nobel Memorial Prize in Economics, Simon Kuznets, and his colleagues (Kuznets, Epstein, & Jenks, 1941) presented the concrete concept of national income, which was defined as “the net value of all economic goods produced by the nation” (p. 3). Among its other influences, national income formed the foundation for various indicators of material societal well-being such as gross domestic product (GDP) and GNP, which became the most popular indices of material well-being at the level of nations from the 1950s to date.

Although the outputs of a nation indicate the material well-being of the nation, material wealth alone does not capture the full range of societal conditions (Diener & Seligman, 2004; Frey & Stutzer, 2002). For instance, an increase in industrial production often entails undesirable societal conditions such as environmental pollution (e.g., Japan in the 1950s; China in the 1990s). In addition, crime rate, personal safety, availability of health care and social welfare, homelessness, infant mortality, and longevity are not perfectly correlated with indicators of material well-being such as GDP (Morris, 1979).

Dissatisfaction with the limited nature of purely economic indicators of societal well-being led to the social indicators and quality-of-life movement in the 1960s and 1970s. In the late 1960s, the U.S. government set up the Panel on Social Indicators with Daniel Bell (sociologist) and Alice M. Rivlin (economist) as cochairs. Federal agencies started publishing various social indicators regularly, including educational enrollment and attainment, crime victimization, infant mortality, and longevity. In 1974, the interdisciplinary journal *Social Indicators Research* was established as a forum for social indicator and quality-of-life researchers (see Sirgy et al., 2006).

These efforts led to the creation of the Human Development Index (HDI, Haq, 1995). The HDI is an objective indicator that reflects individuals’ opportunities for greater well-being, but it uses a broader set of opportunities, which are often called

capabilities (Sen, 1999). Since the creation of the HDI (which consisted of income, life expectancy, and educational attainment) in 1990, several measures of societal well-being have been proposed (Easterlin, 2000). Although there are several strengths of social indicators such as the HDI, there are also several notable limitations (see Diener, Lucas, Schimmack, & Helliwell, 2009, and Diener & Suh, 1997, for detailed criticism). First, a small number of experts often decide which indicators to include in the summary index of societal well-being, which leaves room for disagreements (e.g., “Should the unemployment rate be included?”). Second, it is unclear how various social indicators should be integrated into an overall index. Third, social indicators are not free from measurement errors. For instance, some nations keep the statistics regarding schooling more accurately than others. Thus, as with self-reports, there is divergent reliability in social indicators. Finally, social indicators (e.g., percentage of people with a high-school diploma) might not reflect people’s everyday experiences (Easterlin, 2000).

Subjective Indicators of Societal Well-Being

Other leading scholars are promoting the creation of national accounts of well-being based on subjective indicators. Whereas objective indicators typically focus on opportunities that allow individuals to realize well-being, subjective indicators aim to directly assess the actual level of individuals’ well-being (Diener et al., 2009; Dolan & White, 2007; Inglehart, Foa, Peterson, & Welzel, 2008). The strength of a subjective approach to societal well-being is that it captures people’s experiences and evaluations more directly than either economic or social indicators. For instance, East Asian nations such as South Korea and Japan are high on many economic indicators, such as GDP per capita and saving rates, and social indicators, such as education and longevity, but they do not report particularly high levels of life satisfaction or daily happiness (see Fig. 1). In contrast, many Latin American nations are not particularly high on many economic and social indicators, but they report fairly high levels of life satisfaction and daily happiness (see Fig. 1). The exclusive reliance on economic and social indicators of societal well-being will miss some important subjective perspectives on societal well-being.

As is the case with self-reported well-being at the level of individuals, however, reliability and validity are important issues in discussing the utility of subjective assessments of societal well-being (see Barrota, 2008, for a critical review). Although extensive construct validation has been conducted in North America, self-reported well-being has not been as well validated elsewhere. Thus, the measurement equivalence of self-reported well-being items across societies is a major concern. Specific problems include societal differences in the meaning of well-being items (e.g., when *excitement* is literally translated, it implies “anger” or “sexual arousal” in Japanese and Korean), response styles (e.g., Vittersø, Biswas-Diener, & Diener, 2005), and various other judgment biases (e.g., Heine, Lehman, Peng, & Greenholtz, 2002). These problems can make

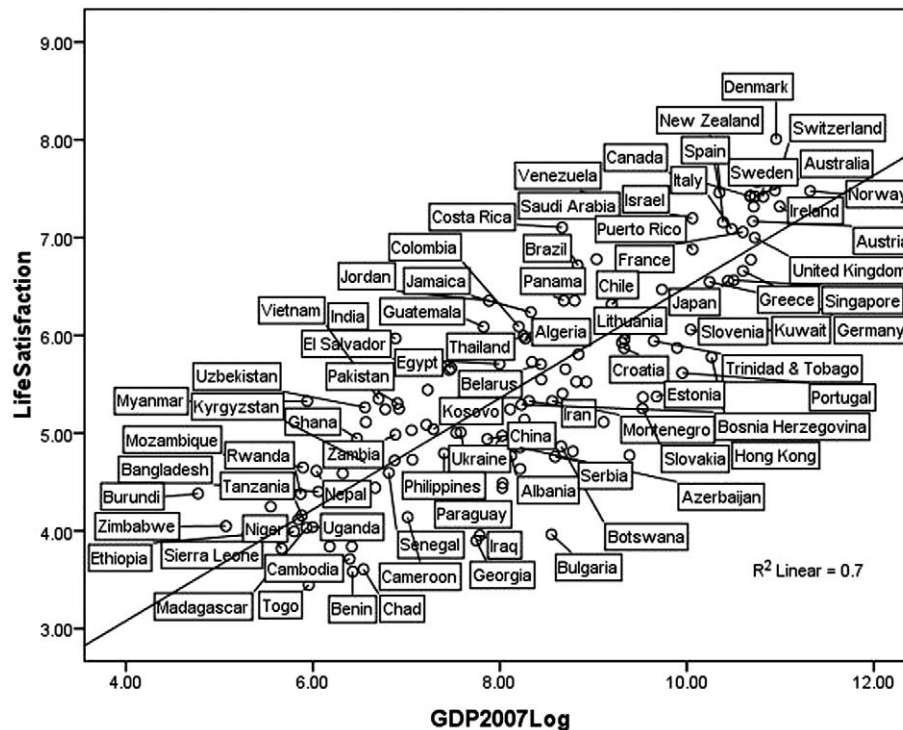


Fig. 1. The relation between log-transformed gross domestic product (GDP) per capita and life satisfaction measured by Cantril's (1965) Ladder Scale.

it difficult to interpret national mean scores of self-reported well-being. Heine, Buchtel, and Norenzayan (2008), for instance, showed that national mean scores of self-reported Conscientiousness did not show expected correlations with criterion variables such as GNP and the pace of life. Vittersø and colleagues (2005) showed that Norwegians and Greenlanders were equally satisfied with their lives, if raw scores were used. However, once the use of the extreme response on the scale (i.e., a rating of 7 on the 7-point scale) was statistically controlled, Norwegians showed higher levels of life satisfaction than did Greenlanders (see also Oishi, 2006). Thus, these findings cast some doubt on the validity of aggregate, national mean scores of self-reported well-being.

Overall, however, there is a good deal of evidence for the reliability and validity of self-reported well-being. First, Diener, Diener, and Diener (1995) examined test-retest reliability of nation-level self-reported well-being (e.g., how satisfied respondents were with their lives, how happy they were). They analyzed data from 55 nations and found that the rank order of nations in global reports of well-being is highly stable over time. For instance, the rank order of nations from 1 year and another was highly correlated ($r = .67, p < .01$). The national mean life-satisfaction scores computed on the basis of college student data in 1 year were highly correlated with the national mean life-satisfaction scores computed on the basis of nationally representative samples in another year ($r = .49, p < .01$). The stability in the rank order of nations in global reports of well-being and convergence between college student and nationally representative data could, however, result from

response styles (the citizens of some nations tend to use high numbers, whereas others use low numbers). Thus, it is important to examine whether mean levels of self-reported well-being converge with non-self-report measures of societal conditions. Unlike in self-reported Conscientiousness (Heine et al., 2008), extensive evidence has shown that mean levels of self-reported well-being are correlated in the expected direction with criterion variables. For example, Diener et al. (1995) found that nations high in self-reported well-being were those high in GDP per capita ($r = .58, p < .01$) and individualism ($r = .77, p < .01$) and low in human rights violations ($r = -.48, p < .01$). Similarly, Veenhoven (1995) analyzed two international surveys and reached an almost identical conclusion: GDP per capita, social equality, political freedom, and access to knowledge and education were significantly associated with the subjective well-being of nations. In addition, nations high in self-reported well-being were those less corrupted, according to the International Corruption Index (Veenhoven, 2005). Because self-reported well-being and these criterion variables do not share any method variance, these patterns of correlations indicate a certain degree of validity in national means of self-reported well-being.

Similarly, self-reported well-being is systematically associated with self-reported conditions of life at the national level. For instance, nations high in self-reported well-being are also high in self-reported trust in government and other people in general (Tov & Diener, 2007) and self-reported availability of social support (Helliwell, Barrington-Leigh, Harris, & Huang, 2010). Furthermore, using the World Values Survey,

Inglehart and colleagues (2008) have shown that changes in the national mean of self-reported well-being could be reliably predicted from changes in societal conditions. For instance, changes in the self-reported sense of freedom from the earliest to the latest survey data were highly correlated with changes in self-reported well-being from the earliest to the latest survey data ($r = .71, p < .01$). That is, nations that experienced an increase in a sense of freedom were those nations that experienced an increase in self-reported well-being, whereas nations that experienced a decrease in a sense of freedom were those nations that experienced a decrease in self-reported well-being. Inglehart and colleagues hypothesized and found support for the theoretical model of societal well-being (measured by self-reported well-being) that was predicted by a sense of freedom, which in turn was predicted by democratization, economic development, and social tolerance. Together, these findings indicate that self-reported well-being provides meaningful information regarding the functioning of societies.

What Is a Good Society? A Contribution From Psychological Science

For a long time, the discussion of the good society was left mostly to philosophers. In *Republic*, Plato argued that a good society is a just society governed by philosopher kings. Confucius proposed that a good society is a harmonious society governed by virtue rather than laws (Kanaya, 1963). In his famous *Civilization and Its Discontent*, Freud (1930/1989) idealized a simple society in which human instincts are not morally and legally constrained. The reliability and validity of self-reported well-being at the national level provide justification for empirically testing various hypotheses regarding the good society: “Are rich nations happy nations?” “How important are social relationships in the psychological wealth of nations?” In the next section, we summarize the main findings regarding these questions.

Although clear evidence has been found for the positive association between the material wealth and psychological wealth of nations, the nature of this relationship has been hotly debated. According to Veenhoven’s World Database of Happiness and Inglehart’s World Values Surveys, the relations between GDP per capita and the self-reported well-being of nations seem curvilinear (Diener et al., 1995; Inglehart et al., 2008). Namely, within relatively poor nations, the richer one is, the happier one tends to be. However, after a certain point—roughly around a GDP per capita of \$15,000 to \$20,000—an increase in GDP per capita is not associated with an increase in the life satisfaction of nations (Inglehart et al., 2008; Layard, 2005).

The latest Gallup World Poll includes many more poor nations than the World Values Surveys. Using the data set from the Gallup World Poll, Deaton (2008) found a linear as opposed to curvilinear correlation between log-transformed GDP per capita and the life satisfaction of nations (measured by Cantril’s, 1965, Ladder Scale). In other words, once GDP per capita was log-transformed, its relation to the life satisfaction of nations became linear rather than curvilinear. Stevenson and

Wolfers (2008) analyzed virtually all the available international surveys on self-reported well-being and also consistently found strong linear correlation between log-transformed GDP per capita and life satisfaction of nations ($r = .71$ for the 1989–1993 World Values Survey with 42 nations; $r = .70$ for the 1994–1999 World Values Survey with 52 nations; $r = .70$ for the 1999–2004 World Values Survey with 69 nations; $r = .55$ for the 2002 Pew Global Attitudes Survey with 44 nations; $r = .82$ for the Gallup World Poll with 131 nations). Interestingly, Stevenson and Wolfers’ analysis of the 1999–2004 World Values Survey showed only a small correlation between log-transformed GDP per capita and the self-reported happiness of a nation (happiness was assessed by the following item: “Taken all things together, would you say you are: *very happy, quite happy, not very happy, or not at all happy?*”; $r = .27$, although the correlation went up to .49 when Nigeria and Tanzania, two outliers, were removed from the analysis). Thus, material wealth seems to be more strongly associated with life satisfaction, or the cognitive evaluation of life, than with happiness, or the affective evaluation of life.

Diener, Kahneman, Tov, and Arora (2010) systematically examined the differential correlations between material wealth and cognitive versus affective aspects of well-being using the Gallup World Poll. Like Stevenson and Wolfers (2008), these researchers found that log-transformed national income was consistently more strongly associated with life satisfaction measured by Cantril’s (1965) Ladder Scale (“Where on the ladder would you say you personally stand at the present time?” 0 = *worst possible life* to 10 = *best possible life*) than with happiness (see Inglehart et al., 2008, for a similar difference between life satisfaction and happiness items in the World Values Survey). Note that in the Gallup World Poll, happiness was measured by two items with regard to the previous day: “Have you enjoyed your life yesterday?” and “Did you smile a lot yesterday?” (response option of “yes” or “no”). Specifically, the correlation was .83 between national income and Cantril’s Ladder Scale, whereas it was .35 with the happiness score.

Why should material wealth be more strongly associated with general life satisfaction than daily happiness? Cantril’s (1965) Ladder Scale asks respondents to think about the best and the worst possible life. When people think about the worst possible life, they often think about poverty, illness, and the lack of family and friends, whereas when they think about the best possible life, they often think about having money, health, and good family and friends (Cantril, 1965). Because Cantril’s Ladder Scale primes financial security and material possessions as well as nonmaterial factors, responses to it are affected by material wealth as well as other factors. In contrast, when participants are asked about enjoyment of life “yesterday,” they are likely to think of specific events or activities that might or might not have required material consumption. Indeed, Diener et al. (2010) showed that nations high on Cantril’s Ladder Scale were also nations high in modern convenience (high percentage of residents with running water, electricity, television, and computer; $r = .80$), whereas nations high in the

happiness score were not necessarily the nations with modern convenience ($r = .16$). Nations high in the happiness score were those nations where people can choose how to spend their time ($r = .54$).

These divergent patterns of correlations between material conditions and different measures of well-being indicate that an answer to the good society question also varies depending on the definition of the good society. If the good society is a society in which people feel their lives are close to the best possible lives, then economic prosperity can be the primary goal because the psychological wealth of nations measured by Cantril's (1965) Ladder Scale is highly correlated with the material wealth of nations (Stevenson & Wolfers, 2008). If, on the other hand, the good society is the society in which people enjoy their lives and smile a lot, then economic development seems to be an incomplete answer; considering Diener et al.'s (2010) findings, policy makers might want to aim to maximize citizens' flexibility in how they spend their time to this end. Thus, recent research on the psychological wealth of nations contributes to the empirical basis for the discussion of the good society. In addition, it shows that psychological science can make a significant contribution to principal policy debates (see also Diener et al., 2009; Diener & Seligman, 2004; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004).

The Psychological Wealth of Nations: Beyond Money

Another way in which psychological science can make a contribution to the emerging field of societal well-being is its attention to the psyche and its relational contexts. Although early economists, such as Bentham (1789/2008) and Mill (1871/2007), viewed experienced pleasure and the lack of pain as the ultimate utility, contemporary economists often view income as the most direct utility. Thus, contemporary economists tend to focus on phenomena easily convertible to monetary terms. In this sense, the strong linear correlations between the material wealth of and the life satisfaction of nations observed by Stevenson and Wolfers (2008) are reassuring to economists who take this perspective.

Despite the impressive size of the correlation between GDP per capita and the self-reported well-being of nations, there are some notable deviations from the linear association. Figure 1 shows the strong positive correlation between log-transformed 2007 GDP per capita and the national average of life satisfaction measured by Cantril's (1965) Ladder Scale in the 131-nation Gallup World Poll data ($r = .84, p < .01$; $r = .77, p < .01$, if 2007 GDP was not log-transformed). Most Latin American nations are above the regression line, whereas many ex-communist nations are below the regression line. For instance, Venezuela's life satisfaction score deviated most positively from the expected value (1.44 in the 11-point Ladder Scale higher than expected from its GDP per capita) followed by Costa Rica (1.37 higher than expected). Brazil (+0.89 higher), Mexico (+0.83 higher), Guatemala (+0.83 higher), Columbia (+0.62 higher), Panama (+0.61 higher), and

Honduras (+0.60 higher) all scored substantially higher than expected from their economic wealth. The most negative deviation was observed in Bulgaria (1.71), followed by Latvia (-1.38), Georgia (-1.31), Iraq (-1.28), Turkey (-0.99), Slovakia (-0.98), Estonia (-0.94), Serbia (-0.93), and Armenia (-0.92). Inglehart et al. (2008) found similar patterns of deviations in the World Values Survey data and showed that religiosity explained the deviations. That is, most Latin American nations showed life satisfaction higher than expected from their material wealth and were more religious than ex-communist nations, which showed lower than expected life satisfaction. Finally, the differences in religiosity in part explained the positive versus negative deviations in the life satisfaction of nations.

In the literature on subjective well-being, there is rich evidence that the quality of social relationships is one of the strongest predictors (e.g., Campbell, Converse, & Rodgers, 1976; Heller, Watson, & Ilies, 2004). Thus, although material conditions are important predictors of subjective well-being at the national level, interpersonal conditions should be associated with societal well-being. Fortunately, the Gallup World Poll included a question regarding availability of social support ("If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?"; response option of "yes" or "no"). We thus tested whether the presence of social support would account for the deviations from the predicted values of life satisfaction. Consistent with our hypothesis, nations high in social support were also high in self-reported life satisfaction measured by Cantril's (1965) Ladder Scale ($r = .74, p < .01$, see Table 1). Most important, regression analysis provided support for our hypothesis by indicating that the national mean of social support explained the life satisfaction of nations beyond log-transformed GDP per capita: $B = 3.27, \beta = .30, t(127) = 4.95, p < .01, \Delta R^2 = .048$.

These findings could, however, be explained by Inglehart et al.'s (2008) religiosity findings, because religious nations might have stronger social support than less religious nations. The Gallup World Poll included one item on importance of religion ("Is religion an important part of your daily life?"; response option of "yes" or "no"). As expected, nations high in importance of religion were higher in the mean levels of life satisfaction and social support ($r = .50, p < .01$, for both). Thus, we went on to test the relative importance of material wealth, social support, and importance of religion in predicting the national mean of life satisfaction. A simultaneous regression analysis showed that contrary to Inglehart et al., importance of religion was negatively associated with life satisfaction measured by Cantril's (1965) Ladder Scale, $B = -0.59, \beta = -.13, t(125) = -2.16, p < .05$, after log-transformed GDP per capita and social support were statistically controlled. In contrast, both log-transformed GDP per capital, $B = 0.48, \beta = .71, t(125) = 10.15, p < .01$, and social support, $B = 3.37, \beta = .31, t(125) = 5.14, p < .01$, remained significantly positively associated with the life satisfaction of nations, even after controlling for importance of religion. Thus, we found that social support is a significant positive predictor of the national mean

levels of life satisfaction, beyond the importance of religion and material wealth. In other words, these findings indicate that the good society is a society that is economically prosperous and has strong social support.

Because the Gallup World Poll also included various affect items (e.g., enjoyment, love, boredom, anger) of the previous day, we further examined the role of material wealth and social support in predicting affective aspects of well-being (see Table 1 for bivariate correlations and Table 2 for results from simultaneous regression analyses). Both log-transformed GDP per capita and social support were positively associated with enjoyment and negatively associated with boredom, depression, and physical pain (Table 1). Simultaneous regression analyses shown in Table 2 indicate that national mean levels of social support predicted the national mean of enjoyment and love beyond GDP per capita, whereas GDP per capita did not predict enjoyment or love beyond social support. Moreover, national mean levels of social support also predicted boredom and anger (the more support, the less boredom and anger), controlling for GDP per capita, whereas GDP per capita did not predict boredom and anger, controlling for social support. GDP per capita, however, predicted national means of physical pain, controlling for social support. The national mean of physical pain experienced on the previous day was lower in wealthier than in poorer nations.

As in the earlier analyses, we examined the role of importance of religion in predicting affective aspects of societal well-being in a series of simultaneous regressions. The results regarding GDP per capita and social support remained similar with or without importance of religion as an additional predictor. For instance, when the national mean of enjoyment was predicted by GDP, social support, and religion, the importance of religion was negatively associated with enjoyment, whereas GDP per capita and social support were positively associated with enjoyment. Social support was also positively associated with love, whereas importance of religion was negatively associated with love, and GDP per capita was unrelated. Importance of religion was also unrelated to negative affect (i.e., national levels of worry, sadness, and depression), controlling for GDP per capita and social support. Overall, importance of religion did not have a strong predictive power beyond material and relational wealth.

In short, daily affective experiences such as enjoyment, love, and the lack of boredom and anger are more strongly associated with the relational wealth of nations than with the material wealth of nations. Material wealth raises the standard of living, which in turn increases satisfaction with the living conditions. However, material wealth and high standard of living alone do not guarantee the daily enjoyment of a society's citizens. If the goal of a society is to raise the daily enjoyment of its citizens, then it seems critical to devise ways to increase the relational wealth of nations (e.g., stronger social networks).

Future Directions

The foregoing discussion of societal well-being has emphasized the purely subjective perspective. Note, however, that several

researchers have proposed societal indices of well-being that combine subjective indicators (e.g., the average self-reported happiness) with more objective indicators (e.g., longevity). For instance, Veenhoven (2005) proposed the Happy Life Expectancy Index, weighting life expectancy by the average self-reported happiness of nations. According to this index, even when two nations are equally happy, the nation with longer life expectancy is deemed better than the other nation with shorter life expectancy. Thus, the Happy Life Expectancy Index overcomes a well-known duration neglect effect in well-being judgments (Fredrickson & Kahneman, 1993). Similarly, the New Economic Foundation (2008) proposed the Happy Planet Index, which extends the Happy Life Expectancy Index by accounting for the energy consumption (damage to the earth) of each nation. Specifically, the Happy Planet Index is the Happy Life Expectancy Index divided by the carbon footprint of each country.

In summary, recent years have seen three types of societal well-being indices: (a) objective indicators (e.g., GDP per capita, longevity, crime rate), (b) subjective indicators (e.g., happiness, life satisfaction), and (c) a combination of social and subjective indicators (e.g., Happy Life Expectancy Index). Each type of indicator has its advantages and disadvantages. Objective indicators do not suffer from the same concerns about reporting bias as subjective indicators. However, objective indicators do not necessarily reflect ordinary citizens' daily experiences, which are better captured by subjective indicators. The combination of objective and subjective indicators addresses the problems of each approach, but it has its own concerns (e.g., how to combine the indicators; weighting issues). One solution to this dilemma is to ask citizens the importance of various social indicators for the well-being of their society and use their answers to determine the weight for each indicator, much like what is done at the individual level (e.g., Oishi, Diener, Suh, & Lucas, 1999). It is important to examine differences and similarities among these types of indicators of societal well-being as scientists, policy makers, and citizens continue to debate the nature and causes of a good society. In addition, further testing of the effect of measurement artifact on cross-national differences in self-reported subjective well-being is critical. For example, Schimmack and Oishi (2010) found some evidence that Latin American nations' subjective well-being is partially inflated as a result of their propensity to use the highest response category.

Conclusion

Psychologists have investigated the meaning, concepts, experiences, and predictors of happiness almost exclusively at the level of individuals. The dominant questions have been the following: "What is happiness?" "How can one measure happiness?" "Who is happy?" "When are people happy?" Not surprisingly, then, culture and well-being researchers have also focused on potential cultural variations in these questions regarding the happiness of individuals (e.g., "Are there cultural differences in predictors of happiness?" "Are there cultural differences in the meaning of happiness?"; see Diener, Oishi,

Table 1. Correlations Among Log-Transformed GDP Per Capita, Mean Social Support, and Self-Reported Well-Being of Nations

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|----------------------|---|-------|-------|-------|-------|--------|--------|-------|--------|--------|--------|
| 1. GDP | — | .69** | .84** | .44** | .14 | -.21* | -.16 | .11 | -.06 | -.32** | -.40** |
| 2. Social support | | — | .74** | .57** | .27** | -.36** | -.36** | .00 | -.16 | -.31** | -.37** |
| 3. Life satisfaction | | | — | .59** | .28** | -.34** | -.26** | -.04 | -.20* | -.37** | -.38** |
| 4. Enjoyment | | | | — | .50** | -.48** | -.39** | -.20* | -.37** | -.48** | -.34** |
| 5. Love | | | | | — | -.30** | -.22* | .13 | -.07 | -.12 | -.10 |
| 6. Boredom | | | | | | — | .59** | .29** | .48** | .58** | .27** |
| 7. Anger | | | | | | | — | .38** | .44** | .48** | .27** |
| 8. Worry | | | | | | | | — | .67** | .30** | .40** |
| 9. Sadness | | | | | | | | | — | .57** | .53** |
| 10. Depression | | | | | | | | | | — | .42** |
| 11. Physical pain | | | | | | | | | | | — |

Note: Sample sizes ranged from 98 to 131 nations. Life satisfaction was measured by Cantril's (1965) Ladder Scale. The rest of the items were single items ("Did you experience the following feelings during A LOT OF THE DAY yesterday?"). GDP = gross domestic product.
 * $p < .05$. ** $p < .01$.

Table 2. Predicting Self-Reported Well-Being of Nations From Log-Transformed GDP Per Capita and Social Support

| Dependent variable | GDP | | | Social support | | |
|--------------------|-------|---------|--------------------|----------------|---------|--------------------|
| | B | β | t | B | β | t |
| Life satisfaction | 0.43 | .63 | 10.97** | 3.27 | .30 | 4.95** |
| Enjoyment | 0.01 | .10 | 0.97 | 0.55 | .50 | 5.03** |
| Love | -0.01 | -.05 | -0.43 | 0.44 | .30 | 2.39* |
| Boredom | 0.00 | .06 | 0.53 | -0.37 | -.41 | -3.54** |
| Anger | 0.01 | .16 | 1.39 | -0.35 | -.47 | -4.07** |
| Worry | 0.01 | .19 | 1.58 | -0.13 | -.12 | -1.02 |
| Sadness | 0.00 | .09 | 0.72 | -0.14 | -.21 | -1.75 ⁺ |
| Depression | -0.01 | .20 | -1.72 ⁺ | -0.12 | -.18 | -1.53 |
| Physical pain | -0.01 | -.28 | -2.50** | -0.12 | -.17 | -1.55 |

Note: GDP = gross domestic product.
⁺ $p < .10$. * $p < .05$. ** $p < .01$.

& Lucas, 2003, and Uchida, Norasakkunkit, & Kitayama, 2004, for reviews). These complex questions require sustained research attention and should remain central in culture and well-being research in the future. However, now that psychologists have some grip on these questions, it is time to expand research questions to the area of societal well-being, not just individual well-being.

In recent decades, self-reports of well-being became accepted as a valid source of information regarding utility among economists (Frey & Stutzer, 2002; Graham, 2005; see, however, Barrotta, 2008, and Sen, 1999, for skepticism). With this increased acceptance of self-reports and survey data, economists as well as sociologists, political scientists, and psychologists have returned to Bentham's (1789/2008) greatest happiness principle and have empirically examined the good society. Recent studies have shown that if the good society is a society in which most residents feel that they are leading close to the best possible lives, then material wealth is likely to help create the good society (Stevenson & Wolfers, 2008). If, on the other hand, the good society is a society in which most residents enjoy their lives day to day, then material wealth is not enough.

A sense of freedom (Inglehart et al., 2008), trust (Tov & Diener, 2007) and a feeling of social support, in addition to material wealth, seem important to create such a society. Roughly 230 years after the publication of *The Wealth of Nations* (Smith, 1776/2003), a scientific inquiry into the psychological wealth of nations has finally begun. We believe that this inquiry will not only help increase understanding of the nature and causes of the good society but also help increase psychological science's visibility in policymaking. In conclusion, the psychological wealth of nations is a challenging and exciting interdisciplinary research area for psychological scientists in the 21st century.

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References

Barrotta, P. (2008). Why economists should be unhappy with the economics of happiness. *Economics and Philosophy*, 24, 145-165.

- Bentham, J. (2008). *An introduction to the principles of morals and legislation*. New York: Barnes & Nobel. (Original work published 1789).
- Campbell, A., Converse, P.E., & Rodgers, W.L. (1976). *The quality of American life: Perceptions, evaluations, and satisfactions*. New York: Russell Sage Foundation.
- Cantril, H. (1965). *The patterns of human concerns*. New Brunswick, NJ: Rutgers University Press.
- Deaton, A. (2008). Income, health, and well-being around the world: Evidence from the Gallup World Poll. *Journal of Economic Perspectives*, 22, 53–72.
- Diener, E., Diener, M., & Diener, C. (1995). Factors predicting the subjective well-being of nations. *Journal of Personality and Social Psychology*, 69, 851–864.
- Diener, E., Kahneman, D., Tov, W., & Arora, R. (2010). Income's differential impact on judgments of life versus affective well-being. In E. Diener, D. Kahneman & J. Helliwell (Eds.), *International differences in well-being* (pp. 3–15). New York: Oxford University Press.
- Diener, E., Lucas, R.E., Schimmack, U., & Helliwell, J. (2009). *Well-being for public policy*. New York: Oxford University Press.
- Diener, E., Oishi, S., & Lucas, R.E. (2003). Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology*, 54, 403–425.
- Diener, E., & Seligman, M.E.P. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest*, 5, 1–31.
- Diener, E., & Suh, E. (1997). Measuring quality of life: Economic, social, and subjective indicators. *Social Indicators Research*, 40, 189–216.
- Dolan, P., & White, M.P. (2007). How can measures of subjective well-being be used to inform public policy? *Perspectives on Psychological Science*, 2, 71–85.
- Easterlin, R.A. (1974). Does economic growth improve the human lot? Some empirical evidence. In P.A. David & W.R. Melvin (Eds.), *Nations and households in economic growth* (pp. 89–125). New York: Academic Press.
- Easterlin, R.A. (2000). The globalization of human development. *Annals of the American Academy of Political and Social Science*, 570, 32–48.
- Fredrickson, B.L., & Kahneman, D. (1993). Duration neglect in retrospective evaluations of affective episodes. *Journal of Personality and Social Psychology*, 65, 45–55.
- Freud, S. (1989). *Civilization and its discontent*. New York: W. W. Norton. (Original work published 1930).
- Frey, B. (2008). *Happiness: A revolution in economics*. Cambridge, MA: MIT Press.
- Frey, B., & Stutzer, A. (2002). What can economists learn from happiness research? *Journal of Economic Literature*, 40, 401–435.
- Graham, C. (2005). The economics of happiness: Insights on globalization from a novel approach. *World Economics*, 6, 41–55.
- Haq, M. (1995). *Reflections on human development*. New York: Oxford University Press.
- Heine, S., Buchtel, E.E., & Norenzayan, A. (2008). What do cross-national comparisons of personality traits tell us? The case of conscientiousness. *Psychological Science*, 19, 309–313.
- Heine, S., Lehman, D.R., Peng, K., & Greenholtz, J. (2002). What's wrong with cross-cultural comparisons of subjective Likert scales? The reference-group effect. *Journal of Personality and Social Psychology*, 82, 379–398.
- Heller, D., Watson, D., & Ilies, R. (2004). A role of person versus situation in life satisfaction: A critical examination. *Psychological Bulletin*, 130, 574–600.
- Helliwell, J.F., Barrington-Leigh, C., Harris, A., & Huang, H. (2010). International evidence on the social context of well-being. In E. Diener, D. Kahneman & J. Helliwell (Eds.), *International differences in well-being* (pp. 291–327). New York: Oxford University Press.
- Inglehart, R., Foa, R., Peterson, C., & Welzel, C. (2008). Development, freedom, and rising happiness: A global perspective (1981–2007). *Perspectives on Psychological Science*, 3, 264–285.
- Kahneman, D., Krueger, A.B., Schkade, D., Schwarz, N., & Stone, A. (2004). Toward national well-being accounts. *American Economic Review Papers and Proceedings*, 94, 429–434.
- Kanaya, O. (1963). *Rongo ("Analects of Confucius" in Japanese)*. Tokyo, Japan: Iwanami Bunko.
- Krueger, A.B. (2003). Introduction. In A. Smith, *The wealth of nations* (pp. xi–xxv). New York: Bantam.
- Kuznets, S., Epstein, L., & Jenks, E. (1941). *National income and its composition, 1919–1938*. (Vol 1). New York: National Bureau of Economic Research.
- Layard, R. (2005). *Happiness: Lessons from a new science*. New York: Penguin Press.
- Mill, J.S. (2007). *Utilitarianism*. Mineola, NY: Dover. (Original work published 1871).
- Morris, M.D. (1979). *Measuring the condition of the world's poor: The physical quality of life index*. New York: Pergamon.
- The New Economics Foundation. (2008). *The Happy Planet Index: An index of human well-being and environmental impact*. London: Author.
- Oishi, S. (2006). The concept of life satisfaction across cultures: An IRT analysis. *Journal of Research in Personality*, 41, 411–423.
- Oishi, S., Diener, E., Suh, E., & Lucas, R.E. (1999). Value as a moderator in subjective well-being. *Journal of Personality*, 67, 157–184.
- Pigou, A.C. (1932). *The economics of welfare*. (4th ed.). London: Macmillan.
- Rawls, J. (1999). *A theory of justice* (rev. ed.). Cambridge, MA: The Belknap Press of Harvard University Press. (Original work published 1971).
- Schimmack, U., & Oishi, S. (2010). *Predictors of national differences in well-being judgments: Wealth and what else?* Manuscript in preparation, University of Toronto, Mississauga, Ontario, Canada.
- Sen, A.K. (1999). *Development as freedom*. New York: Knopf.
- Sirgy, M.J., Michalos, A.C., Ferriss, A.B., Easterlin, R.A., Patrick, D., & Pavot, W. (2006). The quality-of-life (QOL) research movement: Past, present, and future. *Social Indicators Research*, 76, 343–466.

- Smith, A. (2003). *The wealth of the nations*. New York: Bantam. (Original work published 1776).
- Stevenson, B., & Wolfers, J. (2008). Economic growth and subjective well-being: Reassessing the Easterlin Paradox. *Brookings Papers on Economic Activity, Spring*, 1–102.
- Tov, W., & Diener, E. (2007). Culture and subjective well-being. In S. Kitayama & D. Cohen (Eds.), *Handbook of cultural psychology* (pp. 691–713). New York: Guilford.
- Uchida, Y., Norasakkunkit, V., & Kitayama, S. (2004). Cultural construction of happiness: Theory and empirical evidence. *Journal of Happiness Studies, 5*, 223–239.
- Vaggi, G., & Groenewegen, P.D. (2003). *A concise history of economic thought*. New York: Palgrave Macmillan.
- Veenhoven, R. (1995). The cross-national pattern of happiness: Test of predictions implied in three theories of happiness. *Social Indicators Research, 34*, 33–68.
- Veenhoven, R. (2005). Apparent quality-of-life in nations: How long and happy people live. *Social Indicators Research, 71*, 61–86.
- Vittersø, J, Biswas-Diener, R., & Diener, E. (2005). The divergent meanings of life satisfaction: Item response modeling of the Satisfaction With Life Scale in Greenland and Norway. *Social Indicators Research, 74*, 327–348.