Comparing Well-Being Across Nations: Conceptual and Empirical Issues

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The past decade has witnessed a growing interest in well-being indicators and their potential for informing public policy (Diener & Tov, in press; Dolan & White, 2007; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). A number of factors have contributed to this trend. First, a substantial body of research on subjective well-being has fostered increasing confidence in the validity of well-being measures (Diener, Suh, Lucas, & Smith, 1999; Veenhoven, 1996). A traditional concern is that happiness means different things to different people; consequently, people's ratings of how happy they are cannot be compared in any meaningful way. This problem should be further magnified when comparing people from different cultures. Over the past half-century, cross-national research on subjective well-being has provided important evidence *against* these objections (e.g., Diener, Diener, & Diener, 1995). In showing that societal levels of well-being *were* related to socioeconomic conditions, cross-national studies showed that well-being judgments are not completely relative and that meaningful comparisons are possible.

Another factor contributing to the prominence of well-being measures in discussions of public policy is increased scrutiny over economic indicators including their limitations for providing a complete picture of the quality of life in society. Economists have suggested that rising economic growth can sometimes be accompanied by negative effects across society. These negative "externalities" can include pollution from increased manufacturing and lack of family stability from greater geographic mobility (Layard, 2005). Oswald (1997) observed that job satisfaction in the U.S. and U.K. remained stagnant despite rising income from the 1970's to the 1990's. Although economic variables are related to well-being, other factors such as social relationships and a sense of mastery (i.e., feeling that one is developing and is using valuable skills) are also important (Tay & Diener, 2011). Consequently, several economists have begun to advocate for measures of *subjective* measures of well-being to supplement objective indicators

that have traditionally informed public policy (Blanchflower & Oswald, 2011; Stiglitz, Sen, &

Fitoussi, 2009). Layard (2005) has suggested that such measures could help improve cost-

benefit analyses of policy decisions. Instead of considering costs solely in financial terms (such

as people's willingness-to-pay for goods), well-being measures could expand the notion of costs

and benefits to how people's quality-of-life might be affected. However, the ability to make use

of such information is likely to hinge on the sufficiency and cautious interpretation of survey

data. Though the most relevant surveys for policymakers will be those involving their

constituents, on occasion, cross-national data may also be useful because social conditions and

policies often vary more between countries than within. That said, such data must be interpreted

cautiously lest faulty policy recommendations will be made.

In this chapter, we review cross-national survey studies of subjective well-being. We

begin with a short history of the concept of subjective well-being and examine how it has been

measured in national surveys. We then review some findings on well-being at the level of

societies and individuals. The former concerns how the economic and social conditions of

countries are related to their average level of happiness and life satisfaction. The latter considers

how the characteristics of happy and unhappy *individuals* may differ across cultures.   Next we

discuss important issues in research design and analysis of cross-national data, and in the

measurement of well-being across cultures. Advances in psychometrics and cross-cultural

psychology have raised the standards for measuring constructs across cultures, and initial

applications to well-being measures are examined. We close with an assessment of future

directions for cross-national research on well-being.

The Concept of Subjective Well-Being

Subjective well-being (SWB) refers to the myriad ways in which people experience and evaluate their own lives positively (Diener, 1984). Due to the broadness of the concept, survey studies have measured SWB in different ways. An early measure was the self-anchoring scale (Kilpatrick & Cantril, 1960) which uses a pictorial ten-step ladder. Participants are first asked to define for themselves the top and bottom of the ladder (i.e., the best and worst possible lives). Then they indicate where on the ladder their current life is. Another common measure asks people to report how often they experienced various positive and negative feelings (or affect; Bradburn, 1969). An *affect balance* score is then computed by subtracting the negative affect score from the positive affect score. Alternatively, people might be asked how they feel about various domains of life (Andrews & Withey, 1974) such as their family, job, and health.

This initial body of work led to a distinction between cognitive and affective aspects of SWB (Diener, 1984; Diener et al., 1999). The cognitive components include overall judgments of life satisfaction as well as more specific domain satisfactions, whereas the affective components consist of positive and negative emotions. One can also distinguish global measures of SWB from more specific types of measures (Diener & Tov, *in press*; Kim-Prieto, Diener, Tamir, Scollon, & Diener, 2005; Robinson & Clore, 2002). Global measures require an overall assessment of well-being, generalized over one's life (such as overall happiness). In contrast, *narrow* measures might focus on specific areas of life (e.g., job satisfaction). There are also *momentary* measures that ask people to report their on-line (current) feelings and moods, and *time-inclusive* (or retrospective) measures that ask people how they felt over a certain period of time (e.g., depression in the past week).

Table 1.Types of SWB Measures in Survey Studies

	Cognitive	Affective
Global	Life satisfaction Overall quality of life Life evaluation (e.g., best possible life)	Overall happiness General depression
Time-Inclusive	Satisfaction with the past day	Past month depression Frequency of happiness in past week Previous day emotions

Thus, the different components of well-being can be measured in various ways (see Table 1). Cognitive well-being can be assessed at a global level or at a more specific, time-inclusive level (e.g., satisfaction with the past week). Similarly, affective well-being can be measured in an overall sense or with reference to specific period. Different SWB measures have distinct advantages. Kahneman et al. (2004) noted that global SWB measures were more susceptible to memory biases than were measures of recent feelings. On the other hand, global measures are more likely than momentary measures to capture cultural differences in well-being (Diener & Lucas, 2000; Robinson & Clore, 2002), and may be more reflective of enduring societal conditions. However, not all types of SWB measures have been emphasized in cross-national surveys.

The Nature of SWB Measures in Cross-National Surveys

To assess the types of well-being that have been measured in cross-national surveys, we turned to the World Database of Happiness (WDH; Veenhoven, n.d.). The WDH provides a well-updated compendium of well-being scores for over 160 societies based on survey studies from 1946 to the present. Our analysis includes data up to 2009. Large portions of the data are taken from cross-national surveys such as the Eurobarometer, the World Values Survey (WVS), and the Gallup World Poll, as well as smaller scale national studies. Because we were interested

in the *totality of information* in the WDH, our basic unit of analysis was the single data point (e.g. average happiness for France in 1995). We included nations that are no longer formally in existence (e.g., Yugoslavia) because we were interested in how SWB has been measured throughout the history of survey research. However, to maintain a consistent level of analysis, we excluded data that were aggregated into "super regions" (e.g., the European Union), as well as data on specific states within the United States.

For each data point, we classified the measure according to the framework in Table 1. Although we initially distinguished between cognitive and affective measures, some measures were a mixture of both. For example, the delighted-terrible scale (Andrews & Withey, 1974) was considered a mixed measure because the response labels included both cognitive (e.g., mostly satisfied) and affective (e.g., unhappy) terms. We classified mixed measures separately. Three measures in the database did not clearly reflect affective or cognitive well-being per se and were excluded. These were measures of success in achieving one's goals and how well a person's happiness can be judged.

We also grouped the countries into subregions (United Nations, 2000). These groupings were predominantly geographical rather than cultural or ideological. For example, the UN classifies both Georgia and Jordan as part of Western Asia, instead of Eastern Europe and the Middle East, respectively. As our intention is to provide a rough assessment of world representation in the WDH, the UN categories serve our purpose.

Table 2. Number of Data Points in the World Database of Happiness by Region and Type of Well-Being

	General			Time-Inclusive				Pct
UN Region	Cog	Aff	Mix	Cog	Aff	Mix	Total	(%)
Africa, Eastern	43	1			13	10	67	2
Africa, Middle	13				7	2	22	1
Africa, Northern	22	5			8	3	38	1
Africa, Southern	23	10			6	2	41	1
Africa, Western	51	6			14	10	81	2
America, Central	93	15			10	7	125	3
America, Carribean	17	4			7	5	33	1
America, Northern	187	119	8		29	2	345	9
America, Southern	144	30			15	10	199	5
Asia, Eastern	137	42	9		13	5	206	5
Asia, South-Central	62	25			17	11	115	3
Asia, South-Eastern	45	30			11	7	93	2
Asia, Western	112	29			24	12	177	4
Europe, Eastern	341	121	26		29	12	529	13
Europe, Northern	434	163			31	9	637	16
Europe, Southern	353	86	1		26	11	477	12
Europe, Western	561	182	3		21	6	773	19
Oceania	40	17	6		4	2	69	2
Total	2678	885	53	0	285	126	4027	100
Pct (%)	67	22	1	0	7	3	100	

Note. Cog = Cognitive measure; Aff = Affective measure; Mix = Mixed measure. A data point is defined as a mean well-being score for a single country from a single survey-year. Countries are grouped according to regions defined by the United Nations (2000). Data are taken from Veenhoven (n.d.).

Table 2 presents the distribution of data points across subregions and sorted according to type of SWB. Ninety percent of the cross-national data available in the WDH consists of global measures of well-being. This is not surprising given that survey researchers are often interested in broad topics such as political attitudes and economic conditions rather than the nuances of daily experience. Even so, most global measures focused on *cognitive* SWB than affective SWB (67% versus 22%). The cognitive measures included life satisfaction judgments, overall

perceptions of the quality of life, and the self-anchoring ladder. All measures of general, affective well-being asked respondents to rate their overall happiness.

Only 10% of WDH data involved time-inclusive measures that specified a recent period of time (e.g., the previous day or the past week). The Affect Balance Scale (ABS; Bradburn, 1969)—which assesses feelings in the past few weeks—accounted for nearly one-third (28%) of time-inclusive affective measures. The majority of time-inclusive affect measures (64%) were from the Gallup World Poll (GWP; Gallup, Inc., 2008), which measured previous-day affect. In contrast to global measures, the time-inclusive measures included more negative affect items such as depression and anger. The small percentage of data using time-inclusive mixed measures is based on a single item from the GWP asking respondents if they would like "more days like yesterday". This item is mixed as both cognitive evaluations and affective experience could influence responses to this question.

Both global and time-inclusive measures provide researchers with distinct information. For example, Diener, Kahneman, Arora, Harter, and Tov (2009) observed that GDP per capita correlated more strongly with global well-being measures than previous-day affect balance. Although people in poor countries are generally less satisfied in an overall sense, they still report positive experiences in their daily life. The distinction between global cognitive SWB and time-inclusive affective SWB may also have implications for how countries are ranked. In Table 3, we present the top and bottom five countries on two measures of well-being from the 2008 GWP (as compiled by the WDH). The first measure is global life satisfaction; the second measure is previous-day affect balance. We only included countries with data on both measures (*N*=65) to ensure that the rankings were based on a consistent set. As a result, some countries (e.g., U.S., China, and Denmark) were excluded. In terms of life satisfaction, four of the top five countries

are in Europe, and all of the bottom five countries are in Africa. In contrast, the rankings for

previous-day affect balance are more diverse: the top five countries include both Western

European and African countries, and the bottom five countries span Europe, Africa, and the

Middle East.

Table 3. Top and Bottom Five Countries on Two Measures of Well-Being

	General Life Satisfaction		Previous Day Affect Balance	
	Nation	Score	Nation	Score
Top 5	Ireland	8.14	Iceland	66
	Norway	8.09	Djibouti	62
	Finland	8.02	Kenya	62
	Sweden	7.90	Ireland	60
	Australia	7.88	Mali	60
Bottom 5	Liberia	3.43	Lebanon	23
	Benin	3.02	Algeria	21
	Burundi	2.94	Armenia	21
	Zimbabwe	2.83	Georgia	19
	Tanzania	2.45	Iraq	14

An important insight from Table 3 is that the "happiest" nation in a cognitive sense may

not necessarily be the happiest nation in terms of emotional experiences, and vice versa. This

distinction should be borne in mind when rankings of the "happiest countries" are reported in the

media. For example, Denmark is frequently cited as the happiest country in the world ("Denmark

'Happiest Place,'" 2006; Safer, 2008; Weir & Johnson, 2007). This label has been met with

mixed reaction ranging from tongue-in-cheek reflection (Christensen, Herskind, & Vaupel,

2006) to skepticism. A puzzled Danish columnist remarked that "People [in Denmark] are not

looking very happy in the street" (Dorset, quoted in Safer, 2008). As Safer (2008) reports, the

happiness of Danes may be better characterized by contentment rather than over-flowing ebullience.

What tends to be overlooked in these reports is that a major source of these data is the WDH. As we noted earlier, the majority of data in the WDH (67%) are global cognitive measures of well-being such as the life satisfaction. Thus, what the media (and often well-being researchers themselves) have referred to as "happiness" rankings may be a misnomer. The term *happiness* (in contrast to *life satisfaction*) connotes an experience that is emotional and momentary; it conjures up images of smiling, laughing people. How does Denmark score on happiness? The WDH does not contain an exact measure of momentary happiness, however, it contains two measures that are relevant. First, in 2007, Denmark's score on previous-day affect balance was 60, which would place it in the top 6 in Table 3. However, the extent to which the affect balance score captures *happiness* per se is not clear because participants were not specifically asked how much happiness they felt (Veenhoven, n.d.). A second measure asks respondents how happy they are "taking all things together". Although this is not a momentary measure, it makes a clear reference to happiness. Using data from 1999, Denmark ranked 10th out of 70 on overall happiness. That same year, Denmark ranked 2nd in life satisfaction (after Puerto Rico). Thus, although Denmark is consistently high in terms of cognitive well-being, its ranking is somewhat lower in terms of emotional well-being. These subtleties in well-being measures must be appreciated before claiming that people in a society are happy or unhappy.

In addition to the types of SWB measures that have been emphasized, we also examined *where* well-being data have been collected. Table 2 breaks down the percentage of WDH data from different subregions of the world. Much of the data come from European and North American nations, and few data points are available from African nations. In Table 4, we

aggregated the data into macro-regions, as defined by the UN (2000). We also compiled

population estimates (Central Intelligence Agency, 2007) for each macro-region. Two

discrepancies are worth noting. First, although 11% of the world's population lives in Europe,

almost 60% of the WDH data come from this macro-region. Second, the reverse pattern is

observed for Asia which makes up 61% of the world's population, but represents only 15% of

the data in the WDH.

Table 4. Representation of U.N. Macro-Regions in World Database of Happiness and World
Population

UN Macro-Region	Total Data Points in WDH	% of Data in WDH	Population (in millions)	% of World Population
Africa	249	6	934.50	14
Asia	591	15	3998.42	61
Europe	2416	60	729.86	11
Latin America	357	9	568.07	9
North America	345	9	334.66	5
Oceania	69	2	33.56	1

Note. WDH = World Database of Happiness (Veenhoven, n.d.). Population figures
come from the World Factbook (Central Intelligence Agency, 2007). Macro-regions
are defined according to the United Nations (2000).

These discrepancies reflect the longer history of national surveys in the industrialized

nations of Europe. Since the late 1940s, early public opinion surveys in these countries included

questions on happiness. Because each data point in our analysis reflects a single country from a

single survey-year, the longer history of data collection in the West contributes to the

"overrepresentation" of these nations in the WDH. Data for Asian countries accumulated

sparsely after the 1960's. Well-being data were unavailable for many Asian countries until the

recent decade (2000-2010). Thus, regarding the current record of SWB data, we know far less about the well-being of people from the Asian continent compared with those from Western nations. To a smaller degree, African countries are also underrepresented in the WDH. Moreover, though the Oceanic countries seem to be well-represented, all data points from this region are from Australia and New Zealand; none are from the South Pacific island nations. As research infrastructure improves in these areas, the discrepancies among macro-regions may reduce.

Types of Cross-National Comparisons

There are two types of comparisons that are commonly made using cross-national SWB data: societal-level and person-level comparisons. Some examples from the literature are presented below.

Comparing Societal Well-Being

Several studies have examined the correlates of societal well-being. For example, average life satisfaction tends to be higher in wealthier countries (Diener et al., 1995), and average well-being is higher where there are greater civil rights (Diener et al., 1995; Schyns, 1998). Scholars have also investigated the relation between societal well-being and cultural values such as individualism-collectivism. It appears that individualist countries (e.g., the Netherlands) have higher levels of life satisfaction and happiness than collectivist countries (e.g., East Asian nations; Diener et al., 1995; Schyns, 1998). Japan, for instance, has lower SWB than would be expected based on its level of wealth. One explanation is that social norms in individualist cultures promote individual happiness to a greater extent than collectivist cultures, where emphasis is placed on social harmony and self-criticism (Suh, 2000).

When such correlational data are reported, people are often tempted to conclude, for instance, that greater wealth (e.g., GDP) *causes* societal levels of well-being to rise. Such claims have intuitive appeal, but they are not *proven* by correlational, cross-sectional (measured at a single point in time) data, because the direction of causality is unclear. Greater GDP could increase societal well-being (assuming that a stronger economy improves conditions for the majority of the population). On the other hand, greater well-being could improve productivity and spur economic growth. Alternatively, both GDP and societal well-being could be caused by a third factor, such as greater economic or political freedom, which might facilitate the development of trade and business along with well-being. Longitudinal analyses can help clarify these ambiguities. Recent cross-national time-series analyses suggest societal SWB *does* increase with economic growth (Stevenson & Wolfers, 2008).

Even when economic changes appear to predict changes in societal well-being, many questions remain. Wealthy nations tend to have several other qualities (e.g, greater civil liberties, less gender inequality, greater individualism) making it difficult to pinpoint what exactly it is about economic growth that predicts increases in well-being. The answers to these questions are crucial if well-being data are to provide guidance on policy issues. Numerous hypotheses have been proposed to explain why some nations are happier than others (Bond, 2003). For example, Kristof (2006) attributed the high well-being of Costa Rica to a disbanded military and investment in education. These hypotheses can best be answered with data collected over time, across nations, and using a consistent set of items.

Comparing Person-Level Correlates of Well-Being

Not only do nations differ in their average levels of SWB, they also differ in the correlates of *individual* well-being. For example, financial satisfaction and income are more

strongly related to life satisfaction in poorer nations (Bonini, 2008; Oishi, Diener, Lucas, & Suh, 1999). It is not that income is unimportant in wealthier nations, only that the relationship between income and life satisfaction is not as strong as it is in poorer countries. The relationship between SWB and social attitudes such as generalized trust and confidence in government also differs across nations. People with high levels of SWB are more likely to be trusting and confident where economic inequality and violence are low (Diener & Tov, 2007; Tov, Diener, Ng, Kesebir, & Harter, 2009). This is contrary to the dystopic vision depicted in Huxley's (1932/1998) *Brave New World* in which a dominant world government enslaves its citizens by breeding them to be happy and encouraging the use of drugs. Happiness is portrayed as a state of care-free hedonism that blinds people to the oppressive rule of the "World State". In contrast, Tov et al.'s (2009) research suggests that the positive attitudes generally associated with happy people are actually constrained by the social realities they face.

Cross-national comparisons of person-level correlates lead to more nuanced understandings of well-being. These approaches permit an understanding that the correlates of well-being may be both universal (e.g., "Income is generally associated with greater SWB") and culturally variable (e.g., "The relation is stronger in poorer countries"). These insights notwithstanding, it is important to bear in mind that these studies are cross-sectional in nature, and do not establish causality any more than those that examine the correlates of *societal* well-being.

Conceptual and Methodological Issues in Cross-National Comparisons

On balance, it appears that SWB measures are meaningfully related to societal conditions. Nevertheless, when making cross-national comparisons, there are several issues that consumers of research should be aware of.

Conceptual Issues

Although societal well-being is often computed by averaging the ratings of individual respondents, it is important to remember that it reflects the happiness of a *nation* and not any particular person. The factors that affect the average well-being in a country do not always affect a single person's well-being. Thus, in discussing the happiness of nations, there is a danger in confusing this aggregate-level phenomenon with individual-level processes—what has been called the ecological fallacy. For example, in response to the high life satisfaction ranking of Denmark, a Danish journalist wryly remarked, "I really wonder about the suicide rates in Denmark… I mean is it that we're so happy we kill ourselves?" (quoted in Taylor, 2006). Likewise, a report on the happiness of Singapore carried the subheading "Citizens Willing to Trade Civil Liberties for a Cleaner, Safer, Efficient Society" (Weir, 2008). These comments assume a perfect relation between societal conditions and individual well-being. We do not dispute the impact that macro-level factors may have on personal well-being; however it is important to understand that the overall relation is likely to be indirect and dependent upon intervening factors. An increase in GDP is not likely to improve a person's well-being if he or she remains unemployed. Similarly, suicide rates may not affect well-being if they apply to a limited segment of society rather than one's close friends and family. Incidentally, Denmark's suicide rate is lower than several countries in Eastern Europe and East Asia (World Health Organization, 2009).

Moreover, we cannot assume from high societal levels of SWB that people are perfectly aware and contented with *all* aspects of their society. These claims should be scrutinized empirically when possible. For example, the notion that Singaporeans are content to give up civil liberties is debatable. When asked which of four societal goals is more important, 86% of

Singaporeans ranked maintaining order in the nation either first or second (World Values Survey, 2005). However, the majority of these respondents (62%) also ranked having more say in how things are done as important, and a considerable proportion (18%) endorsed protecting freedom of speech.[1] The point is that we must not make assumptions about the individual motives and desires of *all* people in a country based on societal SWB alone.

Similar caution applies when interpreting macro-level variables that are empirically correlated with societal well-being. For example, at the individual level, married people report greater well-being than those who are not married (Bonini, 2008; Diener, Gohm, Suh, & Oishi, 2000). However, at the societal level, the *percentage* of people married in a country correlates positively with average depression (van Hemert, van de Vijver, & Poortinga, 2002) and divorce rates correlate positively with national SWB (Diener et al., 1995). These findings are puzzling unless one considers that marriage and divorce rates reflect cultural norms. Societies with high divorce rates may prioritize individual rights and goals over collective obligations and relationships. Alternatively, lower divorce rates in collectivist countries may reflect greater social pressure to stay together. Thus, interpreting aggregated data requires a shift in perspective toward broad, societal conditions and norms.

Sample Size

The issue of sample size applies to both the number of *individuals* used to estimate the mean SWB of a country, and the number of *countries* included in cross-national analyses. In

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[1] The exact proportion of Singaporeans who ranked these goals as first or second were as follows: maintaining order (first = 68%; second = 18%); having more say (first = 20%; second = 42%); protecting freedom of speech (first = 5%; second = 13%).

terms of individual respondents, smaller samples produce less reliable estimates of mean SWB

because random individual differences are more likely to affect the overall score. Many cross-

national surveys collect data from at least 1000 respondents per country, providing very precise

estimates of mean SWB.

The number of nations available for analysis of cross-national data should also be

considered. When the sample of nations is small, spurious relationships may arise from just one

or two nations. The latter argument was used by Easterlin (1974) in his examination of Cantril's

(1965) data on income and well-being in 14 countries. Easterlin noted that 10 countries differed

widely on gross national product, but barely differed in well-being—implying that the positive

association was driven primarily by four countries. In contrast, Stevenson and Wolfers (2008)

had access to well-being data from 131 nations; they were able to conclude that economic

development was positively associated with mean SWB.

Representativeness

A related but distinct issue from sample size is the representativeness of the sample. The

ability to make claims about the overall well-being of a nation rests on how well respondents

represent the nation as a whole. This is ultimately a question of validity, not reliability. One

thousand respondents from New York will provide a precise, *reliable* estimate of mean SWB,

but not necessarily a *valid* estimate of the entire United States. This is a basic issue of which

survey researchers are well-aware. Probability samples are often carried out and sample weights

may be applied to ensure that the data are representative. When the representativeness of the

sample varies across nations, results should be interpreted cautiously. For example, in their

analysis of depression across nations, van Hemert et al. (2002) observed that the mean for Israel

was unusually high relative to data for other countries. Although the mean was based on a large

sample of 574 respondents, all were Palestinian. Some cross-national studies rely on college

student samples (e.g., Kuppens et al., 2006). Such samples control for differences in education

and may serve basic research purposes. However, they may not always provide representative

estimates of societal SWB (Cummins, 2003).

The time period in which data are collected should be representative as well. Unusual

circumstances (e.g., a recent natural disaster) could artificially inflate or deflate people's moods.

Time-inclusive measures are particularly sensitive to such events. However, global well-being

can also be affected if conditions are prolonged. In 1962, the Dominican Republic's mean score

was 1.6 on the self-anchoring 10-step ladder. This extensive misery has been attributed to

political turmoil that followed the assassination of the dictator Rafael Trujillo (Bond, 2003;

Easterlin, 1974). A noteworthy approach taken by the European Social Survey has been to

maintain a log of national and international events that occurred during data collection (Jowell &

Eva, 2009). This does not solve the problem of bias but helps current and future researchers

identify possible influences on responses—enabling a more cautious interpretation of the data.

Ensuring Equivalence of Measurement

An assumption behind comparisons of societal SWB and person-level correlates is that

the same concept is measured across nations. If two people—one from Denmark, the other from

Zimbabwe—both say they are satisfied with their life, are they talking about the same thing?

This issue is absolutely critical for efforts to include measures of *subjective* well-being as

indicators of progress and quality of life across nations (Marks et al., 2006; Stiglitz et al., 2009).

The concept of Gross National Happiness (GNH), for example, implies that self-reported ratings

of well-being in one country can be compared with those in another country. If GNH is to be a

meaningful metric, policymakers must be able to conclude that people in high-GNH countries

(e.g, Denmark) truly are happy and satisfied, whereas those in low-GNH countries (e.g., Zimbabwe) are truly miserable. Cross-national researchers may address measurement equivalence through careful translation before data collection, and statistical assessment after data collection.

Translation

To ensure equivalence of meaning, the survey instrument is often translated from a standard language into other languages. The translations might then be back-translated into the original standard language, and the process repeated to minimize any loss in meaning (Gallup Organization, 2006).   Studies in which people from the same country report their well-being in either English or another language have shown minimal language effects (Tov & Diener, 2007). For example, the happiness of French-Canadians is more similar to English-speaking Canadians than to the French in Europe (Veenhoven, 2008). These findings suggest that self-reported SWB may reflect societal conditions more than language per se.

Despite these promising results, translation equivalence cannot be assumed; it must be evaluated for each society. A puzzling finding from the fourth wave of the WVS (1999-2004) is that Tanzania ranked 2nd (out of 70 nations) on general happiness (behind Nigeria), but 70th on general life satisfaction! Although happiness and life satisfaction reflect distinct aspects of SWB such stark discrepancies raise several questions discussed earlier. We examined the data file (World Values Survey, 2005) and technical information for the Tanzanian sample (World Values Survey, 2001). The sample size for Tanzania (N = 1171) was adequate and random sampling procedures were used to ensure a representative sample. However, the technical notes reported that there was difficulty translating the term *happiness* into Kiswahili, and back-translation procedures were not used. Although the technical notes did not clarify the nature of these

difficulties, future well-being research in Tanzania should be aided by careful linguistic study to improve translation.

Response Styles

Even if SWB items are understood similarly across nations, another potential issue is that responses are influenced by an overall tendency to agree (acquiescent response style) or be neutral. If this overall tendency occurs more often in one culture than another, then societal differences in SWB scores would not represent true differences in well-being. Chen, Lee, and Stevenson (1995) observed a tendency for Japanese and Taiwanese high school students to use the midpoint of rating scales relative to their North American peers. In contrast, the latter were more likely to use the end points of rating scales.

It is not clear to what extent response styles affect SWB scores across nations. For example, different from the research described above, Diener, Suh, Smith, and Shao (1995) did not observe a neutral-response tendency in the self-reported emotional experience of Asian college students. Furthermore, Chen et al. (1995) noted that the effects of response styles were small, and controlling for these tendencies did not remove cultural differences in attitude items. Smith (2004) observed greater acquiescence in collectivist cultures. This would imply that Asian respondents are more likely to agree (give higher ratings) on SWB items. However, cross-national data are inconsistent with this idea, as average SWB is often lower in Asian countries relative to Western countries (Tov & Diener, 2007). Smith suggested that response styles may reflect substantive differences in cultural attitudes rather than noise that must be removed from responses. This issue awaits further conceptual and methodological refinement.

Measurement Invariance

Advanced statistical methods can be used to evaluate the equivalence or "invariance" of well-being measures across cultures. Suppose there are five items measuring life satisfaction, as in the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). Example items are "I am satisfied with my life" and "The conditions of my life are excellent". If all five items tap into the same concept (life satisfaction), then responses to the items should correlate strongly with each other—people who agree with one item should also agree with the others. That is, a single *factor* (a person's life satisfaction) should underlie responses to the items. If responses to the items correlate strongly among Italians but weakly among Ghanaians, the two groups may have interpreted the items differently. The researchers' definition of life satisfaction might apply to Italians but not to Ghanaians. Vittersø, Røysamb, and Diener (2002) conducted analyses on college student samples in 41 nations (including those in Latin America, Africa, and Asia) and concluded that the five items were adequately represented by a single factor in all nations. However, results were more consistent in wealthy nations (e.g., Italy) compared with less wealthy nations (e.g., Ghana), perhaps because of greater familiarity with surveys in the former. A similar explanation was offered by Tucker, Ozer, Lyubomirsky, and Boehm (2006), who compared Americans and Russians using structural equation modeling (SEM). Responses to the SWLS were comparable between the two groups when college students were used, but not when community samples were used. Russian community members may have been less familiar with taking multi-item surveys.

An alternative approach to evaluating measurement invariance is item response theory (IRT). An assumption of IRT is that people with the same level of well-being should be equally likely to agree with any particular well-being item. For instance, if a Chinese and an American respondent are *equally satisfied with life* (i.e., they have the same overall score), they should be

equally likely to agree with the SWLS item "If I could live my life over, I would change almost

nothing". In one study (Oishi, 2006), Chinese were actually less likely than Americans to agree

with this particular item even when their overall well-being was equated. This suggests that the

item measures life satisfaction differently in the two cultures. When such differences are found,

the items may be discarded or a statistical adjustment might be made in computing the overall

score. Chinese respondents still reported lower mean life satisfaction than Americans after such

adjustments were made.

One can also ask whether the affective components of SWB are equally distinguishable

across cultures. Kuppens, Ceulemans, Timmerman, Diener, and Kim-Prieto (2006) examined the

frequency of various emotions experienced by college students in 48 nations. They confirmed

that positive and negative emotions were distinguishable across nations. Using similar data,

Lucas and Diener (2008) showed that positive and negative emotions were also distinct from life

satisfaction. The factor structure held both at the level of individual responses and nation-level

means across 40 countries. These results are promising; however more cross-national studies are

desirable—especially in representative samples.

Advanced statistical methods hold promise for improving SWB measures and the validity

of cross-national comparisons. To date however, their application to survey data is rare. One

limitation is that SWB measures in large-scale surveys have traditionally been single item

measures. Approaches such as SEM and IRT require that constructs be measured with multiple

items. Future surveys should employ multi-item measures of SWB (e.g., Huppert et al., 2009).

Another limitation is that these approaches have typically been applied to a limited number of

groups at a time. Methods for evaluating measurement equivalence across many nations are still

in their infancy. Stringent measurement approaches to well-being pose many challenges for

cross-national researchers, but they are worth the effort. Until more sophisticated methods are available for assessing equivalence at a large-scale, analyses that compare the equivalence of SWB measures in smaller groups of nations can contribute to their improvement.

Future Directions

Our review of the cross-national data on SWB suggests three key developments for the future. First, it is important to fill in the gap in our existing knowledge of well-being in African and Asian societies. No doubt there are challenges to gathering data in countries in which the research and transportation infrastructure have been weakened by instability or are expanding slowly. If representative samples are not possible, convenience samples will have to do for the time being. *Some* information is better than no information at all.

Second, measures of SWB could be improved in several ways. Multiple items should be used to measure the affective and cognitive components of well-being. Moreover, a diversity of measures is desirable, as SWB is a broad construct. Most survey measures of SWB have been global, cognitive measures. Time-inclusive measures would add to our understanding of more immediate experiences of well-being. These measures should complement, not replace global measures.

Third, measurement equivalence of SWB measures should be assessed—even if applicable data are only available for a few countries. This development must go hand in hand with increased administration of multi-item measures. Collecting data from non-student samples and improving measures for the general population is critical if national indices of well-being are to be used to guide public policy.

Conclusion

Cross-national studies of SWB have generated many important insights into the nature and measurement of well-being. Measuring any concept across the world is not an easy task. Although there are certainly many factors that can influence responses to SWB measures, existing studies show that societal levels of well-being are meaningfully related to macro-level social and economic conditions. Thus, the noisy process of cross-cultural measurement is indeed picking up a signal . As policymakers become increasingly interested in the utility of SWB indicators, developing better measures of well-being will be critical. We remain optimistic that current and future researchers will meet this challenge.

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