

Paul Anand

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Discussion paper

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Happiness, well-being and human development: The case for subjective measures

By Paul Anand



Paul Anand is a Professor at the Open University and Research Associate at Oxford University and the London School of Economics. In his early career, he worked on the foundations of rational choice theory before moving on to study decision-making and quality of life in a variety of contexts. Since 2000, he has directed the Capabilities Measurement Project, which developed some of the first quantitative operationalizations of the Sen-Nussbaum approach to human development; received funding from the Arts and Humanities Research Board, the Leverhulme Trust and the Economic and Social Research Council (ESRC); and collaborated with the Organisation for Economic Co-operation and Development (OECD) on its Better Life Compendium. The project led to the development of the MAPWELL group of 14 national statistical offices working on the Beyond GDP agenda, and the establishment of a supporting non-governmental organization, the Oxford-based Foundation for Knowledge Exchange. In addition, the project provided the basis for a new measure of health, the OXCAP-MH, used first in a clinical trial at Oxford University to assess the effectiveness of community treatment orders in mental health. Anand has published over 50 scientific papers and been a member of several journal boards. His latest book, *Happiness Explained*, published by Oxford University, provides a capability-based approach to human flourishing. A member of ESRC and National Health Service research funding committees, he was a visiting scholar at Columbia University in 2016-2017, during which time he also established the Wellbeing and Human Development Project at the London School of Economics with Luc Bovens.

ABSTRACT

In recent years, economists have made increasing use of psychological measures of well-being. This paper argues that these data and models can make important contributions to human development. The paper begins by offering an overview of some key concepts, definitions and properties of subjective well-being measures, highlighting, particularly, overall assessments of life satisfaction, satisfactions with particular domains, eudaimonic measures and measures of human potential. It then moves on to consider some of the key empirical research findings concerning general psychological mechanisms underpinning subjective well-being, and drivers of domain satisfactions and well-being in youth and older age. The paper concludes with examples of subjective well-being applied to a range of human development issues and an assessment of ways in which such analyses can complement the Human Development Index as it has evolved over the past quarter decade.

Introduction

THE NEED FOR SUBJECTIVE WELL-BEING MEASURES—AN EMERGING CONSENSUS

The Human Development Index (UNDP 1990), founded on core, objective measures of health, education and income, has helped to herald a global revolution in the way that countries and international bodies seek to measure progress, not just through income but also with direct indicators of human well-being drawn from all the domains that contribute to life quality. Accordingly, there has been a growing use of well-being measures based on subjective judgements and self-reports, standard in some disciplines but considered more novel in others. As the United Nation takes stocks of what the Human Development Index has achieved and how it might evolve in the future, this background paper provides an overview of the wide variety of subjective measures available, and the contributions to human development policy and practice they can offer. In sum, the paper will argue that life satisfaction together with domain satisfactions and measures of human potential can usefully expand the informational base provided by data from administrative sources, and that models using such variables contribute to the analysis of human development policies in several ways.

By way of background, it is helpful to recognize two different reasons for being interested in well-being measures. In the first place, the human development concept derived from the fact that income (even if a proxy for consumption) is not a direct measure of life quality (Sen 1985), and that other measures to do with health, education, gender equity, and so on can also be valuable. In addition, there has been a longstanding interest within psychology, related areas of medicine and social indicators research in the use of subjective assessments of life quality or subjective reports about the domains of work, health and community (David et al. 2014). In recent years, shared interests in the development of direct, explicit measures of human well-being, the end goal of economic activity, have come together. Objective measures can often be used to make unambiguous comparisons between different social groups, whereas subjective measures are perhaps most valuable for their capacity to engage perceptions and preferences that are either intrinsically subjective, or for which no objective measure currently exists. Furthermore, though objective indicators add to what we know from income data, they are necessary but not sufficient for reasons to do with heterogeneity—simply, people react differently to the same events (Diener and Lucas 1999). The complementarity of these two approaches is increasingly recognized in economics and psychology, and well summarized by Forgeard et al. (2011), who conclude that, “Wellbeing is best understood as a multifaceted phenomenon that can be assessed by measuring a wide array of subjective and objective constructs.” It is important that subjectively reported data obey the standard criteria required for statistical measurement, but this is generally the case for widely cited measures.

HOW WELL-BEING MIGHT CONTRIBUTE TO HUMAN DEVELOPMENT

If we accept the need for subjective measures, how, more precisely, might they contribute to the analyses of policies or interventions for human development? In principle, there are at least four different types of contribution that can be envisaged. Firstly, we might be concerned about the monitoring of human needs: It is quite plausible that data on low levels of happiness or satisfaction could help to identify groups or issues that are potential priorities for policy interventions. Secondly, increasing use of models of life satisfaction within economics shows that they can shed light on the causes and predictors of human well-being, and as a result, economists now refer to a small handful of variables as ‘the usual suspects’ in their models of life satisfaction. Beyond this, there are now methods for estimating valuations based on empirical life satisfaction models, which can be used to provide indicators of the preference value that people accord to public and other goods for which market data are not available. Fourthly, and finally, we shall conclude that understanding the well-being of service providers, particularly in the areas of health and education, can be useful in helping to redesign and thereby improve the quality of services for human development.

Only the first of these applications depends on direct comparisons of subjective well-being scores, while the other three rely on the use of subjective well-being scores in empirical models, so it may be that the more important uses of subjective well-being data are not to be found in providing another metric for ranking countries, but rather in understanding the drivers and distribution of human well-being. Furthermore, while the first three uses involve looking at the well-being of policy beneficiaries, it is important to note that the well-being of service providers may also contribute to the achievement of human development goals. All of these contributions to policy and practice require that subjective measures are statistically reliable and valid, but not that they are objective in any other sense. In the following sections, therefore, we examine subjective measures commonly used by psychologists and economists as well as analyses and findings to which they give rise before concluding with a discussion of some possible applications of these insights.

Subjective measures of well-being

WELL-BEING—SOME DEFINITIONS AND CONCEPTS

It is helpful to start with some clarification about the terms being used. In the first instance, it is worth noting that the terms happiness, well-being and quality of life, when used broadly, are effectively synonymous. When used more specifically, however, their meanings may vary by context and shift over time. Economists, for instance, have in recent decades used the term happiness to refer to variables largely concerning life satisfaction, which is arguably a reflective judgement,

whereas for a long time, psychologists have tended to particularly emphasize the nature of happiness as a mood or emotional state. In a recent paper, Dodge et al. (2012) concluded that much of the previous psychological literature has worked not with any particular definition, but rather with descriptions of the dimensions of well-being.¹ Consistent with the literature, we shall therefore define subjective well-being measurement either as an internal summary assessment of life or as a self-report about the goodness of some external aspect of it. The following sections provide an overview of some of the more widely used summary measures before moving onto domain-specific measures, so-called eudaimonic measures, and finally measures of human potential.

LIFE SATISFACTION AND HAPPINESS

Much of the psychological research into well-being has focused on ‘happiness’, using data on responses to questions about overall satisfaction with life. In possibly the most widely cited paper in the field, Diener et al. (1985) develop a Satisfaction with Life Scale using an unweighted sum of responses to questions on a seven-point agreement scale. The scale comprises five items: In most ways, my life is close to ideal; The conditions of my life are excellent; I am satisfied with my life; So far I have gotten the important things I want in life; and If I could change my life over, I would change almost nothing. These items were selected from a longer list of candidates based on factor analysis, and scores were found to be reasonably well correlated when measured subsequently two months later (i.e., reliable). The use of multiple items to measure a single construct typifies the psychological approach, but it can lead to unwieldy questionnaires, and so the alternative approach, often preferred by economists, is to use responses to single item measures.² Illustrating this single-item approach, a question used in the World Values Survey is: All things considered, how satisfied are you with your life as a whole these days? It is answered on a 10-point satisfaction scale. Like a number of general summary life satisfaction questions, it has the merit of being usable across many situations and with most subpopulations, including cases where there is no personal or household income to record. It is a workhorse question, and similar questions are used around the world.

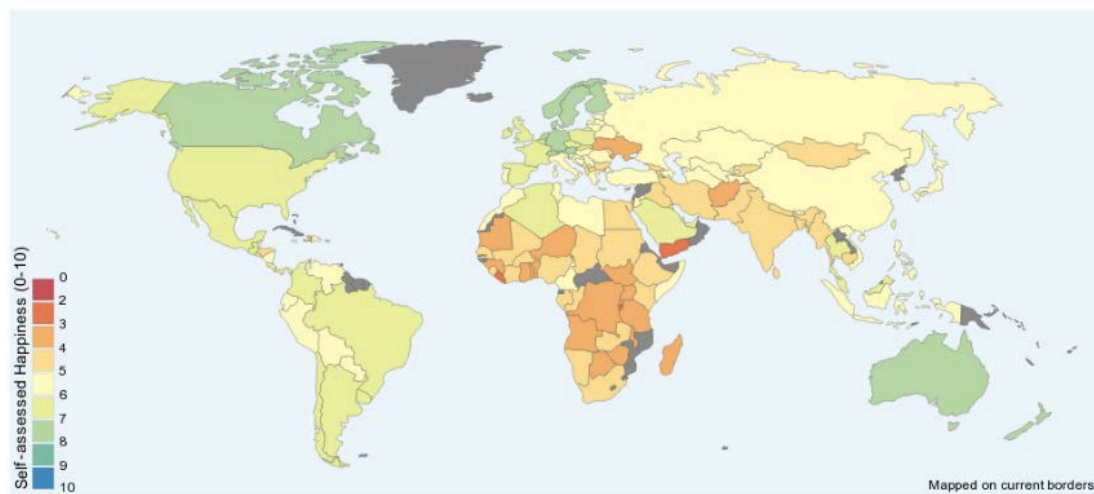
Cultural differences have been observed in the way people respond to such questions, and as a result, anchoring vignettes have been used to establish equivalences between respondents from different groups (King et al. 2004). The use of such comparisons is somewhat akin to making income

¹ From the perspective of the capability approach, it could be argued that a person’s overall well-being depends on their activities and states, their subjective experience of these, and the opportunities and constraints they face given their resources, abilities and other social factors that determine how the person converts resources into activities and states (Anand 2016).

² Such measures might be viewed as being less arbitrary in that they do not call for any aggregation of components and take up less space in survey designs but can lead to less significant results when used in regression models.

comparisons based on purchasing power parity adjustments and are most valuable when comparing two heterogeneous populations. That said, comparisons among groups of countries can still help to raise questions even in the absence of such adjustments, which are not routinely made. Indeed, the distribution of average life satisfaction scores around the world offers a rather plausible picture in which countries with low levels of social cohesion fare particularly poorly (see Figure 1).

Figure 1. Self-reported life satisfaction 2015, Cantril scores



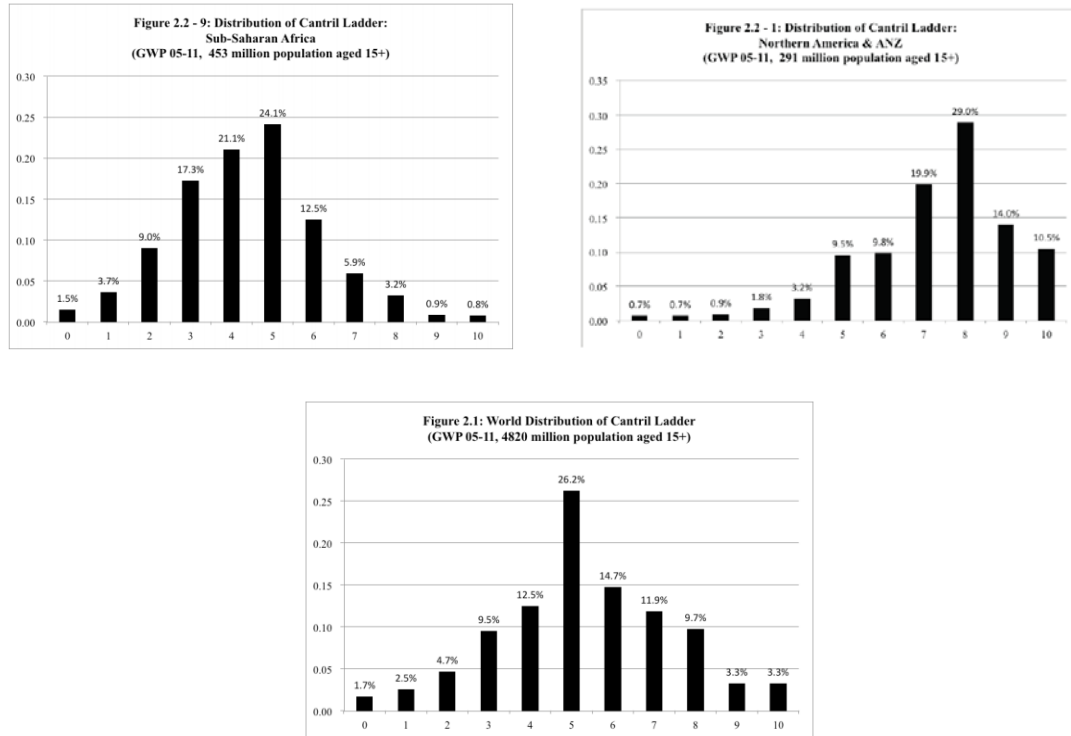
Data obtained from: [World Happiness Report 2016](#)

The author Max Roser licensed this visualization under a [CC BY-SA license](#). At the source - [OurWorldInData.org/happiness-and-life-satisfaction/](#) - you find the data for download and the empirical research on this topic that puts this visualization in context.

Source: <https://ourworldindata.org/happiness-and-life-satisfaction/>.

In Figure 1, the underlying summary measure is the Cantril (1965) self-anchoring scale, which asks respondents to locate themselves on a 10-step ladder where the endpoints represent the best and worst possible lives a person could have. Different versions ask people where they are now or expect to be in the future. Based on data covering some 150 countries, the Gallup organization finds evidence of three significant patterns of current and future well-being, which it characterizes as being strong and progressing, moderate or consistent, and at risk (low both now and in expectations). Scores based on the Cantril ladder have been shown to be more closely centred around the scale's midpoint than responses to life satisfaction, which tend to cluster towards the top of the scale (Diener and Diener 1996). Figure 2 illustrates a comparison of these scores and shows how those in sub-Saharan Africa are skewed to the lower end of the distribution.

Figure 2. Comparison of Cantril score distributions for sub-Saharan Africa, the Americas and the world



Source: World Happiness Report 2012, pp. 25, 29.

Research on subjective well-being measures has also found that positive and negative aspects are significantly distinct (positive well-being is not just the absence of negative feelings—and vice versa). Some measures have been developed to reflect this. Watson et al. (1988), for instance, developed two 10-point scales to measure both the positive and negative aspects, while Kahneman et al. (2004) used the distinction when asking respondents to rate the well-being derived from activities undertaken during the previous day with a day reconstruction method. Having completed diaries for activities in the previous day indicating when these started and stopped, participants were then asked to record the degree (not at all to very much) to which they were in certain emotional states (happy, worried, angry, etc.) during any particular activity. Based on the difference between positive and negative affect associated with each activity, the researchers calculate for each individual a measure of net well-being, as in Table 1.

Table 1. Mean net affect for a range of daily activities

Activity	% of sample	Time spent (hours)	Average net affect
Morning commute	61	0.43	2.03
Working	100	6.88	2.65
Evening commute	62	0.62	2.78
Childcare	36	1.09	2.95
Housework	49	1.11	2.96
Computer	23	0.46	3.14
Shopping	30	0.41	3.21
Cooking	62	1.14	3.24
Napping	43	0.89	3.27
Phone at home	43	0.93	3.49
Watching TV	75	2.18	3.62
Socializing at work	41	1.12	3.75
Praying/worship	23	0.45	3.76
Exercising	16	0.22	3.82
Lunch	57	0.52	3.91
Dinner	77	2.16	3.91
Relaxing	65	0.78	3.96
Socializing after work	49	1.15	4.12
Intimate relations	11	0.21	4.74

Source: Kahneman 2004, p. 432.

These results derive from a sample of 909 working women from Texas and provide evidence both about emotions during the day as well as the activities and events driving these experiences. The ranking places commuting, work and, perhaps surprisingly, childcare at the bottom, while

further analysis showed that sleep, depression and religiosity predicted net affect and life satisfaction equally well, and that a range of demographic factors were more predictive of life satisfaction than of affect, which was better predicted by time use. The approach offers a way of calculating a person's well-being on a particular day as the sum of the net positive feelings they derived from activities during that day, and could in principle be used to compare individuals or groups in terms of their overall index scores.

DOMAIN SATISFACTIONS AND SELF REPORTS

Beyond overall summary measures of life satisfaction or satisfaction with daily activities, researchers have been interested in the development of measures that are more detailed in the sense that they are sensitive to well-being in different domains of life. The Personal Wellbeing Index, developed by Lau et al. (2005), is such a measure and comprises a set of questions of the form: How satisfied are you with...

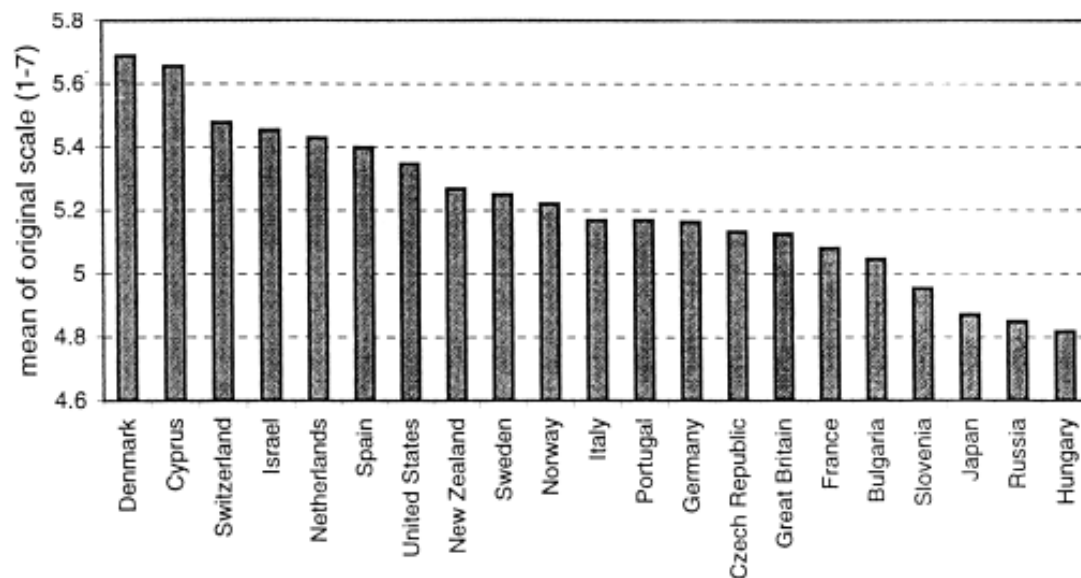
-
- | | |
|------------------------------------|------------------------------------|
| 1. Your standard of living? | 5. How safe you feel? |
| 2. Your health? | 6. Feeling part of your community? |
| 3. What you are achieving in life? | 7. Your future security? |
| 4. Your personal relations | |
-

These questions are intended to provide a decomposition of overall life assessment, and as an indication of its 'convergent validity', the developers found that it was highly correlated ($r=0.78$) with the Satisfaction with Life Scale. Similar kinds of questions appear in a number of household surveys, and while there is no generalized wording, the Personal Wellbeing Index engages with some key issues for human development. For some of these subdomains, especially to do with work, health, safety and community, there are significant bodies of research often developed by researchers in other fields.

The Harvard economist Richard Freeman (1977), for example, was one of the first to argue that job satisfaction should be treated as an economic variable. Its extensive analysis in the management and organizational behaviour fields has contributed significantly to the understanding of what drives well-being in the work place. Job satisfaction can be defined simply as how people feel about their jobs or aspects of their jobs, and there is a large literature on the topic that focuses on potential determinants. In addition, organizational psychologists have produced a number of theoretical ideas to guide this work, one of which views job satisfaction as the product of factors related to the job (of

which pay is just one), perceptions about the role, performance in role and overall company success (Christen et al. 2006). We shall look at a ranking of such factors in the next section but note here that evidence from Sousa-Poza and Sousa-Poza (2000) strongly suggests that national level factors—e.g., policies, histories, cultures and resource endowments—also contribute to variations in job satisfaction (see Figure 3).

Figure 3. Average levels of job satisfaction



Source: International Social Survey Program (1997) data used in Sousa-Poza and Sousa-Poza 2000, p. 524.

Potentially, job satisfaction has important consequences both for economic efficiency and human well-being directly. In fact, it is generally found to predict lower turnover and absenteeism, and fewer accidents and strikes, and to enhance organizational commitment, while evidence regarding connections between job satisfaction and productivity are mixed, perhaps because other drivers and forms of control are often more important.

In research on health and well-being, by contrast, growing use is made of data on self-reported health and satisfaction with health services or patient experience, rather than measures of health satisfaction per se. A measure widely used in clinical trials is the EQ5D (Euro-qual 5 Dimensional Scale), which is applied to generate an overall assessment of health status in terms of mobility, self-care, usual activities, pain and anxiety. In the original version, each of these five dimensions is rated on three levels. As a measure of health status, EQ5D data have been used to understand a patient's benefit from treatment, the efficacy of an intervention or the overall health of a population (Bernert et al. 2009). These latter applications require indexation (aggregation) between dimensions at the

individual level as well as some method of aggregation between individuals for population outcomes and weights that have been derived, largely based on patients' stated preferences, to perform such aggregations.

Comparing the use of measures in the fields of health and work is instructive. While job satisfaction data have been used to shed light on a wide array of factors that contribute to well-being at work, in the field of health, it is self-reported measures of health status that seem to have been most valuable. This difference underlines the value of keeping clear the distinction between subjective measures, which are inherently personal judgements, and those that are self-reports about something that would attract substantial objective agreement. Both kinds of data can be objective in statistical terms when motivational and cognitive biases are relatively unimportant, and they can be used in econometric models to generate valuable insights into actual or potential causal drivers of well-being as a result.³

EUDAIMONIC MEASURES OF HUMAN FLOURISHING

One of the more paradoxical findings in the literature on subjective well-being derives from the observation that parents seem on average to have lower levels of overall life satisfaction despite the fact that parenthood is widely sought and generally freely chosen.⁴ One way of resolving this paradox is to recognize that subjective well-being is not only a matter of pleasure but also an issue of fulfilment. A sense of accomplishment can be important, rewarding and follow on from activities that do not, at the time, seem particularly pleasurable. This has been referred to as eudaimonic (literally meaning 'well in spirit') following Aristotle, who first proposed the idea. One of the earliest and most widely cited measures to provide a positive account of well-being along these lines derives from Ryff's (1989) scales of psychological well-being. Drawing extensively on previous work by others, Ryff developed a measure of well-being based on several subscales covering self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life and personal growth. Autonomy, purpose in life and personal growth were not found to be closely related to previous measures, which perhaps underlines the fact that psychological measures before this period had not given sufficient attention to positive aspects of well-being as opposed to their negative counterparts.

A somewhat related exercise was conducted by Huppert and So (2013), who propose a conceptual framework that connects high well-being with positive mental health. Their approach

³ If the major response difference between groups concerns the average level at which people respond, this can be handled using dummy variables in regression models. More complicated differences in response are harder to address.

⁴ The most famous paradox in economics was found in 1974 by Richard Easterlin, who pointed out that over a 20 period of income growth in the United States, there was no corresponding increase in subjective well-being.

combines measures of feeling and functioning, and highlights the importance of developing a multidimensional measure. Based on previous work, they developed a list of 10 dimensions that are important positive features of well-being, and went on to identify, for each of these dimensions, a corresponding question in the European Social Survey, which they suggested could be used to proxy each of their dimensions (see Table 2).

Table 2. Selected country rankings of eudaimonic measures (from 22 countries)

	Competence	Engagement	Meaning	Positive relationships	Resilience
Denmark	3	10	1	1	1
Finland	12	4	15	8	4
Germany	5	18	18	17	12
Spain	22	8	17	5	11
Cyprus	13	8	7	7	16
Ukraine	9	6	21	9	21
Russian Federation	7	14	22	18	20

Source: Huppert and So 2013, Table 6.

Analysis suggests that while these items are correlated, the relations are not high. Furthermore, a factor analysis suggested the presence of three factors accounting for just over half the variance, comprising items relating to emotional stability, vitality, resilience and optimism (31.8 percent); engagement, meaning, competence and positive relationships (10.9 percent); and life satisfaction and positive emotion (9.3 percent). Notwithstanding the modest correlations between individual items, Huppert and So find that for most comparisons, Northern Europe dominates Southern and Western Europe, which in turn dominate the transition countries of Eastern Europe.

INDICATORS OF HUMAN POTENTIAL

There is now also a range of self-reported measures that seek to provide data that are in some way directed at the set of possibilities open to a person. Such measures can identify aspects of well-being and could be classified as eudaimonic measures, though some measures are also close to indicators of skill. Measures of autonomy and empowerment have been used and developed around the world for several decades, and there has, particularly in countries of the South, been a particular interest in applications to issues of gender equity. Research conducted in the 1980s helped to highlight the importance of female autonomy for human development and has subsequently moved, over time,

beyond the use of indirect, objective measures to embrace also measures based on self-report. In their assessment of such measures, Agarwala and Lynch (2006) conclude that while context dependency poses challenges for comparative research, there is now an acceptance that autonomy is fundamentally a multidimensional concept requiring questions relating to different measures rather than a single overall summary question. In addition, and using data on some 54 questions from a survey of women and partners in five countries, Mason and Smith (1999) identified four key subdomains in autonomy: freedom from violence, participation in non-economic household decisions, community involvement and participation in economic household decisions. Alfano et al. (2011) use such an approach (see Table 3) and compare the impact of female autonomy on child attendance at school in three Indian states. In two states, an index of autonomy is significantly related to attendance, although in the third, Kerala, there is no such relationship, suggesting that norms and procedures in that state dominate the impact that female autonomy has in states with different policies towards attendance.

Table 3. Autonomy for women measured in four domains

Economic	Physical	Decision-making	Emotional	
	<i>Woman can go to...</i>	<i>Woman decides on...</i>	<i>Woman believes her husband is not justified in beating her if..</i>	She is unfaithful
Woman decides on husband's money	The market	Own health care	She goes out without telling him	She is disrespectful
Woman has money for own use	Places outside the community	Small household purchases	She neglects the house and children	Husband has other women
	Health community	Large household purchases	She argues with him	Husband has a sexually transmitted disease
		Visiting family and friends	She refuses sex	She is justified in refusing sex if tired
			She burns the food	

Source: Alfano et al. 2015.

Beyond autonomy, there is considerable interest in questions about the things that people could achieve in various areas of their lives, given their material resources, abilities and entitlements.

Theory directly related to human development has often referred to this potential as a person's capability. There are at least two significant approaches that explore direct measurement. A series of papers, e.g., Anand et al. 2009, 2011, have sought both to develop new direct indicators of what people are able to do in aspects of their lives and to identify such questions in pre-existing surveys. Drawing on literatures from philosophy (Nussbaum 2001) as well as psychology, they have developed a series of over 50 indicators relating to what people are able to do or are constrained from doing in areas of life (see Table 4). A principle finding is that many different capabilities and constraints are related to satisfaction with life, and that the evidence tends to be most significant where the domains are social and the relevant experiences are salient. By comparing intercountry rankings of these capability indicators, they also conclude that potential aspects of well-being depend largely on structural features of an economy, but that effectiveness of political competition, public sector policies for service delivery and national ideology also play a role. An alternative approach to capability assessment has been developed by Coast et al. (2008) whose 'ICECAP' measure was designed to measure life quality for use in the evaluation of health and social care interventions targeted at older people. It features five dimensions, which include attachment, security, role, enjoyment and control. Psychometric properties appear to be comparable with other social measures of well-being, and in subsequent work, Coast's colleagues have also developed applications for working adults.

Table 4. Rankings of what people are able to do selected from 29 topics

	United States	United Kingdom	Italy
Get rubbish cleared	1	4	13
Get to a range of shops	5	2	2
Get help from police	6	11	21
Visit parks or countryside	10	5	7
Be treated by a doctor or nurse	11	6	12
Use my talents and skills at work	15	17	6
Be treated as equal by people at work	13	13	8
Socialize at work	21	27	14
Get help from a solicitor	26	12	22
Achieve a good work-life balance	27	26	16
Be promoted or recognized at work	29	29	29

Source: Anand et al. 2016.

A rather different approach that has attracted a number of instruments as well as applications particularly in education and health draws on psychological interest in mindfulness. The approach

was inspired originally by Asian meditation traditions, and is used in work that seeks to promote focus and reduce distraction. One of the earliest and most widely cited such scales, the Mindful Attention and Awareness Scale, comprises 15 questions (e.g., agreement with statements such as “I find it difficult to stay focussed on what’s happening in the present”), according to which respondents indicate how frequently the statement describes their own situation. There are several such scales, and while they seek to capture slightly different aspects, they all share a focus on the person’s ability to perceive things in a way that goes beyond the immediate personal connection. The capacity to be mindful while not directly affective itself has been given much attention by positive psychologists interested in helping people improve their well-being. Mindfulness is not just a state of mind in which a person sufficiently appreciates and focuses on their context. It would also seem to have the characteristics of a non-traditional skill. Within this review, we do not focus on such skills, though note that measures of mindfulness may be seen as sitting on the boundaries between experience and skill. Within economics, these are clearly demarcated, but the psychological literatures might be read as suggesting that well-being and ability are to a degree overlapping concepts.

While in the past doubts have been expressed about the possibility of measuring happiness, there are now many widely used measures to choose from. These comprise subjective internal assessments of life and subjectively reported assessments of external aspects, and both sorts have been shown to be reliable and valid. Increasingly, these measures are used to provide empirical evidence that can inform the design of interventions for human development, and many national and international bodies now collect such data.

HOW INTERNATIONAL ORGANIZATIONS COLLECT SUBJECTIVE MEASURES OF WELL-BEING

In most cases, subjective measures are used in the context of a dashboard of other indicators, which are otherwise derived from administrative data based on national sources. Many countries focus on a single or small set of subjective measures, although Bhutan provides an example of a country measuring psychological well-being using a battery of indicators (Table 5).

Table 5. Collection of subjective well-being measures at national level on a regular basis

Country/organization	Subjective measure(s)	Other indicators
Bhutan (Centre for Bhutan Studies)	Psychological well-being, social support, mental well-being, spirituality, emotional experience	Health, time use and balance, education, cultural diversity and resilience, good governance, community vitality, ecological diversity and resilience, living standards
European Union (29 countries)	Life satisfaction	Material living conditions, productive or main activity, education, leisure and social interactions, economic and physical safety, governance and basic rights, natural and living environment
OECD (34 countries)	Life satisfaction	Income and wealth, jobs and earnings, housing health status, work and life, education and skills, social connections, engagement and governance, environmental quality, personal security
United Nations Children's Fund (UNICEF)	14 questions about domain satisfactions (used with 15-24 year olds)	The Multiple Indicator Cluster Survey covers several aspects of life quality, and has a focus on women, children and health.
United Kingdom (Office of National Statistics)	Life satisfaction Things you do in life are worthwhile Happiness yesterday Anxiousness yesterday	Where we live, personal finance, economy, education and skills, governance, natural environment, our relationships, health, what we do

Sources:

Bhutan: www.grossnationalhappiness.com/survey-results/index/

European Union: http://ec.europa.eu/eurostat/statistics-explained/index.php/Quality_of_life_indicators

OECD: www.oecd.org/general/compendiumofoecdwell-beingindicators.htm

United Nations Children's Fund: <http://mics.unicef.org/>

United Kingdom: www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/datasets/measuring-nationalwellbeing.

That said, there are several well-being questions used in the UNICEF Multiple Indicator Cluster Surveys, though these surveys are primarily aimed at issues of particular concern to women and children. There are several projects in national statistical offices around the world designed to enhance the use of subjective measures, and in a number of cases, these efforts are part of a 'mixed methods' approach that includes consultation with the population as well as subject experts.

Well-being and human development: key empirical findings and emerging themes

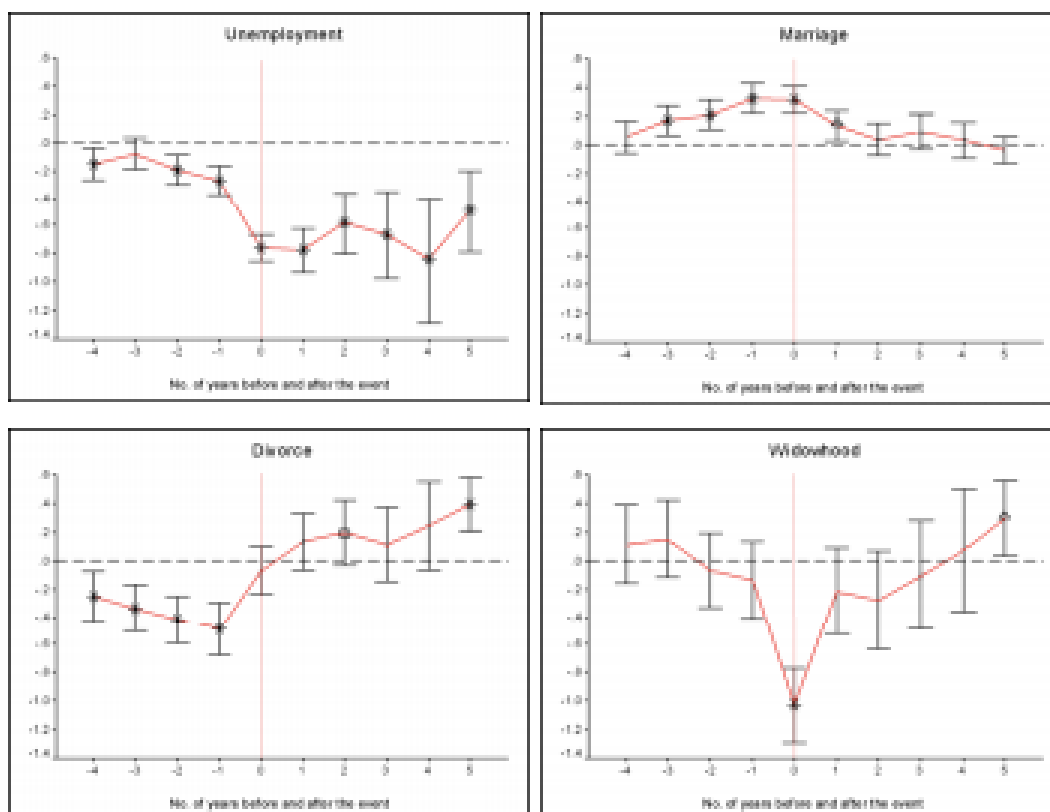
What then can these measures be used to show? What empirical findings follow from their applications? In this section, we look at the general psychological mechanisms that drive judgements about well-being, benefits of well-being for human development in particular domains, and subjective measures in old age and youth, before concluding with some brief observations about the generalizability of these findings.

GENERAL PSYCHOLOGICAL MECHANISMS

One of the most widely cited psychological findings concerns the fact that subjective well-being reports are generally associated with personality traits and genes (De Neve et al. 2012). The traits of extraversion and neuroticism stand out as being (respectively) positively and negatively related to subjective well-being, and the evidence suggests that genetic make-up explains roughly half of the variations in happiness among people. So, *personality* matters, a lot.

A second significant finding is the fact that subjective well-being is, substantially, a matter of *comparative judgement*. The comparisons people make to produce life satisfaction assessments and scores are based on a variety of benchmarks relating to expectations and aspirations, past experiences and the situations of others. One particularly well-known study in the United States, Luttmer 2005, found that happiness is negatively related to the incomes of neighbours, and that the effect is more pronounced for those who are more sociable. There is other evidence that suggests that the result might not obtain where the income of others is a strong predictor of a person's own future prospects, but in general, the comparative mechanism at work can be found around the world. One study conducted in rural India with those on low incomes (Linsen et al. 2011) found that while there was little evidence of a correlation between happiness and relative income, happiness with life in general was negatively associated with conspicuous consumption, measured in terms of durable personal accessories, as well as a range of social expenses.

A third point to note is that experiencing well-being can be *adaptive* in nature. Even from a purely individual perspective, this is an important, if double-edged capacity. Positive psychological adaptation to negative events undoubtedly helps a person to cope mentally, but could undermine the motive for action that would ultimately improve things. One of the more interesting investigations of adaptation can be found in a paper by Clark et al. (2008), which used data from the German Socio-economic Panel to show that while adaptation takes time, life satisfaction adapts completely to a number of significant life events (marriage, divorce, widowhood, birth of a child and layoff), though not to unemployment, and that this latter result was particularly noticeable for men (see Figure 4).

Figure 4. Patterns of adaptation to unemployment, marriage, divorce and widowhood

Source: Clark et al. 2008, p. F234.

Preference adaptation is not the only type of mental state phenomenon relevant to human development. On the positive side, there are states of absorption labelled ‘flow’ by Csikszentmihalyi and Bennett (1971). Initially conceived of as a model of play derived from the study of artists absorbed in their work, the concept of flow has been used to shed light on issues ranging from the development of innovative ideas to the motivation of learning in schools and professional training. As nearly the polar opposite, psychologists have also identified a state of burnout, which is defined in terms of exhaustion, cynicism and inefficiency. Again, there is a considerable amount of research on the syndrome, initially from the United States, although in recent decades from other countries also, which recognizes significant negative impacts on health and well-being, as well as, potentially, on productivity (Maslach et al. 2001). Both flow and burnout are important motivational and experiential states that have implications, potentially, for income and health. Furthermore, burnout has been documented in pro-social professions such as health and development, and so has implications for the supply of human development services as well individual mental health aspects of it.

THE OBJECTIVE BENEFITS OF SUBJECTIVE WELL-BEING FOR HUMAN DEVELOPMENT

HEALTH AND EDUCATION

There is a growing body of evidence that demonstrates that subjective well-being is connected to health and life-expectancy, and highlights the nature of the causal pathways. Some connections are direct: stress in early childhood has, for example, been shown to predict markers of inflammation several years later, which in turn has negative effects on the cardiovascular system. Stress has also been shown to have negative consequences for the health of wounds. Similarly, positive emotions have been shown to benefit cardiovascular, immune and endocrine systems. There are also more indirect mechanisms at work. Pettay (2008), for example, produced evidence that those with high levels of life satisfaction were more likely to be of a healthy weight, and exercise and eat appropriately. Subjective well-being is associated with positive social relationships, which are helpful in coping with illness, and there are documented links between depression on the one hand, and obesity and smoking on the other. Happiness is connected to life expectancy through a variety of pathways. Life satisfaction and positive feeling have both predicted survival, controlling for a variety of socioeconomic variables, while high levels of stress have been associated with elevated risks of cancer death (Russ et al. 2012). Epel et al. (2004) found shorter telomeres (caps that protect DNA) in women who had experienced significant stress in their lives, and proposed that stress hastens ageing by interfering with the accurate replication of DNA throughout life, a view that seems to be attracting wider support.

Education is also connected to subjective well-being, both directly and indirectly, although there is much less research on this connection. In the economics-related literature, theorizing suggests that because education enhances capabilities, it should lead to more favourable assessments of well-being. However, as already noted, the well-being of learners and teachers can have an impact on educational outcomes either by enabling students to be motivated or by encouraging teachers to perform effectively. In a major study conducted in Bangladesh, Ecuador, India, Indonesia, Peru and Uganda, Chaudhury et al. (2006) found that on average 19 percent of teachers (and 35 percent of health workers) were absent, and that pay seemed to have little impact on attendance, although the quality of the school infrastructure did. In other words, an emphasis on the understanding of job satisfaction, beyond pay, in low- and middle-income countries could lead to significant improvement in the quality of education received by many children in those countries.

SUBJECTIVE WELL-BEING, GENDER AND INEQUALITY

There is no strong consensus about gender differences in well-being, though in a recent paper, Senik (2015) claims that women tend to be less happy than men up to 18, happier thereafter and less happy again after their 50s. Drawing on data from the World Values Survey and focusing particularly on the

higher levels of subjective well-being during adult life, Senik highlights a couple of points. In the first place, it is noted that women of working age exhibit a more varied pattern of time use compared with male counterparts, which could mean that women's choices are in some way actually less constrained than those of men—either for reasons to do with social norms or the existence of effective institutional policies.⁵ In addition, she argues for the importance of expectations and finds evidence that while the aspirations of men and women are converging, women still have lower expectations concerning promotion opportunities and are more satisfied with their relations with their manager.

These points illustrate the importance of selecting subjective measures suitable for the research question at hand: If we were interested in gender differences in mental health overall, for example, it would be important to recognize that women tend to suffer more from most mental disorders, with the exception of those related to drug abuse. In older age, psychological studies find that women fare less well than men on subjective measures, though in general such findings tend to diminish the more statistical controls are employed. There is also some evidence that following the loss of a spouse, the reductions in subjective well-being are attenuated by friends for women and by family members for men where they exist, as men in this age group have fewer non-family social contacts on average.

JOB AND COMMUNITY SATISFACTION

Unemployment is known to be a significant driver of unhappiness, particularly for younger people, though the effect exists throughout the life course. Organizational psychologists have identified a variety of drivers of job satisfaction including intrinsic rewards derived from the nature and design of a job, appropriate task complexity, line management quality, working conditions, social relationships, long-run opportunities, levels of aspiration, difficulties associated with role perceptions, need for achievement as well as the obvious extrinsic rewards available from income. The multicountry study by Sousa-Poza and Sousa-Poza (2000) offers a ranking of some the main determinants (see Table 6), although their results should be read with some caution, as research often suggests that security of tenure is the most important driver of job satisfaction. It may be that at the time the work was undertaken, jobs were relatively secure and so risks of job loss were not so salient to respondents.

⁵ There is an alternative view, which is that different patterns reflect specialization in the production of care and income within the household. This in turn reflects the comparative advantages of men and women given the workings of labour markets.

Table 6. Ranking of job satisfaction determinants

Ranking of determinants	All		Males		Females	
	ME	Rank	ME	Rank	ME	Rank
Interesting job	0.189	1	0.188	1	0.189	1
Good relations with management	0.141	2	0.128	2	0.154	2
Income is high	0.067	3	0.074	3	0.053	5
Can work independently	0.062	4	0.055	4	0.066	3
Good advancement opportunities	0.046	5	0.046	6	0.048	6
Good relations with colleagues	0.046	6	0.035	7	0.061	4
Job is secure	0.039	7	0.049	5	0.028	7
Job is useful to society	0.022	8	0.027	8	0.015*	8
Can help other people	0.019	9	0.021	9	0.015*	9
Work time	-0.000*	10	0.000*	10	-0.001	10
Schooling in years	-0.004	11	-0.003	11	-0.004	11
Physically demanding	-0.015	12	-0.018	13	-0.007*	12
Dangerous job	-0.019	13	-0.016*	12	-0.026*	13
Exhausting job	-0.059	14	-0.058	14	-0.059	14

Note: ME = marginal effects.

* Not significant.

Source: Sousa-Poza and Sousa-Poza 2000, p. 529.

Beyond work, there is some evidence that community quality can also impact subjective well-being. The seven-item Personal Wellbeing Index, for example, includes questions about satisfaction such as “how safe you feel” and “feeling part of your community.” Typically, feelings of safety are closely related to local crime levels and statistics, and they make a significant contribution in models of life satisfaction. An alternative approach to community quality focuses on the extent to which a person feels connected with the community. One such sense of community index developed by Chipuer and Pretty (1999) uses 12 questions to ask about a variety of aspects of community and the respondent’s engagement with it. These scales are closely related to those used to measure social capital, often conceived of as the ties that exist within and between groups within society. Such ties could in principle have negative, as well as positive, implications for overall life satisfaction, but in general, social capital is found to have significant, positive consequences for both health (Helliwell and Putnam 2004) and income. One simple theoretical argument is that ties promote trust, and trust helps to reduce the transactions costs of economic exchange within society. There is a link, also, between trust and physical health, and it is possible that one pathway is through elevated levels of stress caused by distrust.

In a review focussed on middle- and low-income countries, Agampodi et al. (2015) not only confirmed the benefits of social capital for health but also suggested that cognitive aspects, especially trust, sense of belonging, social cohesion and reciprocity were likely to be most important, though there is also some evidence for the benefits of social support and group membership. The finding is

echoed in models of neighbourhood satisfaction, which show that even with significant social disorder, social connectedness is a significant predictor of it (Dassopoulos et al. 2012).

SUBJECTIVE WELL-BEING OVER THE LIFE COURSE

WELL-BEING IN CHILDHOOD

Questions about well-being have also been explored at both ends of the age spectrum with a large number of studies focussing on child development and implications for educational practice and policy. For very young children, parent-reported measures of child happiness have been used, while for young people, self-reports of overall and domain satisfactions tend to be preferred. One of the earliest measures proposed, the Student's Life Satisfaction Scale, contains the following items:

My life is going well	My life is just right
I would like to change many things in my life	I wish I had a different kind of life
I have a good life	I have what I want in life
My life is better than most kids'	

Using this scale in a small, early study of children aged 10 to 13 in the United States, Huebner (1991) found no evidence that sociodemographic factors were correlated with subjective well-being but that personality factors were. Those reporting high self-esteem, extroversion and internal locus of control were in general happier, which is similar to findings for adults.

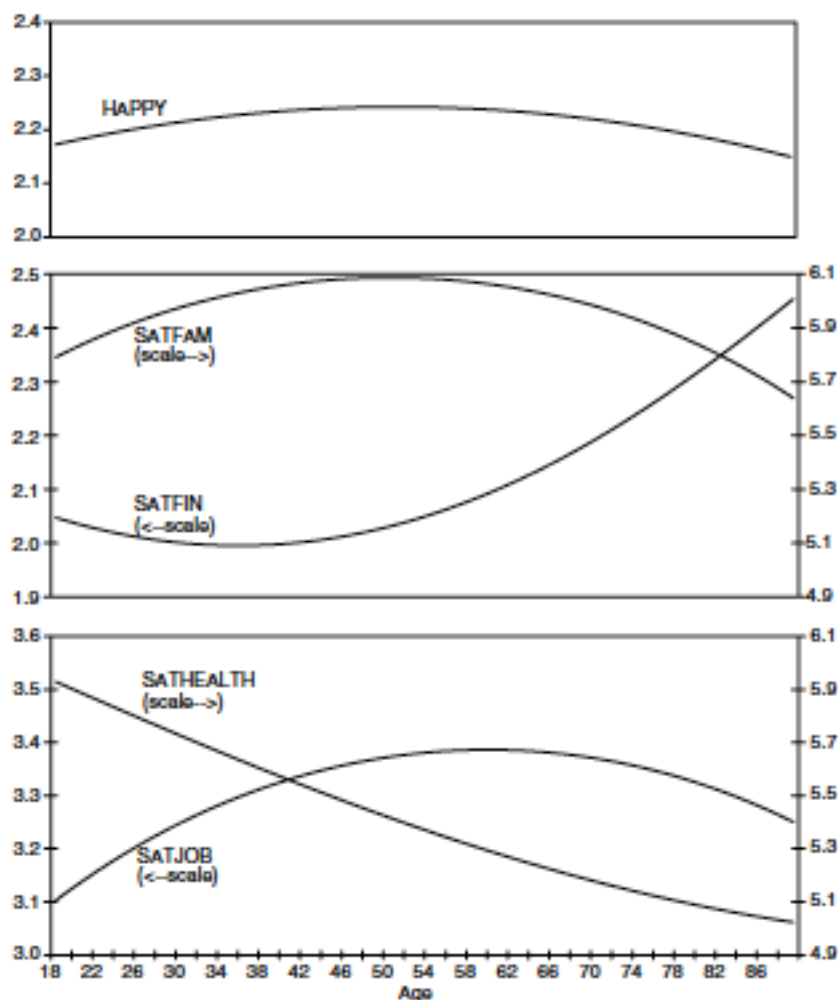
Generally, it is now accepted that child well-being is highly multidimensional. There are several 'dashboards' that reflect this. Such indicator sets tend to comprise a mix of mostly objective indicators with some subjective measures that can be single items. Often, there is a hierarchical approach, with indicators being allocated to domains and subdomains, as in an international comparison by Bradshaw et al. (2006), which measured 'subjective well-being' using measures of self-defined health, personal well-being (young people with high life satisfaction; young people feeling like an outsider; young people feeling awkward and out of place; young people feeling lonely; and young people liking school a lot). Their rankings of countries suggested that subjective well-being is distinct from other aspects of child well-being, and that for children, subjective well-being was best in the Netherlands, Spain, Finland and Sweden, and worst in Poland, Iceland and Japan.

Other findings relating to adolescent well-being worth noting include the following (Procter et al. 2009). Life satisfaction tends to peak around age 12 and 13, and is often lowest at the age of 16, indicating that the period of transition to adulthood and leaving school is generally the most challenging and uncertain on average. Furthermore, and perhaps contrary to expectation, gender, race and socioeconomic status are only weakly related to subjective well-being. Social interest, participation in extracurricular activities and good health are positively related to subjective well-being, whereas use of a wide range of substances (tobacco, cocaine, alcohol, marijuana and steroids) are all negatively related (Donohue et al. 2009). In terms of general productivity, school leavers who are not in further education and or employment report lower subjective well-being in line with findings for young adults, as might be expected. In general, the literature on adolescent subjective well-being points to the value of structured activities, the importance of close attachment to a parental figure and satisfaction with school. It is evident that this finding might apply in many more traditional societies around the world, and so it might be useful to see more research as to whether such impacts are indeed widespread, and whether they have any negative behavioural impacts.

QUALITY OF LIFE IN OLDER AGE

Turning to the other end of the age spectrum and across the globe, gains in life expectancy, combined with changing family structures (Pal and Palacios 2011) are bringing about demographic transitions that are encouraging countries to consider policies for social protection and active ageing (Dethier et al. 2010). It might be supposed that the drivers of well-being in old age will share much in common with those of adult life, and though there is some truth in this, changing patterns of income, health, and social resources and context give rise to an interesting dynamic of domain satisfactions over the life course (Easterlin 2006, p. 474). Satisfaction with health declines continually as people age and with family tails off towards the higher ends of the age spectrum, while satisfaction with income actually increases almost continuously (see Figure 5). In general people have fewer demands on their income as they age, but the situation might be more complicated in countries where health care is funded predominantly from out-of-pocket expenditure.

Figure 5. Domain satisfactions over the life course



Source: Easterlin 2006.

Note: SATFAM = satisfaction with family, SATFIN = satisfaction with finances, SATHEALTH = satisfaction with health, and SATJOB = satisfaction with job. HAPPY is a measure of overall life satisfaction.

Compared with young and middle-aged adults, life satisfaction in older age is slightly higher whereas depressive symptoms tend to be somewhere in the middle of these two groups (Erlich and Isaacowitz 2002). Furthermore, many different subjective measures are used for quality of life assessment in older people. These include instruments such as the CASP-19, comprising 19 questions about personal feelings of control, autonomy, pleasure and self-realization. The conceptual model developed by van Biljon and Roos (2015) with older people in South African residential care settings highlighted a system of relations between meaningfulness, spirituality, health, sense of place, autonomy and relationships. Pinquart and Sorensen's (2000) review of 286 empirical studies confirms that higher income, better quality social ties and higher competence with respect to

independent living as well as more meaningful activities were all positively related to life satisfaction. In addition, there are differences as people progress within older age itself. Socioeconomic status has been found to be more important for the young old, whereas social networks were more important for the old old. Other studies have found positive emotions (Xu and Roberts 2010), personality (Friedman et al. 2010), the creation and maintenance of purpose in life (Pinquart 2002), physical exercise (Windle et al. 2010), daily activities (Herero and Extremera 2010), depression (Vailland and Mukamal 2001) and social isolation (Chappell and Badger 1989) associated with subjective well-being in older age. Autonomy, which at this stage of life can mean independent living, is important for subjective well-being, but a number of factors to do with meaning and sociality may not be helped much by interventions that focus solely on financial contributions to life quality.

CULTURAL DIFFERENCES AND UNIVERSALITY

To the extent possible, we have drawn on evidence from countries across the income spectrum, although most research has been conducted in higher income countries, which in turn raises questions about generalizability to other contexts. In *The Pattern of Human Concerns*, Cantril (1965) observed that the “differences between individuals and groups are often easier to detect than the similarities they obscure,” and his comment about international comparisons is as pertinent today as it was when he made it half a century ago. While culture and environmental factors undoubtedly shape experience, psychological and biological mechanisms are more universal, and many of the experiences of the rising middle classes around the world will be common. That said, there is evidence that our concepts of well-being are shifting over time. Using a variety of sources dating back to 1790, Oishi et al. (2013), for example, found that happiness used to be widely defined as good luck and favourable external conditions, and that only more recently has there been a narrow association between happiness and internal psychological states. Across the world, the relative weight accorded to individual well-being compared with that of the group or community varies significantly.

In an international comparison study, Cheng et al. (2011) found that while responses from Western countries conformed predominantly to an individualistic model of well-being, those from Asian countries indicated an ability to combine both individual and collective approaches. Within Africa, Botswana and Rwanda were found to have more traditional, community-oriented approaches to well-being, whereas the profile of Algerian responses was much more individualistic. In short, international studies suggest that development projects that emphasize community aspects of well-being may be more valued by countries with more traditional orientations. It is also worth acknowledging that direct country comparisons of happiness levels need to be treated with some care as they may reflect reporting effects in addition to any ‘real’ differences in happiness. Work by Diener et al. (1995), for example, argues that Pacific Rim countries tend to report lower levels of subjective

well-being compared with the United States, which may reflect different reporting standards, but also that lower levels of satisfaction are expressed in some areas such as education and the self. Elsewhere and in the 1990s, Chinese respondents appeared to avoid negative affect more than others around the world, and gave less prominence to subjective well-being. For studies comparing a single variable such as life satisfaction, a method of rescaling using vignettes has been developed, though as this requires several vignettes per question item, the technique cannot at the moment be applied to comprehensive comparisons of well-being, given its highly multidimensional nature. All that said, as we noted at the start, country rankings in terms of subjective well-being do generate a plausible global picture and help generate useful questions about why certain groups of countries cluster consistently on particular parts of the global rankings.

Using subjective well-being to inform policies for human development

The models of well-being surveyed in the previous section contribute particularly to our understanding of well-being as an input to human development but also as an aspect of it. In Table 7, we note a few examples of ways in which subjective well-being can make a concrete contribution to policy. These applications cover the health, education, paid employment, gender and inequality concerns of human development, and often echo the messages derived from more objective indicators, but they serve to highlight other issues also that would not emerge so clearly if we used only an income focus. In the cases of maternal satisfaction, teacher retention in rural areas and urban planning, for example, models of subjective well-being can help to improve and fine-tune the delivery of services for human development through a better causal understanding of the job and community satisfactions of service providers. In terms of taxation, the fact that subjective well-being increases at a declining rate contributes to priority setting by providing support for progressive taxation policies that seek to mitigate the impacts of rising inequalities. As far as gender equity is concerned, self-reported measures of autonomy make a significant contribution both to the monitoring of gender equity, which is an important social priority in itself, and to the available pool of human resources in a country.

Table 7. Examples of subjective well-being applied to human development issues

Issue	Who benefits	Subjective measures—use and relevance	Who has done this	Source
Decent employment	Workers, households, employers	Job satisfaction and related measures—shows that decent work depends on a number of factors beyond income	UNDP <i>2015 Human Development Report</i>	http://hdr.undp.org/en/2014-report
Gender equity	Women and girls, citizens	Measures of autonomy (attitudes to domestic violence) help to monitor changing norms towards women in society	UNICEF Multiple Indicator Cluster Survey	http://mics.unicef.org/surveys
Mental health	Mentally ill, carers, employers	Mental health measures such as WEMWBS provide measures of need for mental health services	Scottish Health Survey	www.healthscotland.com/documents/26787.aspx
Maternal health service quality	Mothers and newborns	Maternal satisfaction indicates perceived service quality, which impacts service use	New Zealand	www.health.govt.nz/publication/comparative-study-maternity-systems
Development of non-cognitive skills	Workers, youth	Psychological measures of soft skills help to highlight the workplace value of skills not traditionally directly developed in formal education	World Bank Step Program	www.worldbank.org/content/dam/Worldbank/Event/education/STEP%20skills%20Measurement%20PPT_May%202014.pdf
Well-being literacy	Youth, citizens	Teaches emotional well-being, which helps individuals in a variety of aspects of life	Personal Social Health and Economic Association	www.pshe-association.org.uk/curriculum-and-resources/resources/guidance-preparing-teach-about-mental-health-and
Improvement of city services and urban planning	City dwellers, urban planners	Includes subjective perceptions of service quality combined with dashboards of other indicators providing data on how voters	Jaanagraha (all-India non-governmental organization) Santa Monica City Wellbeing Project	http://janaagraha.org/asics/ and Annual Survey of India's City Systems, Ward Quality Databook 2013 and Voice Report 2014

		perceive the quality of services	Happy City	http://wellbeing.smgov.net/ www.happycity.org.uk/about
		Satisfaction with public transport, roads, air, water, housing, education and health care in sub-Saharan Africa	Gallup	www.gallup.com/poll/185960/africans-satisfaction-community-basics-remains-low.aspx
Tax negative social externalities	General population	Consistent with research on life satisfaction, which shows that conspicuous inequalities have a negative impact on people	Australia Luxury Car Tax	www.ato.gov.au/Business/Luxury-car-tax/
Use tax and transfers to efficiently promote equality	The poor	Financial satisfaction and life satisfaction increase with income at declining rate, which justifies progressive taxation	International Monetary Fund	www.imf.org/external/np/pp/eng/2014/012314.pdf

We have argued in this paper that subjective well-being is vital for human development, and implicitly therefore against the view that human development is a completely objective concept that has no need for 'subjective' measures. For one thing, the distinction in practice may not be so great (if income is self-reported and subjective measures generate reliable observations). Moreover, if we are interested in the improvement of human development outcomes through the provision of quality services, the research evidence and policy applications argue clearly and strongly against the latter view. Subjective measures have their limitations, as do all kinds of measures, but statistically robust subjective well-being measures can generate insights through models, rankings and predictions that would be impossible to achieve by focusing exclusively on financial resources and mechanisms. Models of subjective well-being help highlight the lifelong importance of autonomy while providing a more nuanced understanding of how measures of human potential can complement the standard measures of income and consumption. They help also to highlight the need for more research and thought to be given to human development, not just across countries but also at different points in the life course. The debate between the value of creating a single index or a dashboard of indicators will no doubt continue. Most likely, whether subjective measures are included in a top-line dashboard of indicators or sit beneath them will depend on a balancing of objectives, but we suggest

that a *small* number of subjective well-being indicators relating to work, home life, community, environment and services could usefully, and at little cost, be added to most national labour force, household, health and enterprise surveys around the world, and that this will lead to a significantly richer understanding of what human development is and can be.

For a number of reasons, some discussed above, subjective well-being cannot be a unique metric of success as some might suggest, but it is surely an integral part of human flourishing and an important motive for international development. Its absence has negative and significant impacts on human behaviour, including at the ballot box, and for that reason alone it is likely to continue becoming more important to political actors and voters alike.

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UNDP Human Development Report Office
304 E. 45th Street, 12th Floor
New York, NY 10017, USA
Tel: +1 212-906-3661
Fax: +1 212-906-5161
<http://hdr.undp.org/>

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