How can subjective well-being be improved?

John F. Helliwell[1]

Introduction

Individuals, communities and governments are increasingly interested in using subjective well-being – based on how individuals rate the quality of their own lives- to supplement or even supplant more conventional economic measures of individual and social progress. Some countries, including Bhutan since 1970, and more recently the United Kingdom and China, have made higher subjective well-being (SWB) an explicit goal for public policy. This flowering of interest has naturally sparked efforts to increase the quality and quality of subjective well-being data, research, and policy analysis. These have included the Stiglitz/Sen/Fitousi (2009) report, the simultaneous launching of public consultations and widespread SWB data collection in the UK, and efforts by the EC and the OECD to develop international standards and uniform surveys for the measurement of subjective well-being. Reflecting this increasing interest, the Centre for the Study of Living Standards (CSLS 2011) sponsored in December 2010 a conference in Ottawa to introduce and extend discussions of the policy implications of well-being research.

Thus it is a good time to take stock of what is known and what most needs to be done to move the analysis and policy agendas from demonstrated interest to well-founded change. This paper attempts such a stock-taking in several stages. I shall first review a range of the most policy-relevant measures of subjective well-being, then outline some research results with direct bearing on policy issues, and finally illustrate how these results, and others like them, can be used to improve evidence-based policy choices by governments, companies and communities.

How can subjective well-being be measured?

[1] Canadian Institute for Advanced Research and Department of Economics, UBC. Second draft of paper for the CSLS symposium in honour of Ian Stewart. The structure and content draw heavily on my presentation at the Institute for Government, London, March 3, 2011, and on helpful contributions from panel members and other participants. This research is part of the Social Interactions, Identity and Well-Being program of the Canadian Institute for Advanced Research, and I am grateful for that support as well as the related research collaboration of Christopher Barrington-Leigh, Anthony Harris, Haifang Huang and Shun Wang, all of whom contributed importantly to the underlying research reported here.

The most common SWB measures are evaluations of life as a whole. The principal question refers to satisfaction with life (SWL), with alternatives including Cantril's self-anchoring striving scale (hereafter referred to as the Cantril ladder, and used in the Gallup World Poll, and the Gallup/Healthways Daily Poll in the United States) and questions asking how happy respondents are with their lives.

The other main class of SWB measures includes positive and negative emotions, sometimes measured on a momentary basis, and sometimes as remembered at a later time. Redelmeier and Kahneman (1996) collected both momentary and remembered measures of the pain of a colonoscopy, and found that the remembered assessments differed systematically from the sum of moment-by-moment assessments[2]. Where these two assessments differ, how should the analyst proceed? Kahneman has argued, following the example of Jeremy Bentham's felicific calculus (Kahneman, Wakker & Sarin 1997), but also harking back to the Epicureans, that the true measure of utility is the cumulant of momentary pleasures and pains, with pain and negative emotions being given negative weight. If these cumulants differ from the remembered experiences of pain, as in the colonoscopy case, then he thinks the latter should be seen as mistaken (Kahneman & Riis 2005). Others, including me (Helliwell 2008), have argued that since it is the remembered pleasure or pain that governs subsequent decisions, whether about having another colonoscopy (Redelmeier & Kahneman 1996) or where to go on the next spring break (Wirtz et al 2003), the remembered experiences should be treated as intelligible and often useful reframing of past experiences to support future decisions (Otherwise, would there not be more one-child families?)

While momentary assessments of emotions have been tested in clinical and experimental settings (Shiffman et al 2008), they are expensive to collect and invasive of the lives being monitored. Thus most surveys that ask about emotions do so on a remembered basis, either as a part of a time-use survey (Krueger et al 2009) or with reference to a specific time period, e.g. yesterday.

[2] Stone et al (2002) find other differences between at-the-moment assessments and subsequent diary reports.

How do remembered moods and life assessments differ in what they say about the quality of life? While some analysts treat positive and negative moods as equivalent, as in the U-index of Krueger, Kahneman and colleagues (Krueger, ed., 2009), most researchers have found that positive and negative affect should be kept separate, as they have different sources and different consequences, at least in some important applications. Related evidence is reported in the next section.

Mood assessments, especially those relating to a specific moment or day, fluctuate with changes in the daily or hourly content of life. This makes them especially appropriate for inclusion in time use surveys, where they can help to unpack the hedonic content of daily life. If asked every day, of either the same or comparable samples of respondents, they can be used to reveal the nature and sources of day-to-day fluctuations of moods.

Life evaluations differ from mood assessments in two key ways. First, life evaluations are much more stable, on a day-to-day basis, than are daily assessments of moods. This is shown clearly by the data from the Gallup/Healthways daily poll in the United States, which asks for life evaluations, based on the Cantril ladder, and for the prevalence yesterday of several measures of affect, both positive (happiness, enjoyment and laughter) and negative (worry, sadness and anger). Positive emotions are significantly more prevalent on weekends than on weekdays, with the reverse result holding for the three measures of negative affect. By contrast, there are no daily patterns apparent in the life evaluations drawn from the same respondents (Helliwell & Wang 2011a, Figure 1.2).

The second key difference between daily mood assessments and life evaluations is that when the same set of variables is used to explain them, life circumstances are much more closely related to life evaluations than are emotions. This difference helps to validate both measures, as theory would suggest that cognitively based evaluations of life would pay more heed to the main circumstances of life than would reports of emotions, especially where the latter relate to specific moments or days. Thus life evaluations provide more securely based estimates of the

relative importance of different life circumstances, as well being a more informative guide to future individual decisions and a more useful tool for policy assessments.

Two more examples from SWB measurement are worth mentioning at this stage, since they may help to reassure those who fear that subjective responses may not connect closely enough to the world in which the respondents live. Many surveys ask respondents to rate the state of their current physical health, on a five-point scale. The answers show a continual decline by age group. One set of surveyors, anxious to provide more precision to the question, asked respondents to rate their physical health on the same five-point scale, but to report their state of health relative to others in their own age group. The age-based decline was completely eliminated. This provides good validation for both sets of data, as it suggests that respondents were able to evaluate their own and others' states of physical health in precisely the same terms, revealing at the same time an age-based decline of subjectively assessed physical health that matches the decade-by-decade increase in health problems measured by clinical criteria.

A second example also shows how respondents are able to focus on the specifics of the question, and to answer appropriately. The World Values Survey has in several rounds asked respondents how satisfied they are with their lives as a whole and, on a different scale and in a different part of the survey, how they rate their overall happiness[3]. Comparative modeling of the happiness and satisfaction evaluations (Helliwell and Putnam 2004) shows the two evaluations to depend on much the same variables, in much the same way. The Gallup Daily Poll, by contrast with the WVS happiness question, asks respondents how happy they were yesterday. These answers are quite different from life evaluations collected in the same survey (Kahneman & Deaton 2010, Helliwell & Wang 2011b). Thus it would seem that 'happiness' is capable of taking an evaluative role, as in the WVS (how happy are you about something) or a purely affective one, as in the Gallup-Healthways Daily Poll and the UK questions discussed below (how happy were you yesterday). Satisfaction, by contrast, is more universally evaluative, since it necessarily refers to satisfaction with or about something.

[3] The exact WVS wording is: "Taking all things together, would you say you are - Very happy, Quite happy, Not very happy, or Not at all happy"

The quartet of key questions announced by the UK Chief Statistician in late February 2011, to be asked annually of 200,000 respondents to the main UK household surveys, contains three direct measures of subjective well-being, one evaluative and the other two emotional. The evaluative question asks respondents how satisfied they are with their lives as a whole nowadays, on a scale running from 0 at the bottom to ten at the top. There are then two questions on the respondent's emotions, one asking how happy the respondent was yesterday, and other asking how anxious, in both cases on the same 0 to ten scale. The fourth question is not a direct measure of subjective well-being, but instead asks 'to what extent do you feel that the things you do in your life are worthwhile?'. My interpretation of the four UK questions is that they represent an Aristotelian package centred on an overall assessment of life satisfaction flanked by examples of the pleasure/pain variables (represented by happiness and anxiety, respectively) emphasized by Bentham and the Epicureans, and the eudaimonic supports (represented by a purposive life) emphasized by the Stoics. Aristotle took a middle position, arguing that a good life requires both aspects, having good emotions and also doing the right thing[4].

In this interpretation, overall evaluations of life satisfaction lie at the centre of the measurement of subjective well-being. Emotions are also important direct measures of subjective well-being, while a variety of other measures, including sense of purpose, trust, health status, sense of belonging to neighbourhoods and nations, social engagement, social supports, income, and sense of freedom need to be collected along with subjective well-being data to help explain why life satisfaction is higher for some people and communities than for others.

What has been learned thus far?

This section provides a selective review of some recent SWB research results that have special salience for the design and operation of policies and institutions.

[4] This case is made more fully, with the matching references to Aristotle, in Helliwell (2003) and as applied to modern SWB measurement in Hall, Barrington-Leigh and Helliwell (2011).

Existence of positives trumps absence of negatives

Many public institutions, and the research intended to support them, are designed to diagnose and repair things that have gone wrong. Psychology over the past half century has been almost entirely concerned with the analysis and treatment of depression. But research over the past twenty-five years has shown that positive and negative states of mind can have independent sources and consequences. Not only do positive and negative states of mind have different biological markers (Steptoe et al 2005), but they have different impacts on health outcomes. More importantly, positive states of mind provide a more important buffer against future bad health outcomes ranging from the common cold (Cohen et al 2003) through a wide range of sources of morbidity and mortality (Diener & Chan 2011). Although most prospective studies have involved measures of positive and negative affect (Chida & Steptoe 2008), in those cases where life satisfaction has been measured it also predicts longer lives (for Finnish males, see Koivumaa-Honkanen et al 2000).

Humans are inherently social and altruistic

Cross-sectional studies have consistently shown strong correlations between various measures of the existence and strength of social ties and subjective well-being (e.g. Helliwell and Putnam 2004, Helliwell et al 2010). Causal linkages in these cases almost surely run in both directions. However, when conditions are experimentally controlled, adding modest but meaningful social interactions significantly increased the subjective well-being of seniors in a UK residential care facility (Haslam et al 2010). Similarly, prospective studies show that stroke victims with more social contacts recover faster and more fully, especially if the social connections can be maintained (Haslam et al 2008).

The basic and inherent nature of the social nature of humans is revealed by experiments showing that even just rowing in synchrony elevates pain thresholds by one-third over doing the same workout in isolation (Cohen et al 2010). A fifty-year history of research (see Balliet 2010 for a recent meta-analysis) shows that face-to-face communications substantially increase cooperation and trust.

Although all positive social connections are associated with higher subjective well-being, there is a growing body of evidence, mainly based on experimental evidence, that altruism – doing things for others – has enhanced power to improve SWB, to an even greater extent than people realize. Regular peer-to-peer counseling between patients with multiple sclerosis (Schwartz & Sendor 1999) was found to benefit the givers significantly more than the recipients. Students assigned to give money away were happier than those who spent it on themselves, and more so than they expected (Dunn et al 2008). Comparable international research suggests that the SWB benefits of generosity are universal. (Aknin et al 2010).

Trust and procedures matter

It is well-established that trust and social connections are causally linked in both directions. As already noted, decades of experience and experiments have shown that even modest increases in social connections increase interpersonal trust (Balliet 2010). In the other direction, where there is a climate of trust, people are more willing to reach out and make connections with others (Putnam 2000). Survey data from many countries suggests that both trust and social connections have independent linkages to subjective well-being. Indeed, when respondents are asked to evaluate separately their trust in several different domains (e.g. in the workplace, in the police, among neighbours) their answers differ substantially, and trust in each of these dimensions is among the strongest correlates of SWB (Helliwell and Putnam 2004). To have or not have trust in each of these key areas of life has the life satisfaction equivalent of more than a doubling of income (Helliwell and Wang 2011a, Tables 4-b to 4-d).

Trust matters for emotions as well as for life satisfaction. Data from the Gallup/Healthways daily poll in the United States show that most people, and especially full-time workers, are significantly happier on the weekend than during weekdays. These weekend effects are three times larger for those who work in low-trust workplaces than they are for those in high-trust workplaces (Helliwell & Wang 2011b, Figure 3.3). But happiness on the job, and hence the relative absence of a blue-all-week effect, also depend importantly on how things are done, and on the nature of social dynamics on the job. For example, weekend effects for happiness are twice as large for those whose immediate work supervisor acts like a boss, compared to one

who acts more like a partner (Helliwell & Wang 2011b, Figure 3.3). The importance of trust can be seen as one facet of the frequent finding (e.g. Frey et al 2004) that how a policy is developed and delivered matters at least as much as the content itself.

Close-in trumps distant

Life is more local than most people realize. This is true both for the relative strengths of near-by and far-way trade, migration and capital movements (with the distant much less frequent than could be justified by transport costs) and for the densities of, and SWB derived from, social connections. Thus we find that while local, provincial and national senses of belonging, and their related identities, all provide significant, and simultaneous, support for Canadian life satisfaction, a sense of belonging to the local community has the much the largest effect, bigger than the sum of the other two effects together (Helliwell and Wang 2011a, Table 3). In fact, it would appear that a good part of the strong life-satisfaction effect of trust in neighbours is mediated through a sense of belonging to the local community, since the direct effect of neighbourhood trust is one-third less (although still highly significant, Helliwell & Wang 2011a, Table 3) when the equation also contains the respondent's sense of belonging to the local community.

How can the results be used to improve policies?

It is one thing for individuals and governments to accept that the quality of their lives depends as much or more on the quality of the social fabric as it does on their material standard of living. That realization is important, but it is far from being sufficient. It is important because unless there is a widespread recognition among the general public, and among policy-makers, that there is a need for better measures of the quality of lives in neighbourhoods, towns, provinces and nations, there will be no effective demand for the collection of the necessary data, and hence no ability to conduct the research required to make policies differently. It is not sufficient, because even with demand for better data, it take time to build the data base, and longer still to develop a firm empirical basis for better policies.

There are now many countries, either singly or in concert, interested in building a large geographically coded inventory of subjective well-being data, along with measures of its likely supports. Even before these data are fully in hand, it is worth considering how the data can and should be used to assess policies. It is also possible to survey existing subjective well-being research to support an early harvest of policy ideas and assessment methods. In this section, I list an example range of methods and issues illustrating how government could be delivered differently.

Cost/benefit analysis

The first and relatively straight-forward application of well-being research is to extend conventional cost-benefit analysis to include matters that have long been understood to be important, but have previously been relegated to footnotes. A recent policy evaluation by the Social Research and Demonstration Corporation (SRDC) illustrates the differences in methods and results when SWB research is used to augment cost/benefit analysis (Gyarmati et al, 2008). The Community Employment Innovation Project (CEIP) transferred randomly chosen participants from income assistance (IA) or employment insurance (EI) to employment in community projects chosen and managed by five participating communities. For participating individuals, CEIP "led to longer-term increases in job quality, transferrable skills, social capital, volunteering, and small improvements in overall satisfaction with life. For communities, CEIP led to increases in organizational capacity, through the direct supply of organizational labour as well as increased volunteering by participants and board members, in addition to improvements in community-level social capital…" (Gyarmati et al 2008, p. 94). In the benchmark cost/benefit analysis, the analysis included estimates of the values of most of these benefits, but excluded individual and community-level increases in social capital.

Adding SWB-based estimates of the additional social capital, and declines in hardship, for the individual participants significantly increased the cost/benefit ratios of CEIP. The total values of the estimated community-wide increases in trust and social linkages were far larger still, so much so that they were left in an appendix, reflecting their still-preliminary status. If more secure estimates can be made of continuing improvements in community-wide social capital, it is clear, from the CEIP and other analysis, that they have the potential for being a decisively important part of cost/benefit analysis. The SRDC analysis illustrates two important features

the cost/benefit analysis will require if SWB data and research are to be made central to program design and selection. The first is the documentation of SWB among participants and their communities before and after changes in the policy environment. The second is an experimental design that enables project participants to be compared with otherwise-identical controls, coupled with some convincing way to establish benchmark communities to provide an assessment base for the community-wide consequences of different ways of designing and delivering policies. Both of these requirements, and especially that latter, will be much more easily achieved if governments adopt a more step-by-step experimental process in policy design, and if national statistical agencies develop data archives deep enough to provide a larger range of choices of benchmarks against which policy experiments can be assessed.

Coping with disasters

In 1956, the growing number of people suffering brain and nervous system damage in Minamata (a fishing village on the west coast of Japan's southern island of Kyushu) was traced to many years of mercury in the effluent from the local Chisso chemical plant. Over the following 35 years, many people died or had chronic health problems throughout their lives. Those with the disease were discriminated against, and inadequately treated, raising the extent of their losses and increasing social divisions. Only in 1990, long after a string of lawsuits laying the blame on the source factory was completed, was there a local government in place that saw the need for a radically new approach if lives were improve in Minamata.

Over the subsequent twenty years, Minamata has refashioned itself into a champion of environmentally friendly products, rediscovered its social and cultural roots, and replaced shame and blame with pride and shared well-being. What were the secrets to this long-delayed discovery of a new path? According to Kusago (2011), the key elements of the 'Minamata model', which has since been packaged and used in other countries, for earthquakes and other disasters, were strong local leadership and top-to-bottom engagement of local citizens to rebuild social ties. This has involved first a vision of an alternative (green) path, followed by implementation based on local ideas, with the ultimate goals of sustainable well-being.

It should not require a disaster to trigger recognition of what is needed to support sustainable well-being. But it might nevertheless provide a necessary jolt. The experience of Aceh (Indonesia) after the 1994 tsunami helps to illustrate this point. Despite the enormous losses of life and property, the residents of Aceh were more satisfied with their lives in 2008 than they were before the disaster (Deshmukh 2009), because the severity of the disaster was enough to stop a bloody civil war of thirty year's duration, and to induce former enemies to rebuild their lives together. The 'peace dividend' of Aceh shows the power of a disaster to reset attitudes and minds along a better path. Unfortunately, if there is not a sufficient level of shared social capital to permit cooperation to take place, then disaster can merely exacerbate existing tensions and make a bad situation worse. This was revealed by parallel analysis of the effects of the 1994 tsunami in Jaffna (Sri Lanka). In Sri Lanka, relief operations took a back-seat to the continuing hostilities, with each side wanting to avoid aid going to the other (Deshmukh 2009).

Thus disasters provide a testing time for the social fabric. If the fabric is strong, then post-disaster cooperation gives a chance for some of the ultimate sources of well-being to flower. What better than to have the chance to work together in a good cause in support of others? The evidence shows that these chances do not happen automatically in the rush of modern life, and that shared activities in a good cause are even better for SWB than people realize. Hence it is not so surprising to find 'hikmah' (in Achenese, 'something good out of the worst'; in Arabic 'collective wisdom') in the wake of a disaster.

But if the social fabric is too weak, or too badly frayed, then the shared opportunity for cooperation will be lost, and become instead another source of animosity.

Reform of conventional public service design and delivery

Once subjective well-being and its lessons are taken seriously, they ought to change the ways in which all public services are designed and delivered. Some of the positive consequences may flow merely from paying more attention to the opinions of those for whom the services are designed. For example, Halpern (2010, 42) reports that Merseyside police started a few years ago to collect data not just on crimes committed and clear-up rates but how satisfied citizens

were with their contacts with the police. The surveys showed, to police surprise, that people cared more about whether police showed up when they said they would (trust?) than about the rapidity of the response. The police were able to change their procedures accordingly, thereby increasing their efficiency and public satisfaction at the same time.

A more dramatic example, still in the field of law enforcement, is provided by the reforms of the Singapore Prison System. Because prisons are often considered social cesspits, or at least unpromising sources of increased subjective well-being, any success there provides a powerful example. If prisons can be reformed to improve the subjective well-being of all parties, then anything should be possible. Since 1998 the Singapore Prison Service has converted its prisons into schools for life, thereby improving the lives of inmates, prison staff and the community at large (Leong 2010, Helliwell 2011). The reforms embodied all of the SWB lessons described earlier in this paper. By any measure, the results have been impressive, ranging from a one-third drop in recidivism to improved staff morale and better social connections between prisons and the rest of society.

Health care makes up the largest and usually fastest growing component of most government budgets. What does subjective well-being research have to contribute on the design and delivery of health care? Health care has long adopted the same problem-fixing mode that characterized psychology before subjective well-being was paid much heed. It is still mainly concerned with applying procedures and drugs to cure diagnosed illnesses. The patients are at best clients, to whom services are delivered. Their communities and their families are a complication, or part of the back-drop. The previous section alluded to the accumulating results showing that improving positive states of mind, and the social interactions that they support and are supported by, has striking impacts on health outcomes. There has been increasing study of the biological and neurological pathways that are implicated, but much less by way of experimental changes in using this knowledge to redesign health care to deliver better outcomes at a lower cost.

New models for local government

The efficacy of face-to-face contacts, the subjective well-being advantages of a local sense of belonging, and the psychological benefits of working together for the benefit of others all explain why local government is such fertile ground for the development and application of policies aimed at improving subjective well-being.

The Young Foundation in the United Kingdom has pooled the ideas and resources of well-being researchers, policy-makers and three leading local authorities to form the Local Well-Being Project (Bacon et al 2010) to design and test community activities and public services that enhance subjective well-being. They do this both through what is done and how it is done. In all cases the emphasis is on having both design and delivery exploit and strengthen social glue. The areas of experimental application include family relations, education, health, ageing and the workplace, health, sports and the arts, essentially everything that takes place in the community.

Several metropolitan areas in Canada, including Victoria, Calgary, Vancouver and the National Capital Region, have been bringing together stakeholder groups and social sparkplugs to envisage and enable better ways of building communities and delivering services. In the Greater Victoria region, universities, health authorities, municipal governments, foundations and grass-roots organizations started with a well-being survey, subsequently using the results as a basis for all-party discussions of what initiatives might serve to improve well-being.

Improving environmental sustainability

Attitudes towards the natural, built and social environments are changing, and with these changes comes the possibility of creating and harnessing new environmental norms. Conventional environmental policy often finds itself arguing about, and choosing among, taxes, regulations, subsidies and tradable pollution permits and the level and structure of utility prices. While these tools, especially those that enable users to know the overall social costs of the resources they are consuming, are an essential part of the story, they ignore the all-important social norms.

It has been shown that subjective well-being is raised when people are given the opportunity to do things for others. Actions to improve the local and global environments for the benefits of others in current and future generations fall right into that sweet spot. Such actions are most likely to be effective where they are socially connecting, demonstrably efficient, and represent voluntary actions by the givers rather than actions they are paid or forced to do.

Ian Stewart's sidelot ice rink is an inspiring example. It gives pleasure, healthy sport and social connections to the many cohorts of grateful users, and returns pleasure and good feelings to their genial icemaker. Such actions can happen anywhere, and virtuous circles can be started as simply as by random acts of picking up sidewalk litter. It takes more planning to make them a part of public policy, and even here the more local the better. The 'Green Gyms' initiative of the South Tyneside Metropolitan Borough Council, centred in the most deprived wards of the borough, provides a nice example (Bacon et al 2010, 84). These community-led projects include allotment development, nature reserve conservation, and restoration of community gardens and public open spaces. Similarly inspired neighbourhood gardens are starting to appear all over Vancouver. These activities require leadership and supporting social norms to get started, but the individual and community-level rewards they provide – ending or reducing social isolation, building connections that increase both current well-being and community capacity, and increased physical activity – are likely to make them self-sustaining. With luck they provide beacons for others to adopt and improve.

Macroeconomics

There are two main ways in which subjective well-being research has suggests alternative approaches to macroeconomic policies. The first is the use of subjective well-being equations to replace the empirically unfounded 'misery index, which presumed that the welfare cost of one percentage point increase in the unemployment rate was assumed to equal that of an inflation rate one percent higher. The early results (Di Tella, MacCulloch and Oswald 2001) suggested that the welfare weight for the unemployment rate should be almost twice that for inflation. Updated results (Di Tella and MacCulloch 2009) suggest something more like 1.6 times. Another important feature of this research is that the subjective well-being effects of unemployment and inflation are both high in terms of GDP-equivalence. Using large samples of US data, Helliwell and Huang (2011) find very large negative regional spillover effects of

unemployment on the subjective well-being of those still employed. And for the unemployed themselves, the subjective well-being effects of unemployment are much larger than can be explained by the effects of unemployment on their household incomes. The total effects on the unemployed, plus the total spillover effects on those who are not unemployed amount to fifteen times the income loss to the unemployed (Helliwell & Huang 2011). The US analysis does not permit any comparable estimates of the SWB costs of inflation, but if they are half or more as great as those of unemployment, as suggested by the international evidence of Di Tella and MacCulloch (2009), then they are very large indeed. Thus unemployment and inflation, often treated as the two main proxy objectives of macroeconomics, are both very important to subjective well-being.

The second way in which SWB research can influence macroeconomic policies and outcomes is by using research results to influence policy strategies. South Korean macroeconomic policy responses to the post-2008 global recession provide perhaps the most successful example. Korea had the largest and most integrated set of monetary and fiscal policy changes, was able to keep employment growing throughout the crisis, and yet is still on track to achieve a public debt/GDP ratio that in 2012 is expected to be the third lowest in the OECD (OECD 2010b, Figure 1.14). How could such an exceptional policy be so successful, and how did the government come to choose policies that diverged so much from its own past policies, and from what other countries were doing?

In 1997-98, facing a similarly large drop in the external value of the Won, South Korea instituted very tight monetary and fiscal policies, leading to sharp drops in consumption and employment. This was a conventional package, at the time, for a country with a currency under external pressure. Between then and 2008, it was recognized that the predominantly growth-oriented economic policies were not producing correspondingly better lives. Per capita incomes had indeed increased several-fold over the preceding twenty years but reported satisfaction with life was declining. When the 2008 crisis hit, a new strategy was constructed. It had features that could be taken straight from an SWB playbook. Recognizing the high SWB costs of unemployment, the government acted to encourage both public and private employers to maintain employment, and to use their temporarily spare capacity to design and implement

industrial changes for a Green Korea. In budget terms, this involved expenditure increases equal to 3.2% of GDP and tax cuts equal to 2.8%, for a combined fiscal stimulus larger than in any other OECD country (OECD 2010a, 50). Expenditures to support the green employment strategy included additional public investment of 1.2% of GDP, and job support transfers to local governments and enterprises (1% of GDP for the latter), particularly of small and medium size, and transfers to public financial institutions to keep the loan taps open for SMEs (OECD 2010a, 51). The tax cuts were equally for households and businesses, the latter targeted to green-related R&D and investment.

Whatever their macroeconomic consequences, the elements of the Korean package were likely to have sustained SWB very well. To keep productive groups of employees together during a temporary lull, and to provide them the capacity to more towards highly valued longer term goals at the same time, looks like a pretty sound well-being strategy. Did it work? It seems to have worked remarkably well. Aggregate employment, which fell 10% during the 1997-98 crisis, grew steadily during the latest crisis, being 2% higher in early 2009 than in mid-2007. Aggregate GDP fell by less, and grew faster after the trough, than was the case in 1997 (OECD 2010a, 45). For the OECD as a whole, growth merely paused during the 1998 crisis, while it fell by about 5% from peak to trough in the current crisis. Korean growth is the highest in the OECD, while its debt/GDP ratio remains among the lowest. This illustrates that a well-being-oriented policy need not come at the expense of economic outcomes. In this case Korea chose policies that could be argued to enhance subjective well-being, above and beyond any economic consequences, but still left Korea at the top of the international league table for crisis and post-crisis economic outcomes. Thus more recognition of what motivates behavior, and what delivers better lives, can lead to policies that simultaneously deliver better economic and non-economic outcomes.

Conclusion

There seems to be sufficient evidence already in hand to encourage policy field trials and policy experiments implementing what is already known from subjective well-being research. If this is so, why has so little changed? The relatively slow progress from accumulating evidence to even experimental changes in policies and procedures is partly due to the human predilection,

evident in medicine and all sciences (Nickerson 1998), to adhere to old ways despite the arrival of contrary evidence. Even chess masters unconsciously stop looking effectively for better strategies once they have something plausible in hand, enough so to drag the quality of their play down by three standard deviations in the skill distribution (Bilalić et al 2008, 654).

Caution has its own rewards, however, as the inherent conservatism of science can at least reduce the likelihood of running off in all directions. But if taking subjective well-being more seriously has the potential for increasing the quality of lives while reducing pressures on available resources, should there not at least be a stronger commitment to broaden the range of policy alternatives to include those with a strong chance of improving subjective well-being?

References

Aknin, L.B. , C.P. Barrington-Leigh, E.W. Dunn, J.F. Helliwell, R. Biswas-Diener, I. Kemeza, P. Nyende, C.E. Ashton-James & M.I. Norton (2010) 'Prosocial spending and well-being: cross-cultural evidence for a psychological universal' *NBER Working Paper* 16415. Cambridge: National Bureau of Economic Research.

Bacon, N., M. Brophy, N. Mguni, G. Mulgan & A. Shandro (2010) *The States of Happiness: Can Public Policy Shape People's Wellbeing and Resilience?* London: The Young Foundation.

Balliet, D. (2010) 'Conversation and Cooperation in Social Dilemmas: A Meta-Analytic Review', *Journal of Conflict Resolution* **54**, 39-57.

Bilalić, M., P. McLeod & F. Gobet (2008) 'Why good thoughts block better ones: The mechanism of the pernicious Einstellung (set) effect' *Cognition* **108**, 652-61.

Bok, D. (2010) *The Politics of Happiness.* Princeton, Princeton University Press.

Bok, S. (2010) *Exploring Happiness from Aristotle to Brain Science.* New Haven, Yale University Press.

Borgonovi, F. (2008) 'Doing well by doing good: The relationship between formal volunteering and self-reported health and happiness' *Social Science and Medicine,* **66**(11), 2321-34.

Centre for the Study of Living Standards (2011) 'Happiness as a goal for public policy: Ready for prime time? A synthesis of the CSLS-ICP conference on happiness and public policy' *CSLS Research Note 2011-1*.

Chida, Y. & A. Steptoe (2008) 'Positive psychological well-being and mortality: A quantitative review of prospective observational studies' *Psychosomatic Medicine* **70**, 741-56.

Cohen, S., W.J. Doyle, R.B. Turner, C.M. Alper & D.P. Skoner 'Emotional style and susceptibility to the common cold' (2003) *Psychosomatic Medicine* **50**, 652-7.

Cohen, S. and S.D. Pressman (2006) 'Positive Affect and Health' *Current Directions in Psychological Science* **15**(2), 22-5.

Cohen, E.E.A., R. Ejsmond-Frey, N. Knight & R.I.M. Dunbar (2010) 'Rowers' high: behavioural synchrony is correlated with elevated pain thresholds' *Biology Letters* **6**(1), 106-8

Danner, D.D., D.A. Snowdon, & W.D. Friesen (2001) 'Positive emotions in early life and longevity: Findings from the nun study' *Journal of Personality and Social Psychology* **80**, 804-13.

Deshmukh, Y. (2009) 'The "hikmah" of peace and the PWI. Impact of natural disasters on the QOL in conflict-prone areas: a study of the Tsunami-hit transitional societies of Aceh (Indonesia) and Jaffna (Sri Lanka)'. Florence, ISQOLS World Congress, July 2009.

Diener, E. & M.Y. Chan (2011) 'Happy people live longer: Subjective well-being contributes to health and longevity' *Applied Psychology: Health and Well-Being* **3**(1), 1-43.

Diener, E., R. Lucas, U. Schimmack & J.F. Helliwell (2009) *Well-Being for Public Policy*, New York: Oxford University Press.

Diener, E., J.F. Helliwell, & D. Kahneman, eds. (2010) *International Differences in Well-Being*. New York: Oxford University Press.

Dijkers, M. (1997) 'Quality of life after spinal cord injury: A meta analysis of the effects of disablement components' *Spinal Cord* **35**(12), 829-40.

Di Tella, R., R. MacCulloch and A. Oswald (2001) 'Preferences over inflation and unemployment: Evidence from surveys of happiness' *American Economic Review* **91**(1), 335-41.

Di Tella, R. & R. MacCulloch (2009) 'Happiness, contentment and other emotions for central bankers' In Foote, C.L., L. Goette, & S. Meier, eds., *Policymaking Insights From Behavioral Economics*. Boston: Federal Reserve Bank of Boston (Proceedings of a conference held September 2007), 311-73.

Dunn, E.W., Aknin, L.B., Norton, M.I. (2008). Spending money on others promotes happiness. *Science, 319,* 1687-1688.

Frey, B.S., M. Benz & A. Stutzer (2004) 'Introducing procedural utility: Not only what but how matters' *Journal of Institutional and Theoretical Economics* **160**, 377-401.

Gyarmati, D., de Raaf, S., Palameta, B., Nicholson, C., & Hui, T. (2008). *Encouraging Work and Supporting Communities: Final results of the Community Employment Innovation Project*. Ottawa: Social Research and Demonstration Corporation.

Hall, J., C.P. Barrington-Leigh and J. Helliwell (2010) 'Cutting through the clutter: Searching for an overarching measure of well-being' *CESifo DICE Report 4/2010, 8-12.*

Halpern, D. (2010). *The Hidden Wealth of Nations*. Cambridge: Polity Press.

Haslam, C., A. Holme, S.A. Haslam, A. Iyer, J. Jetten & W.H. Williams (2008) 'Maintaining group memberships: Social identity continuation predicts well-being after a stroke' *Neuropsychological Rehabilitation* **18**(5/6), 671-91.

Haslam, C., S.A. Haslam, J. Jetten, A. Bevins, S. Ravenscroft & J. Tonks (2010) 'The social treatment: The benefits of group interventions in residential care settings' *Psychology and Aging* **25**(1), 157-67

Helliwell, J.F. (2008) 'Life satisfaction and quality of development' *NBER Working Paper* 14507. Cambridge: National Bureau of Economic Research.

Helliwell, J.F. (2011) 'Institutions as Enablers of Well-Being: The Singapore Prison Case Study' *International Journal of Wellbeing* (Felicitators Symposium).

Helliwell, J.F. & C.P. Barrington-Leigh (2010) 'Measuring and Understanding Subjective Well-Being' *Canadian Journal of Economics* **43**: 729-53.

Helliwell, J.F., C.P. Barrington-Leigh, A. Harris, & H. Huang (2010) 'International evidence on the social context of well-being' In E. Diener, J.F. Helliwell & D. Kahneman, eds. *International Differences in Well-Being*. New York: Oxford University Press. 291-350.

Helliwell, J.F. & H. Huang (2008) 'How's your government? International evidence linking good government and well-being' *British Journal of Political Science* **38**, 595-619.

Helliwell, J.F. & H. Huang (2010) 'How's the job? Well-being and social capital in the workplace' *Industrial and Labor Relations Review* **63**, 205-28.

Helliwell, J.F. & H. Huang (2011) 'New measures of the costs of unemployment: Evidence from the subjective well-being of 2.3 million Americans' *NBER Working Paper* 16829. Cambridge: National Bureau of Economic Research.

Helliwell, J.F. & R.D. Putnam (2004) 'The Social Context of Well-Being' *Phil Trans R. Soc Lon. B* **359**: 1435-46. Reprinted in F.A. Huppert, B. Keverne & N. Baylis, eds., *The Science of Well-Being*. London: Oxford University Press, 2005, 435-59.

Helliwell, J.F. & S. Wang (2011a) 'Trust and well-being' *International Journal of Wellbeing* 1(1): 42-78. www.internationaljournalofwellbeing.org/index.php/ijow/article/view/3/85

Helliwell, J.F. & S. Wang (2011b) 'Weekends and well-being' Draft paper for the 16th World Congress of the International Economic Association, Beijing, July 2011.

Huppert, F.A., N. Baylis & B. Keverne, eds. (2005) *The Science of Well-Being* Oxford: Oxford University Press.

Kahneman, D. (1999) 'Objective happiness' In D. Kahneman, E. Diener, & N. Schwarz, eds. *Well-Being: The Foundations of Hedonic Psychology*, New York: Russell Sage.

Kahneman, D., & A. Deaton (2010) 'High income improves evaluation of life but not emotional well-being' *Proceedings of the National Academy of Sciences of the United States of America* **107**(38), 16489-93.

Kahneman, D., & A.B. Krueger (2006) 'Developments in the measurement of subjective well-being' *Journal of Economic Perspectives* **20**, 3-24.

Kahneman, D., & J. Riis (2005) 'Living, and thinking about it : two perspectives on life' In F.A. Huppert, N. Baylis and B. Keverne, eds. *The Science of Well-Being* Oxford: Oxford University Press.

Kahneman, D. P.P. Wakker, & R. Sarin (1997) 'Back to Bentham? Exploration of experienced utility' *Quarterly Journal of Economics* **112**, 375-405.

Koivumaa-Honkanen, H., R. Honkanen, H. Viinamäki, K. Heikkilä, J. Kaprio & M. Koskenvuo (2000) 'Self-reported life satisfaction and 20-year mortality in healthy Finnish adults' *American Journal of Epidemiolgy* **152**(10), 983-91.

Kusago, T. (2011) 'A sustainable well-being initiative: Social divisions and the recovery process in Minamata, Japan'. *Community Quality of Life Indicators: Best Cases V*. **3**: 97-111.

Krueger, A.B., ed. (2009) *Measuring the Subjective Well-Being of Nations: National Accounts of Time Use and Well-Being* Chicago: University of Chicago Press.

Krueger, A.B., D. Kahneman, D. Schkade, N. Schwarz, & A.A. Stone (2009) 'National time accounting : The currency of life' In A.B. Krueger, ed.,(2009, pp. 9-86)

Leong, Lena (2010) *Story of the Singapore Prison Service: From Custodians of Prisoners to Captains of Life*. Singapore: Civil Service College

Lucas, R.E. (2007) 'Long-term disability is associated with lasting changes in subjective well-being: Evidence from two nationally representative longitudinal studies' *Journal of Personality and Social Psychology* **92**(4), 717-30.

Nickerson, R.S. (1998) 'Confirmation bias: A ubiquitous phenomenon in many guises' *Review of General Psychology **2***(2), 175-220.

OECD (2010a) *OECD Economic Surveys: Korea* **12**(July 2010), Paris: OECD.

OECD (2010b) *OECD Economic Outlook* **88** (November 2010), Paris: OECD.

Putnam, R.D. (2000) *Bowling Alone: The Collapse and Revival of American Community*, New York: Simon & Schuster.

Redelmeier, D. & D. Kahneman (1996) 'Patients' memories of painful medical treatments: real-time and retrospective evaluations of two minimally invasive procedures' *Pain* **116**, 3-8.

Schwartz, C. E., & M. Sendor (1999) 'Helping others helps oneself: response shift effects in peer support.' *Social Science & Medicine* **48**: 1563-75.

Sen, A. (1999) *Development as Freedom*, New York: Knopf.

Shiffman, S., A.A. Stone & M.R. Hufford (2008) 'Ecological momentary assessment' *Annual Reviews of Clinical Psychology* **4**, 1-32.

Steptoe, A., J. Wardle, M. Marmot and B.S. McEwen (2005) 'Positive affect and health-related neuroendocrine, cardiovascular, and inflammatory processes' *Proceedings of the National Academy of Sciences of the United States of America* **102**(18), 6508-12.

Stiglitz, J., A. Sen & J.-P. Fitoussi (2009) *Report by the Commission on the Measurement of Economic and Social Progress.* Paris: OECD (www.stiglitz-sen-fitoussi.fr)

Stone, A.A., S. Schiffman, J.E. Schwartz, J.E. Broderick & M.R. Hufford (2002) 'Patient non-compliance with paper diaries' *British Medical Journal* **324**, 1193-4.

Wirtz, D., J. Kruger, C.N. Scollon & E. Diener (2003) 'What to do on spring break? The role of predicted, on-line and remembered experience in future choice' *Psychological Science*, **14**, 520-4.