

## Chapter 2

# The Role of Subjective Well-Being as an Organizing Concept for Community Indicators

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**Abstract** One important objective of community indicator initiatives, often explicit in their title or mandate, is to assess overall well-being, life quality, or social progress. These concepts are increasingly becoming accountable to the evaluation survey respondents give when asked about how their life feels, overall. Such quantitative, subjective data are not directly useful for guiding policy, but statistical analysis based on these subjective well-being data can now be used to guide the choice of indicators in a community indicator system, and can even provide weights to use in calculating a summary index for a set of seemingly unrelated indicator measures. This chapter uses a database of 82 indicator initiatives implemented since the 1970s from 30 countries, and at all geographic scales, to assess trends in the structure, content, and success of attempts to measure human flourishing or life quality. Based on a taxonomy that encompasses unaggregated dashboards of indicators, money-denominated accounts, other indices (composite indicators), and measures oriented around subjective well-being, the database suggests that unaggregated and subjective-well-being-oriented indicator initiatives are more successful in terms of their longevity. Moreover, in the interest of accessibility, transparency, accountability, and the assurance of relevance, the construction of indices should only be carried out when quantitatively guided by the analysis of subjective well-being data. Relying on subjective well-being in this way provides an intuitive, compelling headline indicator or synthetic index, supported by a set of policy-amenable indicators whose inclusion is accountable to the actual experience of citizens.

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## 2.1 Introduction

While often initiated or led by the civil society sector, community indicators are effective when they capture the attention of the public and government. Considerable benefits may flow from public engagement in the process of deliberation and creation of indicators (Hall and Rickard 2013), but typically the ultimate goal is to build sufficient consensus about measurable objectives for society, and for that consensus to have sufficient duration, that those objectives drive policy and are used to hold decision makers to account.

In order to shed some light on which features in indicator initiatives might be most conducive to achieving this sort of *acceptance*, *authority*, and *staying power*, this chapter provides a community-indicator-oriented summary of a longer review published in *Social Indicators Research* (Barrington-Leigh and Escande 2016, hereafter: *MPWB*). The review is based on a database of indicator initiatives of well-being and progress at all levels of government and geography. In some sense, the cutting edge of innovation in thinking how to measure progress and well-being happens at the smallest and largest of these, i.e., in local community indicator initiatives and in international organizations, while intermediate levels such as national governments tend to be more tied to conventional metrics, due to larger political stakes and institutional inertia.

In any case, we collected quantitative and qualitative information on 82 different indicator projects, classified them, and analyzed the patterns and trends in what we found. Our sample was not made to be representative, nor was it meant to be all-inclusive. Indicator initiatives were considered eligible for inclusion in the database only if the title or stated objective of the effort relates to some concept of overall well-being or progress. This excludes indicator initiatives focused on a particular issue or demographic component of the population. For instance, indicator projects with scopes limited to “child well-being” or “economic progress” were excluded. It also excludes plenty of efforts which act more as a centralized clearinghouse of policy-relevant statistics. These criteria rule out a significant fraction of the longer list in the Community Indicators Consortium’s database of Indicator Projects.

Below I outline some different ways we classified the indicator initiatives.

**Geographic scale** We included indicator initiatives which encompass a “**local**” or “community” scale, which mostly applies to towns or cities; those which span a “**regional**” scale, i.e., a sub-national province or state; those with “**national**”

coverage; and “**international**” ones which span multiple countries or are even calculated for most or all countries. Usually, the spatial resolution is finer than the geographic scale of coverage.

**Responsible agency** Within each of those scales, there are several possibilities for who designs or leads the indicator project. These we classified into “**government and inter-government**,” “**nongovernment**” for any civil society, non-profit, or for-profit organization, and “**academic**” for systems defined by researchers and which typically can be implemented using existing data.

**Rationale** In principle, the structure of an indicator system can be chosen “**top-down**”, i.e., decided by a small group of experts or representatives, or be derived directly from some theoretical idea; or it can be “**bottom-up**,” which could mean either driven by a democratic or broadly consultative process, or derived from some data-driven process able to choose and organize constituent elements of an indicator system.

**Structure** Much of our emphasis lies in differentiating indicator systems based on how they take many numbers and aggregate them together to produce one, or a few, summary values. We call the different options “**Sets of indicators**,” “**Indices**,” “**Accounts**,” and “**Subjective measures**.”

**Inclusion of subjective well-being** Indicator initiatives can choose to incorporate or eschew individuals’ subjective reports of their overall well-being.

Several bits of relevant terminology are ambiguous. The usage in this chapter is as follows. “Well-being” and “progress” are used in their most general senses, in order to encompass the full range of metrics in our database. “Subjective well-being” (SWB) refers to any of a range of questions eliciting different aspects of subjective psychological experience (but not subjective assessments of objective facts), while “life satisfaction” refers to a single question, discussed later, which captures a cognitive evaluation of life. “Measure” and “indicator” are often used interchangeably to refer to any individual quantitative metric, while I use “indicator initiative,” “indicator project,” or “indicator system” to refer an entry in our database, regardless of which kind of *structure* it has. On the other hand, “sets of indicators” is a category of *structure*, above, and means a collection of measures that are not combined into a summary value in any way. These sets of indicators are sometimes called “dashboards” by others.

Table 2.1 shows a subset of indicator projects, taken from the database of *MPWB*, which are classified as being calculated at the community level. The sample of local projects is, for reasons of practical convenience, biased towards English-speaking regions and North America in particular. The larger database includes projects from 30 different countries. As can be seen in the small sample of Table 2.1, many initiatives have not survived. One line of inquiry is to determine which characteristics of indicator initiatives are associated with better chances of surviving. Of course, those which are no longer active but which made it into our database are only the ones with sufficient prominence or impact in their time in order to come to our attention. The analysis in the rest of this chapter is based on the full database of 82 initiatives.

**Table 2.1** “Local” indicator initiatives

Name	Country	Year	Alive	Who	What	How	Pop
Subjective QOL in the City of Flint, and Genesee County, Michigan	USA	1979	N	NG	SWB		420k
The Indices of Community Well-Being for Calgary Community Districts	Canada	1985	N	Gov	Idx	T	1M
Jacksonville Community Council QoL progress report	USA	1985	Y	NG	Set	T/B	840k
Oregon Benchmarks	USA	1989	N	Gov	Set	T/B	
Truckee Meadows Tomorrow—Quality of Life Compact program	USA	1994	Y	NG	Set	T/B	320k
Santa Cruz County California Community Assessment Project	USA	1994	N	NG	Set	T	63k
Ontario SDC, Quality of Life Index	Canada	1997	N	NG	Idx	T/B	14M
GPI Atlantic, Nova Scotia	Canada	1998	N	NG	A/S	T	940k
BC regional Socio-economic Profiles and Index	Canada	1998	N	Gov	Idx	T	4.6k
Federation of Canadian Municipalities QOLRS	Canada	1999	N	Gov	Set	T/B	2.6M
Social Development Index	China	2000	Y	Gov/Acd	Idx	T	7M
Boston Foundation’s Boston indicators Project	USA	2000	Y	NG	Set		1M
Zurich sustainability indicator set	Switzerland	2000	Y	Gov	Set	T	400k
Buffalo City 2001 QOL survey	South Africa	2001	N	Gov	Set	T	750k
Porto Monitoring System on Urban Quality of Life	Portugal	2001	Y	Gov/Acd	Set	T	1.7M
GPI, Alberta, Pembina Institute	Canada	2001	N	NG	Act	T/B	4.1M
Tasmania Together Project	Australia	2001	N	Gov	Set	T/B	520k
Newfoundland community accounts	Canada	2002	Y	Gov	Set	T	530k
Peterborough Quality of Life Report	Canada	2002	Y	NG	Set	B	120k
Hennepin County 2002 Community Indicators Report	USA	2002	N	Gov	Set	T	1.2M
City of Florence QOL	Italy	2003	N	Gov/Acd	Set	B	360k

(continued)

**Table 2.1** (continued)

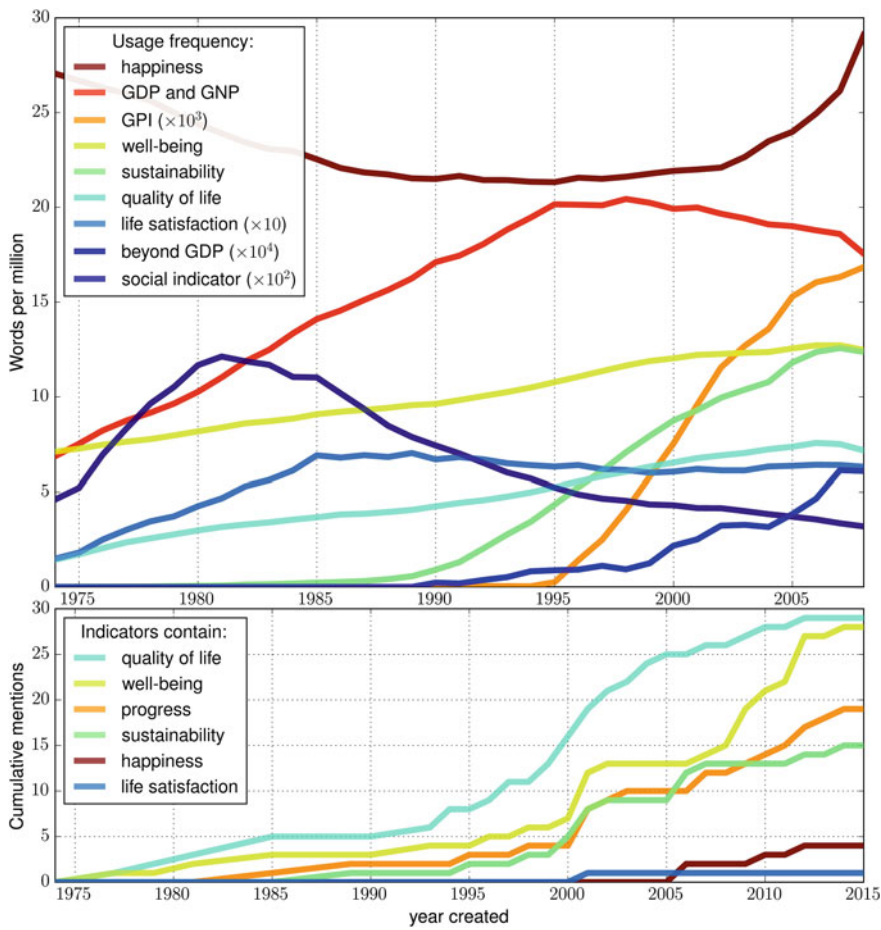
Name	Country	Year	Alive	Who	What	How	Pop
Community Foundations of Canada’s Vital Signs Program	Canada	2007	Y	NG	Set		30M
Khavesh Shomali QOL	Iran	2009	N	Acad	S/I	T	
The Glasgow Indicators Project	Scotland	2009	Y	Gov/Acad	Set	T	590k
Winnipeg Peg report	Canada	2010	Y	NG	Set	T/B	660k

Indicator initiatives in the database of Barrington-Leigh and Escande (2016) classified as “local,” meaning that the geographic precision or scope of the indicators is at the municipality or metro scale. *Year* is the founding year; *Alive* records whether or not the indicator project is still in production; *Who* classifies its creator as government or non-government (there are none of academic origin in this subset); *What* describes its *structure* as a Set of Indicators, an Index, or a set of Accounts, or a combination; and *How* specifies whether it was designed with a top-down, bottom-up, or hybrid approach. *Pop* is the population of the region or regions covered

The goal in what follows is (1) to understand some trends in how indicator initiatives are being constructed, (2) to assess which classes of indicator initiatives best survive the test of time, and (3) to suggest how subjective and objective measures can be used together in order to construct accountable, accessible, and authoritative community indicator systems. I conclude by recommending that subjective well-being can play a central role in measures of human outcomes, but that in order to do them justice most long-term environmental indicators must be separated from those focused on current human well-being.

**2.2 Statistical and Cultural Trends of Indicator Initiatives**

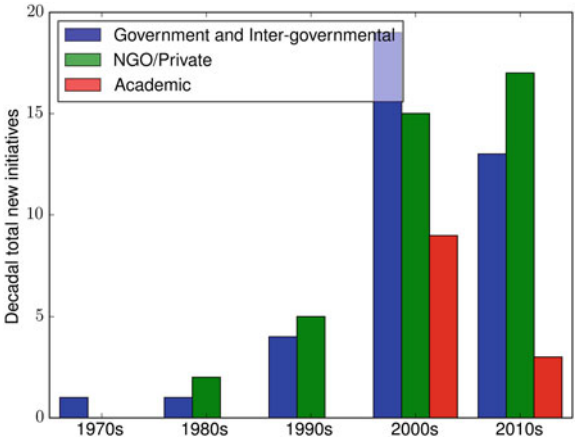
To begin with, it is interesting to look at broader trends in the fashion of language surrounding progress and well-being. The upper panel of Fig. 2.1 shows a history from 1975 to 2008 of how often different words were used in printed books. It shows some patterns we might expect from the history of social indicators. First, the term “social indicator,” popular in the late 1970s, is in decline. The use of terms “gross domestic product” (GDP) and “gross national product” (GNP) is also on the decline, after having peaked in the 1990s. By contrast, reference to modern augmented GDP measures, often referred to as “genuine progress indicators” (GPIs) is on the rise, as are the terms “beyond GDP,” “well-being,” “happiness,” and “sustainability.” One may interpret these trends as indicative of overall interest in these concepts, and reflective therefore of the importance English-speaking societies place on them. During this same period, there has been an even stronger trend in writing by academic economists, as judged by their publications. The number of articles appearing in economics journals and referring to “life satisfaction” or “happiness” or “subjective well-being” grew from three in 1991 to >300 per year



**Fig. 2.1** Usage of progress and well-being terminology over time. *Upper panel* Historical incidences of some relevant terms in printed books, taken from Google’s n-grams (see <http://ngram.google.com> for more information). “Life satisfaction” represents the sum of incidences of “life satisfaction” and “satisfaction with life” and is scaled up by a factor of 10 for better visibility. “Social indicator” is scaled up by a factor of 100, and GPI, short for “genuine progress indicator,” is scaled up by 1000. Use of the term “sustainable development” shows a similar pattern over time as “sustainability.” The Google N-gram database ends in 2008. *Lower panel* the (rescaled) cumulative number of mentions of different terms (labeled by color in top panel) in the stated name or purpose of those measures

last year (MPWB). To some extent, the growth in indicator initiatives using more human-based measures of progress may have much to do with the idea that we can now measure happiness quantitatively. Advances in research have provided specific

**Fig. 2.2** Government and non-government designers. Bars show the number of new indicator initiatives in our database by decade. Two indicator initiatives fall simultaneously into the *non-government* and *academia* categories; the rest are in only one



insights about the importance of social links and other life conditions in fostering a satisfying life.

Carrying out a similar analysis on the language used in the names or stated purpose of indicator systems in our database shows consistent trends. The lower panel in Fig. 2.1 shows the cumulative number of mentions of several of these terms. In recent years, “well-being” and “progress” are used more often than “quality of life” or “sustainability” in explaining the essence or objective of new indicator initiatives. “Happiness” is a relatively new term to appear prominently in the name or objective of indicator initiatives.

Figure 2.2 portrays the breakdown of *who* was responsible for leading each effort. In both the full database and the smaller (local) list shown in Table 2.1, the indicator initiatives have been founded by a fairly constant and even mix of government and non-government/private actors. *MPWB* discusses the advantages and challenges particular to each category, but clearly—and particularly for local initiatives—a broad and cross-cutting alliance of stakeholders is the most promising, because it can best ensure ongoing demand for the product, collective accountability for continued efforts to produce it, a robustness of funding in some cases, and of course the legitimacy of a broad base of support for the structure and content.

### 2.3 Quantitative, Qualitative, Objective, and Subjective

I now turn to the classification of *structure*, mentioned earlier, and outlined by *MPWB*. Indicator initiatives’ types have been described and classified in different ways by various authors. Our categories distinguish, first, whether a set of indicators is combined into summary statistics of some kind. Nearly all community indicator initiatives are comprised of a panel of measures, and in many cases this is as far as the quantitative contribution goes. For instance, an initiative focused on

child well-being may include an estimate of attendance at primary school, expressed as a fraction of the appropriately-aged child population. It may also present rates of change for this indicator, for instance as the measured change over ten years. Beyond that, a published form of the initiative may go on to provide qualitative evidence in the form of a discussion of associated observations, policy changes, or anecdotes, or may provide normative evaluations of whether the levels and trends are good or bad. For instance, the Boston Indicators project and Canada's Vital Signs projects have considerable and strong emphases, respectively, on such qualitative accounts.

In the example above, the initiative remains a *set of indicators* if its contribution is to collate a series of statistics, relevant to some topic or objective, and accompanying discussion. However, it becomes an *index* if some aggregate measure, for instance named overall child well-being, is constructed to summarize the performance of multiple other measures. Unlike the individual constituent indicators which have natural units such as fraction of children, calories per day, or average reading level (grade) at age 12, indices often have contrived scales and no units. For instance, they may be a number which is scaled so that its value in a base year was 100. A prominent example is the Human Development Index (Human Development Report Office 2013), which is simply a combination of life expectancy, income per capita, and two measures of population education levels. There is no obvious or natural way to combine these, so the method is somewhat arbitrary. A more complex example is the Canadian Index of Wellbeing, which blends 64 individual measures into a summary index (Michalos et al. 2011, p. 6). Clearly, someone else using the same data might choose to combine them in a different way and therefore come up with a different value for the index.

This problem with indices is a serious challenge when they become subject to public scrutiny. The Stiglitz-Sen-Fitoussi Commission, appointed by the French Presidency, wrote in its 2009 report that statistical offices should provide information to empower others to aggregate across dimensions of life quality in various ways, to create a variety of indices (Stiglitz et al. 2009), rather than make the value judgments necessary to settle on and promote a single index. In our database, 52% of indicator initiatives which fit purely into the "index" category have become defunct, as compared with 40% of the collections of indicators which have chosen not to aggregate their components (*MPWB*).

Two kinds of indices appear to have a more accountable rationale for their method. We defer discussion of one of them for later, but the first is those which are summing up things with monetary values, referred to above as *Accounts*. The GDP is such an index, as are many of the "Genuine Progress Indicators" (GPI) which aim to partly "correct" the GDP by including missing components such as the degradation of natural capital. However, even though these indices may be denominated in units of currency, they are not simple sums. Expressing GDP in terms comparable across years is a complex calculation because it must take into account the year-to-year changing market prices of countless goods whose real values have presumably not changed. GPIs have an even harder challenge, since they aim to put financial values onto components of provision, investment, and disinvestment or

harm, without having any direct price evaluations to work from. This requires higher levels of judgment and extrapolation in order to quantify the contributions. In fact, the inevitable omissions in these methods leave their indices also lacking in transparency and objectivity.

### 2.3.1 *Subjective Well-Being*

So far, the focus has been on objective indicators. The rate of attendance at primary school, life expectancy, and volume of a good produced are all values which, in principle, someone else could re-measure if they had access to the same population, and they should come up with the same answer. By contrast, the use of *subjective* data to assess well-being and progress is on the rise in economics and in indicator design, but relies on an individual's evaluation which cannot be verified by a second or outside authority.

It is worthwhile to consider a certain single survey question which has a somewhat central role in this field:

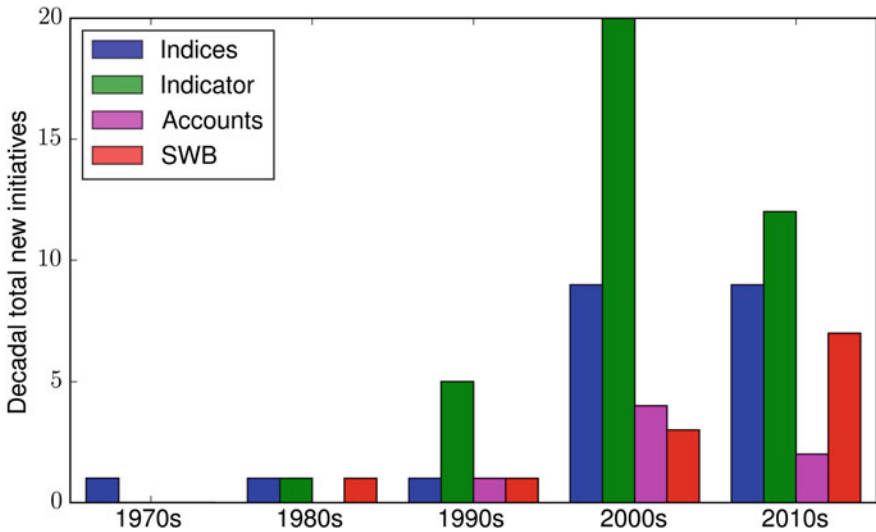
Overall, how satisfied are you with life as a whole these days, on a scale from 0 to 10, where zero means you feel “not at all satisfied” and 10 means you feel “completely satisfied”?

While clearly highly subjective, this life satisfaction (LS) question solicits a numeric response, and the data from fielding it are therefore quantitative. This fact has facilitated an extensive and rapidly growing body of research (alluded to earlier) which quantitatively analyzes variations in LS across individuals, communities, and countries, at a point in time as well as using changes over time. The body of evidence shows that LS exhibits reasonable stability within individuals, sensitivity to life conditions and changes, the ability to predict behavior, reasonable variation with material and other circumstances across the entire range of global national development levels, and international and intercultural comparability (Helliwell et al. 2010; Exton et al. 2015). More broadly, SWB reports for an individual are consistent with those predicted on their behalf by family and close friends (Diener 1984; Sandvik et al. 1993), and SWB reports correlate with objective physiological signs of mood and well-being. While an individual's answer is subjective, average responses from a population are a reproducible measurement.

Upon acceptance of the idea that individuals can aggregate their experience in accordance with their own priorities and values in a way that no one else can, the advantages of having access to such measurements become apparent. The aforementioned Stiglitz-Sen-Fitoussi report points out that it is difficult to compare income over time in the face of technological change, for reasons already given above, and it is also a great challenge to value publicly-provided individual services, as well as numerous other experiences which are not a result of choices. By contrast, individuals' own cognitive evaluations of life accommodate in principle all these experiences and changes with the appropriate psychological weights.

The understanding of these measures has advanced rapidly in recent years due to the increasing abundance of empirical data. Efforts by the U.S. National Academies (Stone and Mackie 2014) and in particular the OECD (OECD 2013) have led to a standardization of SWB measurement, in which LS is identified as the primary measure for policy analysis. Politically, too, such “happiness” metrics have gained traction and, increasingly, investment and policy accountability. High-level examples include Prime Minister Cameron’s initiative in the U.K. (Cameron 2010; UK Office of National Statistics 2011; Dolan et al. 2011); President Sarkozy’s rationale for the Stiglitz-Sen-Fitoussi report (Stiglitz et al. 2009); the OECD’s Better Life initiative (OECD 2015, 2016); the World Happiness Reports (Helliwell et al. 2012, and nearly annually since); and the U.S. Federal Reserve chair Bernanke’s speech on well-being (Bernanke 2010).

Accordingly, there has arisen our fourth category of indicator system *structure*, the “Subjective measures.” These are indicator initiatives consisting entirely of subjective reports, for instance satisfaction with various aspects of a local government’s performance, or which are otherwise oriented around subjective well-being. One of the indicator projects listed in Table 2.1, in Genesee County, fits this description. Figure 2.3 shows the distribution of our four categories over time. According to this limited sample, there was a peak of interest in monetary-denominated accounts (GPIs and the like) in the previous decade, but there is a continued growth in the role of indicator initiatives focused on subjective



**Fig. 2.3** Indicator sets, Indices, Accounts, and Subjective measures. *Bars* show the classification of new measures in our database by decade. The “Indicators” category refers to sets of indicators that are not rolled into an index. The subjective well-being (SWB) category includes measures exclusively composed of subjective assessments, as well as indices aggregated according to weights derived from empirical models of life satisfaction. Excluded from “Index” are those indices which also fit in the SWB category

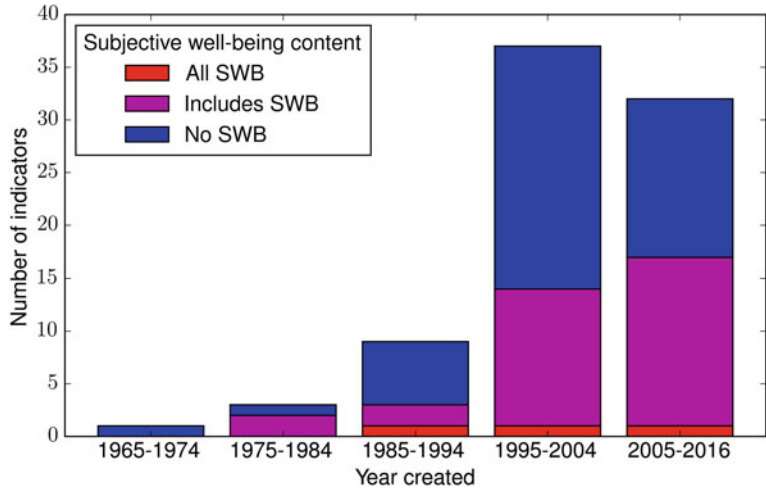


Fig. 2.4 Incorporation of subjective responses into measures of progress. From *MPWB*

well-being. Figure 2.4 provides even stronger evidence of this trend. A number of indicator systems include at least one subjective response measure in their panel of indicators, even if they do not privilege SWB as a focus or guide. In the last decade, fully half of the new indicator initiatives have incorporated subjective responses in one way or another, which is nearly double the rate of the previous decade.

Possibly the most interesting development in the measurement of general-purpose well-being indicator systems is the rise of indices which are built from a set of objective indicators but which use SWB to guide their aggregation. In our classification, these fall both into the “Index category” and the “Subjective measure” category. Earlier I referred to two kinds of indices which appear to be more accountable because of their transparent method of creating an index out of a collection of relatively unrelated indicators; however, I explained why the first, the money-denominated accounts, is in fact plagued by transparency problems.

By contrast, the SWB-based indices may pose a paradigm in which the recipe for building an index from a set of (typically) objective measures is more accountable. Our database includes three examples. The Legatum Prosperity Index (Lind 2014) uses a model explaining variation in responses to Gallup World Poll’s life evaluation question to determine weights for building an index out of eight domains. Similarly, a regional analysis in France uses the answer to the question, “In your current life, do you feel happy: never, occasionally, quite often, very often?” along with the same statistical technique to find weights for aggregating 11 indicator dimensions (Bigot et al. 2012). Thirdly, the Economist’s *Quality of Life Index* is generated using weights derived from a similar model of life satisfaction data (The Economist Intelligence Unit 2005).

In each case, an objective, reproducible method is used to determine how to build an index out of a set of available measures which may be thought to pertain to quality of life, progress, or well-being.

The method essentially evaluates the importance of each item for explaining variation in SWB, and then uses the measured importance as a corresponding weight. In fact, the resulting index is like a synthetic measure of SWB, as it statistically reproduces the measured subjective indicator using only the set of more objective indicators. In the next section, I discuss the advantages of this approach, and explain some of its limitations.

## 2.4 Structuring Indicator Initiatives to Be Meaningful and Accountable

Indicator systems meant to reflect policy success, or to capture overall well-being or a broad—if not comprehensive—measure of progress, require several attributes to support their adoption, persistence, and ability to influence. These include accountability, accessibility, and relevance. Being accountable relates to at least two things about the indicator project, corresponding to our categories of *rationale* and *structure*. First, the conception and design of the indicator system must have legitimacy, in its ultimate form but usually also in the process of devising it. In “bottom-up” design processes, for instance, there is a sufficient level of atheoretical input from the population being monitored. Secondly, an accountable structure is one with sufficient transparency in order that others can both reproduce it and understand it.

This last point relates to accessibility, also. Not only must the indicator system structure be feasibly understood by others, but the presentation format of the indicator system should also be appealing. For this reason indicator initiatives sometimes choose to build an index as a summary measure; it acts as a headline feature as well as an organizing concept which can encourage further exploration of the more detailed, disaggregated components which constitute it.

In order to be relevant, of course, the metrics included in an indicator system must in fact help to differentiate good experience from less good experience and ultimately good policy from bad. Ideally, the metrics would also be concise: i.e., they would be the best and smallest available set which address the relevant dimensions, and no more.

My focus on LS reflects two advantages in regards to the criteria described above. First, LS can serve as an organizing concept and headline measure for human welfare or quality of life. Even if it is reported in its raw form and a remaining set of indicators is not aggregated into any index, featuring LS as the headline indicator communicates the overall intent of an indicator system. It also conveys a particular approach, in which it is the experience of the target population that is privileged with the ultimate voice and priority. This portrays one kind of accountability in the measurement

system simply because the designers are not deciding which policies, departments, or domains are the most important.

Secondly, LS can serve as a statistical tool to provide guidance on weights for an index, and even on what social and economic variables to incorporate in an indicator system. How might one achieve the best and smallest set of indicators in a panel of indicators, and how might one evaluate the relevance of a particular indicator when deciding whether or not to record, include, or publish it? Using LS data as a guide allows exactly this, in principle. Although the process is not completely devoid of judgment, the statistical calculations referred to earlier (typically, these are linear regressions) provide measures of importance for LS for each of an array of indicators that one might propose as jointly relevant for well-being. This process not only provides weights that can be used in building an index out of a set of indicators; it also can suggest which indicators to drop entirely. If an indicator is not deemed important by such models, then it is not currently useful in differentiating between those experiencing high quality of life and those experiencing low quality of life, overall.

One drawback of such data-driven weights in an index is that if a new or better set of indicators arises, for instance because a new, improved measure of social capital becomes available in a survey, it has implications for past assessments of the index. That is, one could then calculate trends over time in two ways—with or without the new value included. Moreover, even with the same set of indicators, the weights could change just with updated values of the data or with newer external science informing the weights. This means that there is not a single possible version of the index, but rather that it remains to some extent a work in progress. In fact, this is not so different from the ever-evolving detailed definition of GDP, or the GPIs which are limited in their inclusiveness only by what data and methods are available at any point.

A second caution is that an indicator system for well-being does not encompass all community indicator objectives. There is no reason to believe that SWB measures like life satisfaction incorporate full assessments of future risks or unseen damage to the environment or to public resource stocks. As a result, well-being indicator initiatives are best separated from complementary ones addressing long-term sustainability (Neumayer 1999; Hall et al. 2011). *MPWB* also articulates deep concerns with treating environmental or sustainability assessments in an analogous way to what is advocated here for well-being, i.e., folding them into a single index. While use of improved accounting systems like GPI and augmented GDPs still has a role for evaluating trade-offs between one asset and another, the task of ensuring environmental integrity is much more complex and lends itself more to tracking a set of indicators which cannot sensibly be combined. Most likely, in this realm policy should be in the form of enforcement of limits (e.g. quotas) on most of those indicators, rather than trying to optimize a single outcome.

Despite these limitations, because LS-based weighting schemes as described above do not rely on arbitrary choice, but are constrained to follow whatever the data say, and because even the set of included factors (indicators) is ultimately

chosen by the data itself, the schemes do not suffer as much as other indices from the drawbacks related to accountability and theoretical foundation. When the public and policy makers trust that the weights of an index are meaningful, they may also be more likely to feel interested to investigate and take seriously the more specific indicators that comprise the index.

## 2.5 Conclusion

Well-being is a bit of a weasel-word, in that it can be used to refer to whatever priorities a given advocate wishes to promote as important. However, subjective well-being, and life satisfaction in particular, is becoming the measure to which other definitions of well-being are accountable.

One new option in the menu of strategies for devising, organizing, and communicating community indicator projects is to use life satisfaction responses as a way to give privilege to a collective voice for defining what is important. Rather than asking citizens explicitly what they believe is important to measure and to pursue, recording life satisfaction allows for the choice to be an implicit one because modern methods are established to infer what matters based only on how people judge their lives, overall, when asked for a cognitive evaluation. That is, when large data sets on individual life satisfaction and an array of more objective life circumstances are brought together, the circumstances can be used to statistically “explain” life satisfaction, and this tells us which life conditions deserve the most focus, and in what proportion. This has the nice property of separating, as much as possible, objective measures from subjective ones, while recognizing that ultimately the selection and pursuit of objective measures are all accountable to our subjective assessment of life quality.

Use of SWB in this way can in principle (1) guide and test the choice of indicators in an indicator initiative; (2) provide objective, empirically-based weights for creating an index measure out of a set of indicators; (3) provide a headline indicator to succinctly communicate the overall goal of pursuing life quality to those who might otherwise be put off by a rather technical array of detailed quantitative indicators; and indeed (4) keep the effort, and therefore policy, accountable above all to a purely human centered and experience-based metric of well-being.

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## Author Biography



**Christopher Barrington-Leigh** is an Assistant Professor at McGill University, jointly appointed at the Institute for Health and Social Policy and the School of Environment, and is an associate member in McGill's Department of Economics. Originally trained in upper atmospheric and space plasma physics at M.I.T., Stanford, and Berkeley, Chris subsequently received a Ph.D. in Economics at UBC. Chris' research interests lie in two fields. One is focused on empirical and quantitative assessments of human well-being, and their implications for economic, social, and environmental policy, including the pursuit of overall economic growth and material consumption expansion. In particular, his research makes use of subjective well-being reports to address the relative importance of social and community-oriented aspects of life along with material consumption. He uses large international as well as national surveys, experiments, and economic theoretical modeling to understand individual and aggregate consumption benefits, and their implications for policy. His other research pursuit addresses issues in environmental economics, including the structure of urban road networks and their implication for climate policy. Chris was a Global Scholar of the Canadian Institute for Advanced Research (2009–2014).

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