SOCIAL PROGRESS INDEX 2014

METHODOLOGICAL REPORT

BY **SCOTT STERN,** AMY WARES AND SARAH ORZELL, WITH PATRICK O'SULLIVAN

SOCIAL PROGRESS IMPERATIVE

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CHAPTER 1

The Social Progress Index Methodology 2014

Scott Stern, Amy Wares and Sarah Orzell

1 / INTRODUCTION

Measuring multiple dimensions of social progress is indispensable to understanding its components, benchmarking success, and catalyzing improvement. The Social Progress Index provides a holistic, objective, transparent, outcome-based measure of a country's wellbeing that is independent of economic indicators. The Social Progress Index can be used to compare countries on different facets of social progress, allowing the identification of specific areas of strength or weakness at the country level. It also allows countries to benchmark themselves against peer countries both at the level of individual indicators as well as in terms of more aggregate measures of social progress.

This paper describes the methodology used to calculate the Social Progress Index. Section 2 describes the conceptual architecture of the index and the distinction between input and outcome indices. We introduce the logic behind the underlying components of the Index. Section 3 describes the data used for the construction of the Index. Section 4 provides detail on the calculations undertaken to compute each element. Section 5 discusses the methodology behind assessing countries' relative strengths and weaknesses.

A beta version of the Social Progress Index for 50 countries was introduced in April 2013. We gathered extensive feedback and conducted further research to refine the framework and index construction. Further information on changes from the beta version is described in section 6. Section 7 concludes this chapter and provides information on future directions.

2 / SOCIAL PROGRESS PRINCIPLES

To create an index measuring social progress, one must first develop a conceptual framework that defines social progress as well as its key elements. Then it is necessary to design and implement a rigorous methodology for measurement at the country level. We define 'social progress' as the *capacity of a society to meet the basic human needs of its citizens, establish the building blocks that allow citizens and communities to enhance and sustain the quality of their lives, and create the conditions for all individuals to reach their full potential.* This definition of the concept of 'social progress' is used throughout this report.

The Social Progress Index framework aims to capture the level of social development within a given society. It is composed of three overall dimensions: Basic Human Needs, Foundations of Wellbeing, and Opportunity. Each of these dimensions is further broken down into four underlying components (see Figure 1). Together, this framework aims to capture an interrelated set of factors that represent the primary elements which combine to produce a given level of social progress. The Social Progress Index methodology allows measurement of each component and each dimension, and yields an overall score and ranking.

The Social Progress Index is explicitly focused on non-economic aspects of national performance. Unlike most other national measurement efforts, we treat social progress as distinct though affected by traditional economic measures such as GDP per capita. Other hybrid indices such as the Human Development Index or OECD Better Life Index combine economic and social indicators, confounding the two. Our objective is to utilize a clear yet rigorous methodology that isolates the non-economic dimensions of social performance.

Our approach builds on a long line of work in constructing country indices to measure and assess various facets of economic and social performance. However, the Social Progress Index embodies a number of core methodological choices:

- A focus on outcome indicators, rather than input measures;
- A holistic framework consisting of three broad dimensions of social progress, which is the sum of four equally weighted components; and,
- Calculation of each component as the weighted sum of a series of measures, with the weights determined through principal component factor analysis.

2.1 / OUTCOME INDICES VERSUS INPUT INDICES

There are two broad categories of conceptually coherent methodologies for index construction: input indices and outcome indices. Both can help countries to benchmark their progress, but in very different ways. Input indices measure a country's policy choices or investments believed or known to lead to an important outcome. In competitiveness, for example, an input index might measure investments in human capital or basic research. Outcome indices directly measure the outcomes of investments. For competitiveness, for example, this might include productivity per working-age citizen.

Whether to utilize an input index or an outcome index depends on the specific problem to be addressed and the data available. On the one hand, a well-constructed, input-driven index can provide direct guidance to policy-makers about specific policy choices and investments. Creating an input index, however, requires a degree of consensus about how inputs lead to outcomes, as well as a process to calibrate the relative importance of different input factors against outcome measures. For example, Delgado, et al (2012) focuses on the input factors shaping the degree of national competitiveness, which is measured as the PPP-adjusted GDP per working age population.

In contrast, when there are multiple "output" measures, lack of consensus on all the inputs that matter, and/or data related to inputs are highly incomplete, an outcome-oriented index may be more appropriate. Precisely for these reasons, the Social Progress Index has been designed as an outcome index. Given that there are multiple distinct aspects of social progress each measurable in different ways, the Social Progress Index has been designed to aggregate and synthesize multiple outcome measures in a conceptually consistent and transparent way that will also be salient to benchmarking progress for decision-makers. Over time, the Social Progress Imperative research program will explore the role of input measures and policies in determining a country's performance.

2.2 / METHODOLOGY OVERVIEW

The Social Progress Index methodology incorporates three architectural elements devised after extensive review of the literature and availability of data: dimensions, components, and indicators. Dimensions represent the broad conceptual categories which define social progress. The Index is calculated as the equal weighted average of a country's score on each dimension. Within each dimension are components: four unique but related concepts together composing each dimension. A country's dimension score is calculated as the equal weighted average of its components in that dimension. Each component is composed of indicators which measure as many valid aspects of the component as possible. These indicators are aggregated using a weighted average, where the weights are determined by factor analysis.

2.3 / THREE DIMENSIONS OF THE SOCIAL PROGRESS INDEX

The result of a two-year process guided by a group of academic and policy experts,[1] the Social Progress Index framework synthesizes a large body of research emphasizing the importance of moving "beyond GDP," and which identifies the social and environmental elements of performance of societies. While a complete literature review is beyond the scope of this note, our framework draws on a wide range of sources in economics, sociology, political science, and history. Among many others, we draw on the seminal work of Amartya Sen focusing on the role of capabilities, what individuals are able to do (Sen, 1985), and a range of more contemporary research emphasizing the role of institutions in shaping economic and social performance (North, 1990; Acemoglu and Robinson, 2012).

Based on this wide body of disparate analysis, we synthesized three distinct though related questions that, taken together, offer insight into the level of social progress:

1 / Does a country provide for its people's most essential needs?

2 / Are the building blocks in place for individuals and communities to enhance and sustain wellbeing?

3 / Is there opportunity for all individuals to reach their full potential?

Any assessment of social progress must begin with whether that society is able and willing to provide for its citizens' basic human needs, including adequate nourishment and basic medical care, sanitation, basic shelter, and personal safety. This is challenging in developing countries, and often incomplete even in advanced countries. While basic needs have been the predominant focus of research in development economics, a second dimension of social progress captures whether a society offers building blocks for citizens to improve their lives. Are citizens able to gain a basic education, obtain information, access communications, benefit from a modern healthcare system, and accomplish these objectives in a way that is environmentally sustainable?

[1] See Appendix 4 for a list of literature reviewed and the Acknowledgements section of the Social Progress Index 2014 Report for a list of experts consulted.

Finally, any discussion of social progress must include not simply whether citizens are able to improve their own lives but whether they have the freedom and opportunity to make their own choices. Personal rights, personal freedom and choice, an environment of tolerance and inclusion, and access to advanced education all contribute to the level of opportunity within a given society.

The Social Progress Index framework in Figure 1 reflects these three distinct but interrelated dimensions. Therefore, as an empirical matter, we do not judge any one of the dimensions to have an a priori higher weighting than any other; as such, the Index is a simple average of the three social progress dimensions. We considered other avenues to weighting such as using the coefficients of a regression of life satisfaction scores against the three dimension scores.[2] Though the results are intriguing (and an avenue we intend to explore in ongoing work), we did not believe there was a sufficiently robust relationship of how each of the social progress dimensions mattered in a relative way. We therefore adopt a simple average of the dimensions in order to highlight the critical role of each in social progress.

Figure 1 / Social Progress Index component-level framework

2.4 / COMPONENTS OF EACH DIMENSION

For each of the three dimensions of social progress, there are four components. Components, like dimensions, are categories of outcomes rather than specific outcomes. Every component within a dimension is designed to highlight a separate aspect of the overall set of outcomes which make up a dimension, building on both the academic and policy literature. For example, the Opportunity dimension includes the components Personal Rights, Personal Freedom and Choice, Tolerance and Inclusion, and Access to Advanced Education. Each of these components describes a related but distinct aspect of what it means for a society to provide opportunity. The Personal Rights and Access

[2] The dependent variable from this regression was the pooled average from 2009 to 2013 of the average responses to Gallup World Survey question of life satisfaction based on Cantril's Ladder within each country.

to Advanced Education components describe different aspects of the extent to which individuals are able to pursue their own objectives to the best of their ability. Both Personal Freedom and Choice, and Tolerance and Inclusion, describe different aspects of the extent of limits on individuals. Together these components offer a conceptually coherent way of capturing how societies can empower (or limit) an individual's autonomy, freedom, and ability to progress.

The selection of the dimensions and the elaboration of the components within each dimension occurred through an iterative process involving review of the literature and input from the Social Progress Imperative Advisory Board. The components represent what we believe to be the most complete set of broad outcome elements available given our current understanding from diverse literatures.

We have consulted extensively with experts across disciplines on the 12-component structure of the Social Progress Index to ensure that this captures the principal aspects of human wellbeing, incorporating but not confined to, challenges such as those affected by extreme poverty.

As in weighting across dimensions, the Social Progress Index architecture equally weights components for constructing a dimension-level score because there is no clear theoretical or empirical reason to weight any of the components more highly than any other. For this reason, each dimension score is composed of the simple average across the four components.

2.5 / MEASURING INDIVIDUAL COMPONENTS

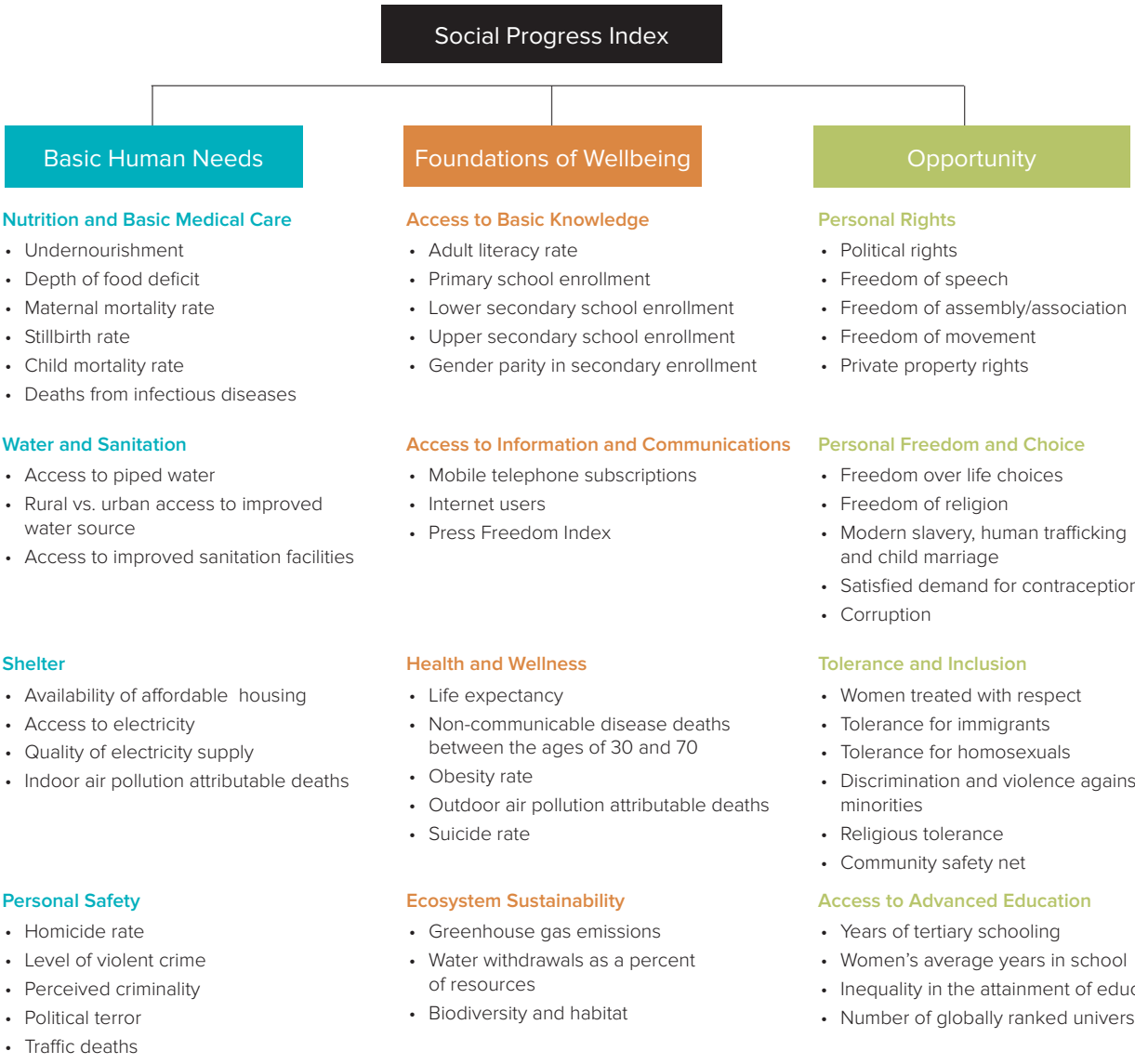
Once the dimensions and components are determined, the Social Progress Index model identifies multiple independent outcome measures related to each component. Each measure had to meet three criteria: internal validity, public availability, and geographic coverage. Each indicator was evaluated to ensure that the procedures used to produce the measure were sound and it captured what it purported to measure (hence internally valid). To meet our goals of transparency and independent replication, each indicator must be freely available to the public. Each measure also must be available for most if not all of the countries in our sample. We only included indicators that were measured well, with consistent methodology, by the same organization, and across all (or essentially all) of the countries in our sample. Figure 2 lists each of the outcome measures by component.

As can be seen in Figure 2, there is some conceptual overlap between different measures that are included to capture different aspects of the same component. For instance, in the Nutrition and Basic Medical Care component, two separate overlapping measures are included: "undernourishment" and "depth of food deficit." To account for the overlap between these elements, the score for each component is calculated using a standard technique, principal component factor analysis (FA). In researching the best construction for the Social Progress Index we pursued both an equal weighting of indicators within each component and the use of factor analysis to calculate weights for each indicator. Through this process we found that factor analysis weighted many indicators very near to equally within components, signaling a good selection of indicators to measure the concept of the

component (see Appendix 2 for 2014 weights). However, there are some components which are more challenging to measure due to lack of data or the inherent divergent nature of data across countries. This finding solidified our decision to use FA weighting, as we believe it is important to compensate for differences in available data and divergent indicators within components and across the Index by allowing FA to weight indicators appropriately to reach the best composite measure of each component.

We discuss the measures in more detail in Section 3. From a methodological perspective, it is useful to note here that two common measures of the validity of factor analysis—the KMO and Cronbach scores—are within ranges considered acceptable in the statistical literature (Manly, 2004).

Figure 2/ The individual indicators within the Social Progress Index Framework



3 / DATA

3.1 / INDICATOR SELECTION AND SOURCES

The Social Progress Index is an aggregate measure derived from numerous indicators drawn from many different organizations, ranging from very large institutions like the UN, to NGOs like Transparency International. The sources are summarized in Appendix 1. In some cases, there are tradeoffs between the quality and precision of a social indicator and its broad coverage of countries and continents. The architecture of the index affects the screening criteria for data sources. For factor analysis based on principal components to be valid, each of the indicators used to calculate the factor has to be relatively free of measurement error (Dunteman, 1989). Thus, it should precisely measure what it was intended to measure and do so consistently across countries. Our choice of factor analysis as the basis for aggregating at the component level was affected by the quality and quantity of data available on social progress.

Similar to the state of affairs in the mid-20th century for measuring economic variables, social scientists have only just begun to build the complicated infrastructure required to successfully mount the large-scale surveys and measurements required to provide effective measurements of social issues across countries. Not surprisingly, the UN and its various entities have taken the lead, and we include UN data ranging from the percent of a population with access to piped water drawn from the Joint Monitoring Programme for Water Supply and Sanitation, to the extent of outdoor air pollution attributable deaths from its Global Health Observatory. For other metrics, we rely on specialist organizations such as the Institute for Economics and Peace which supply personal safety data. One of our objectives is to stimulate improvement in data sources over time.

In an effort to measure solely outcomes, not inputs, we have focused on results that matter to the lives of real people, not whether certain things are legally permissible or how much money the government spends. In some cases, this requires survey data. For example, six indicators are used from the Gallup World Poll in the 2014 Index that measure peoples' perceptions of living conditions in their country. For instance, same-sex sexual activity is legal in Tajikistan, but according to the Gallup survey, only 1 percent of the population replied yes to a question on whether Tajikistan is a good place for homosexuals. Because of divergences like this, we concluded that survey data, as a representation of peoples' lived experiences, is the better outcome measure.

For some indicators, such as Corruption, there were alternative data sources that provided similar indicators. We evaluated alternatives based on internal validity, geographic coverage, and theoretical attractiveness (what methodology was used to gather data). Geographic coverage was often a key limitation. We sought indicators that were measured by the same organization for all of the countries in our initial sample. This meant that many high-quality indicators were excluded from consideration because they only covered a subset of countries (e.g., just Latin America or just OECD countries).

There are additional indicators we hope to use in the future, but which are not yet measured broadly or in a standard way. For instance, in the Access to Basic Knowledge component one could imagine a number of interesting indicators like the Program for International Student Assessment (PISA) scores to measure attainment rather than enrollment. While there is PISA data for a number of countries, the scores do not cover a broad enough country sample for inclusion. For a more in depth look at this issue see the *Social Progress Index 2014* report.

The Social Progress Index includes **all** the valid and available indicators that were conceptually linked to the components. We relied upon factor analysis to draw out the common signal amongst the set of selected indicators in each area. Figure 1 provides a mapping of the connection between components and dimensions.

Most indicator data in raw form had score ranges from 0–100 or from 1–5. Such indicators are constructed to have clear upper and lower bounds. Other indicators, like Greenhouse gas emissions (in the Ecosystem Sustainability component of the Foundations of Wellbeing dimension), are variables which have no *ex ante* upper bound. In order to prevent outliers from skewing the weights of indicators we have converted them to ordinal variables (see Table 1 for more information). Additionally, the indicators which measure gross school enrollment have been capped at 100 percent to prevent countries from being rewarded for students repeating grades. Similar capping has been applied to Mobile telephone subscriptions (see full list in Table 2). Both of these transformations are applied after any missing variables have been estimated; the estimation process is described in the next section.

Table 1 / Indicators transformed to ordinal variables

VARIABLES	MIN	MAX
Indoor air pollution attributable deaths	1	3
Greenhouse gas emissions	0	4

Table 2 / Capped indicators

VARIABLES	MIN	MAX
Lower secondary school enrollment	0	100
Upper secondary school enrollment	0	100
Gender parity in secondary enrollment	0	1
Mobile telephone subscriptions	0	100

Prior to implementing factor analysis, we evaluate the "fit between" the individual indicators within a component, first by calculating Cronbach's alpha for the indicators in each component. Cronbach's alpha provides a measure of internal consistency across indicators. An applied practitioner's rule of thumb is that the alpha value should be above 0.7 for any valid grouping of variables (Bland and Altman, 1997). Table 3 shows alpha values well above 0.7 for all but two of our components (Health and Wellness, and Ecosystem Sustainability). While Cronbach's alpha is a good screen for conceptual fit, it does not provide a direct measure of the goodness of fit of a factor analysis (Manly, 2004).

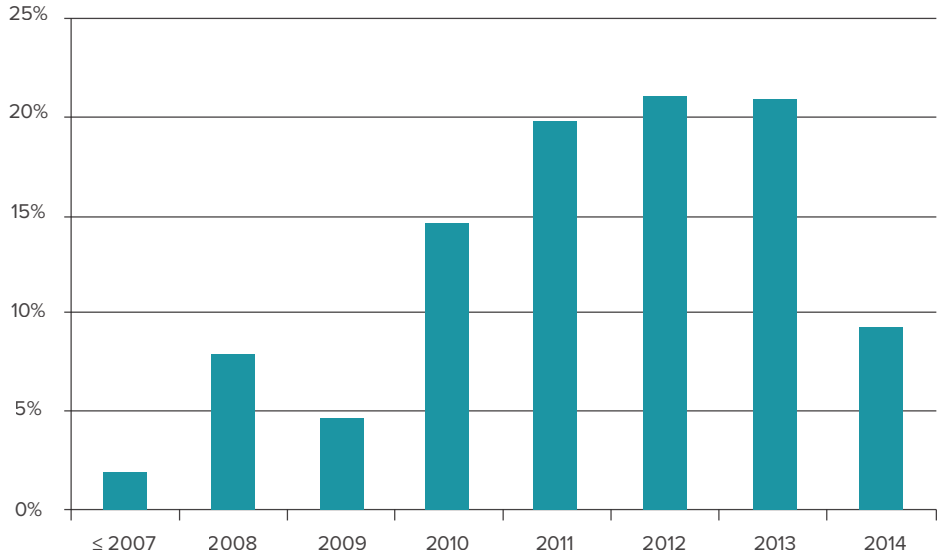
Table 3 / Cronbach's Alpha for each component

		CRONBACH ALPHA
Basic Human Needs	Nutrition and Basic Medical Care	0.95
	Water and Sanitation	0.91
	Shelter	0.75
	Personal Safety	0.87
Foundations of Wellbeing	Access to Basic Knowledge	0.93
	Access to Information and Communications	0.77
	Health and Wellness	0.48
	Ecosystem Sustainability	0.28
Opportunity	Personal Rights	0.86
	Personal Freedom and Choice	0.73
	Tolerance and Inclusion	0.75
	Access to Advanced Education	0.87

3.2 / CHARACTERISTICS OF COUNTRY DATA

The use of data in the Index is limited to 2004–2014 data for any given indicator and country. This is done to create the most current index possible while not excluding indicators or countries that update on a less frequent basis. The average year of data in the 2014 Social Progress Index is 2011. A small number of data points are from 2007 or earlier; these are mostly from OECD countries and are on indicators on which progress is made slowly, such as literacy rates, access to electricity, and deaths from indoor air pollution. Figure 3 below shows the percentage of data points from each year across all countries in the Index.

Figure 3 / Percentage of data points published in each year



3.3 / REGIONAL DIFFERENCES

The nature of a global index is to measure how countries as a whole perform on a certain set of indicators. This is important and useful for comparing countries to one another and assessing both progress and under-performance in order to find best practices and target areas which need improvement. Many policies and investments that affect social progress are also set nationally. However, while the Social Progress Index gives a view into how a country performs on average, aggregate data can obscure substantial regional and state differences in performance. These sub-national patterns matter when a country is considering policies, especially in geographically large nations. While the Social Progress Index is a great starting point for targeting successes and challenges, future research or indexing at the sub-national level will add greater clarity. We have several initiatives underway which will be represented in future reports.

3.4 / ESTIMATES FOR MISSING VALUES

We have carefully selected our country set for 2014 to have the most coverage possible across all indicators, without jeopardizing the statistical quality of the Index. Our final country set excludes nations with no more than one missing value in any given component. In rare cases, a country will not have a value for a given indicator due to lack of coverage by the source, incomplete reporting by the country to international organizations, or only data older than 2004. In these instances, values are estimated using a regression process applied at the component level. In exceptional situations, qualitative and cohort group estimates are applied. Constraining the regression to within component indicators allows for the preservation of the signal that the indicator provides to the component factor analysis calculation. For example, if a country is missing a value for the measurement of Satisfied demand for contraception, the four other Personal Freedom and Choice indicators are used as independent variables to predict a value by regressing them on Satisfied demand for contraception using the sample country set. The estimation of missing values is necessary prior to undertaking FA, which requires a complete dataset for the results to be sound.

Lastly, we transformed some indicators so that in each case a greater value means better social progress. For example, a higher score on the Discrimination and violence against minorities indicator, is transformed so that a greater value means better social progress. For clarity and ease of interpretation, we transformed all measures so that a higher score on the indicator corresponded to a higher overall Social Progress Index score.

4 / CALCULATING THE INDEX

4.1 / INDICATOR WEIGHTS AND AGGREGATION

Factor analysis (FA) uses the shared covariance across all of the indicators within each component to calculate a set of weights that makes it possible to create one aggregate value out of many different indicators (Manly, 2004). This aggregate value is called a factor. If indicators within a component are chosen well, this factor will extract a score which can be used as a valid synthetic measure of the component across countries. FA provides a set of weights for the underlying variables within each component to account for these variables themselves sometimes being correlated with each other.

The Health and Wellness component has indicators with signals that diverge into two separate groupings of correlated values. In this case FA is used to weight the indicators within similar signal groups and these two sub-components are then equal weighted to sum to the component value.

After performing FA in each component, we assessed goodness of fit using the Kaiser-Meyer-Olkin measure of sampling adequacy. The results of this analysis are provided in Table 4. In general, KMO scores should be above 0.5. In our data, the mean KMO score is at or above 0.5 for all but two components. Hence, the grouping of indicators chosen for the components of the Social Progress

Index seem to provide a good measure of the underlying construct, especially for exploratory rather than confirmatory FA. The two exceptions are the Health and Wellness and the Ecosystem Sustainability components. A KMO of 0.40 is not surprising nor highly concerning as the indicators for Ecosystem Sustainability are highly disparate due to the wide ranging scope of the component. Also, because the statistical measures for Ecosystem Sustainability are relatively new and not highly institutionalized, compared to other components, it is expected that some noise in the data causes the KMO to be reduced. As mentioned above, the Health and Wellness component has indicators trending in two different directions: one captures health issues more prevalent in developing nations and the other health issues more prominent in developed nations; the combination produces a lower mean KMO.

Table 4 / Mean Kaiser Meyer Olkin measure of sampling adequacy for each component

DIMENSION	COMPONENT	MEAN KMO
Basic Human Needs	Nutrition and Basic Medical Care	0.84
	Water and Sanitation	0.71
	Shelter	0.71
	Personal Safety	0.81
Foundations of Wellbeing	Access to Basic Knowledge	0.82
	Access to Information and Communications	0.63
	Health and Wellness	0.49
	Ecosystem Sustainability	0.40
Opportunity	Personal Rights	0.81
	Personal Freedom and Choice	0.68
	Tolerance and Inclusion	0.70
	Access to Advanced Education	0.69

The individual component values are calculated by summing the weighted scores to reach the component

Formula 4.1

$$Component_c = \sum (w_i * indicator_i)$$

where the weights (*w* in the equation) are determined through FA. See Appendix 2 for a full list of weights *(w)* and the corresponding values on a 0 to 1 scale for ease of interpretation.

4.2 / COMPONENT SCORES

The final step in calculating each component is to provide transparency and comparability across the different components. Our goal is to transform the values so that each component score can be easily interpreted, both relative to other components and across different countries. To do so, we calculated scores using an estimated best- and worst-case scenario dataset in addition to the individual country data. The best- and worst-case scores are defined at the indicator level according to the definition of each data point. For indicators which do not have a clear best or worst bound or where the probability of reaching a bound is extremely unlikely, such as child mortality where the theoretical worst case would be that every child dies between the age of one and five, we use a bound based on the worst recorded performance since 2004 across all years and countries available in the indicator data set as available from the source, not just from our sample of countries. Best and worst-case data series are included with the sample country set when FA is applied. See Appendix 3 for the specific values used for each indicator's bounds.

This process allows for countries to be scored on a 0 to 100 scale with 100 being the estimated best case and 0 signifying the estimated worst case at the component level. The following formula is used to calculate a component score for each country:

Formula 4.2

$$\frac{(X_j - \text{Worst Case})}{(\text{Best Case} - \text{Worst Case})}$$

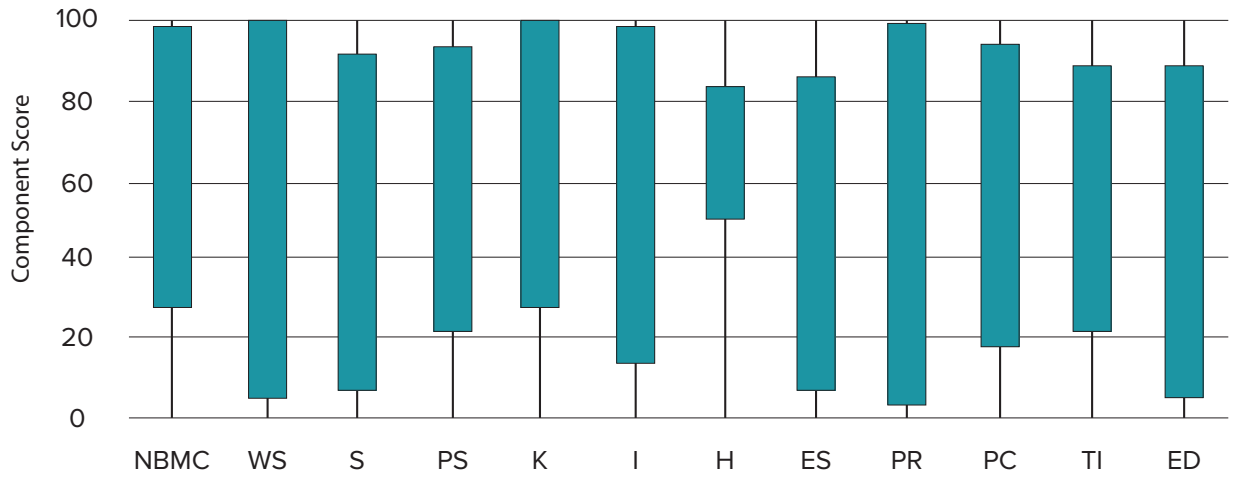
where X_j is the raw component value for each country. The summary statistics after this final transformation of the data are provided in Table 5.

Table 5 / Summary statistics for each component by dimension across all countries in the Social Progress Index 2014

	VARIABLES	MEAN	STANDARD DEVIATION	MIN	MAX
Basic Human Needs	Nutrition and Basic Medical Care	84.12	15.90	27.58	98.78
	Water and Sanitation	73.11	26.46	4.75	100.00
	Shelter	60.85	22.58	6.38	91.81
	Personal Safety	61.94	17.86	21.52	93.45
Foundations of Wellbeing	Access to Basic Knowledge	83.62	17.53	28.01	99.75
	Access to Information and Communications	61.07	20.00	13.25	98.82
	Health and Wellness	72.46	6.96	49.93	83.26
	Ecosystem Sustainability	52.97	16.06	6.74	86.13
Opportunity	Personal Rights	55.55	24.31	2.40	98.80
	Personal Freedom and Choice	67.52	12.87	17.62	94.00
	Tolerance and Inclusion	51.08	15.14	21.34	88.44
	Access to Advanced Education	39.78	20.05	4.72	89.37

There are differences across the components in terms of their overall score variation, which are displayed in Figure 4. For example, some components have a high overall range (such as Water and Sanitation), because some countries score perfectly with no need for improvement, while others struggle to meet these infrastructure needs. Other components, such as Health and Wellness, have a much smaller range, due in part to the great strides the world has made in health since 2004. Even for this component, however, there is much room for improvement.

Figure 4 / Distribution of component scores



4.3 / DIMENSION SCORES

Table 6 provides summary statistics for each dimension, where each dimension score is the average of the four components that make up that dimension (see formula below).

Formula 4.3

$$Dimension_d = 1/4 \sum_c Component_c$$

Table 6 / Summary statistics for each dimension

	MEAN	STANDARD DEVIATION	MIN	MAX
Basic Human Needs	70.01	18.77	25.94	95.73
Foundations of Wellbeing	67.53	11.42	41.34	89.78
Opportunity	53.48	15.56	24.31	88.01

4.4 / INDEX SCORES

The overall Index is calculated as the simple average of the three dimensions. As such, the overall Index is calculated as:

Formula 4.4

$$SPI = 1/3 \sum_d Dimension_d$$

In the 2014 Index, scores range from 32.60 to 88.24. It is expected that the range of scores decreases when averaging scores first into dimensions and then into an index.

5 / ASSESSING COUNTRIES' RELATIVE STRENGTHS AND WEAKNESSES

The component, dimension and overall Social Progress Index scores are scaled from 0 to 100 with 100 as the score that a country would achieve were it to have the highest possible score on every indicator, and 0 as the score were it to have the lowest possible score on every indicator. Best and worst are determined as described above. With this scale, it is possible to evaluate a country's performance relative to the best and worst possible score.

In some cases, it is also helpful to compare a country's performance to other countries at a similar level of economic development. For example, a lower-income country may have a low score on a certain component, but could greatly exceed typical scores for countries with similar per capita incomes. Conversely, a high-income country may have a high absolute score on a component, but still fall short of what is typical for comparably wealthy countries. For this reason, we have developed a methodology to present a country's strengths and weaknesses on a relative rather than absolute basis, comparing a country's performance to that of its economic peers. Within the group of peer countries, yellow signifies that a country's performance is typical for countries at its level of economic development, green signifies that the country performs substantially better than its peer group, and red signifies that the country performs substantially worse than its peer group.

Standard groupings of countries, such as the classifications done by the World Bank, are not appropriate for our purposes for two reasons. First, the groupings are too large, representing excessively wide ranges of social performance and therefore few relative strengths and weaknesses. Second, using these groups, countries at the top or bottom of a group may appear to have a misleadingly large number of strengths or weaknesses simply because the group the country is being compared to is at a much lower or higher level of economic development. We therefore define the group of a country's economic peers as the 15 countries closest in GDP PPP per capita. After significant testing, we found that larger groupings resulted in a wider range of typical scores and therefore too few relative strengths and weakness. Smaller groupings become too sensitive to outliers.

Once the group of comparator countries is established, the country's performance is compared to the median performance of countries in the group. The median is used rather than the mean, to minimize the influence of outliers. If the country's score is greater than (or less than) the average absolute deviation from the median of the comparator group, it is considered a strength (or weakness). Scores that are within one average absolute deviation are within the range of expected scores and are considered neither strengths nor weaknesses.

When the distribution of scores at the component level is tight around the median with too little variation to assess relative strengths and weaknesses, a 1 percent band around the median is used to determine strengths and weaknesses.

6 / YEAR-TO-YEAR RESULTS COMPARISON AND THE 2013 BETA INDEX

The construction of the 2014 Index is designed to enable comparisons across dimensions and component performance. The new scores calculation based on best- and worst-case countries creates a scale of 0 to 100 that will remain consistent in future years. It is, however, important to note that indicator weights in components may vary slightly over time, making some year-over-year comparisons less than straightforward. Despite this, given the choice to use FA, the concept measured by each component will be comparable over time.

The Social Progress Index 2013 was released in April 2013 as a beta version with the stated intention of receiving feedback and suggestions for improvement. Throughout the summer and fall of 2013, the Social Progress Imperative team engaged in dialogue with knowledgeable and interested parties, reached out to experts, and responded to inquiries. The Social Progress Index 2014 is the result of these extensive consultations and due to improvements based on those consultations is not comparable to the 2013 beta version of the Index. The team is grateful to all who contributed to this process (see Acknowledgements in the *Social Progress Index 2014* report).

Revisions were made to each of the 12 components to improve how the concepts were measured. A key change was to remove all proprietary and custom indicators. In some cases, we identified publicly available sources of similar indicators to use instead; in other cases, the 2013 indicators were simply removed. From the feedback we received, we believe increased transparency and the ability to refer to original sources outweighs the loss of these indicators.

Through consultation, we also identified better measures and sources for existing indicators and discovered new indicators that improve measurement of the component concepts. The overall structure of the framework, of three dimensions with four components each and best available data for indicators in each component, meanwhile, received positive feedback and has not changed.

Changes by Component

Nutrition and Basic Medical Care: The indicator Prevalence of tuberculosis was replaced by the more inclusive Deaths from infectious diseases, which also includes Deaths from HIV/AIDS (formerly in the Health and Wellness component).

Water and Sanitation (formerly Air, Water and Sanitation): The Social Progress Index 2013 included the indicators Indoor air pollution attributable deaths and Outdoor air pollution attributable deaths. In the Social Progress Index 2014, Indoor air pollution attributable deaths was moved to the Shelter component and the Outdoor air pollution attributable deaths indicator was moved to the Health and Wellness component, where they are better conceptual and statistical fits. The Access to wastewater treatment indicator was removed because it is not publicly available. No suitable replacement was found.

Shelter: The source for Access to electricity indicator was changed to a more complete data source: the UN Sustainable Energy for All initiative. Since access alone does not give a complete picture of the reliability of electricity, the indicator Quality of electricity (from World Economic Forum data) was added.

Personal Safety: Road injury is among the top ten causes of death worldwide.[3] Accordingly, the Traffic deaths indicator (from World Health Organization data) was added to this component.

Access to Basic Knowledge: The 2013 Secondary school enrollment indicator was split into two indicators for 2014: Lower secondary school enrollment and Upper secondary school enrollment in order to capture better partial secondary education and dropout. Women's average years in school was moved to the Access to Advanced Education component. Gender parity in secondary education was added.

Access to Information and Communications: Since it is not possible to determine how many people are accessing the Internet via a broadband subscription, the Fixed broadband subscriptions indicator was removed.

Health and Wellness: Non-communicable disease deaths between the ages of 30 and 70 replaced the 2013 indicator Cardiovascular disease and diabetes deaths. The new indicator is both broader in terms of the illnesses measured and more focused on those deaths that are more likely to be preventable. Availability of quality healthcare was deemed too subjective and so removed. Suicide rate, as a limited but best available proxy for mental health, was added. As mentioned above, Deaths from HIV was removed from this component and replaced by Deaths from infectious diseases in the Nutrition and Basic Medical Care component. Outdoor air pollution attributable deaths was moved to this component from the 2013 Air, Water and Sanitation component.

Ecosystem Sustainability: The structure of the Ecosystem Sustainability component in 2013 unfairly penalized resource-rich countries. The indicators were modified to better assess the extent to which a country is using its resources sustainably. The Social Progress Index 2014 Ecosystem Sustainability component comprises three new indicators, measuring air, water and land use. Greenhouse gas emissions per $1000 of GDP replaces the narrower 2013 CO2 emissions per capita, which rewarded countries at lower levels of economic development. Water withdrawals as a percent of resources replaces the 2013 Water withdrawals per capita in order to provide a more accurate measure of how sustainably a country uses its resources. Biodiversity and habitat was added to capture a country's protection of terrestrial and marine areas as well as threatened or endangered species.

Personal Rights: The indicator Freedom of movement was added to capture citizens' freedom to travel within their own country as well as leave the country and return. Women's property rights was removed because it was not publicly available from the source.

[3] http://who.int/mediacentre/factsheets/fs310/en/

Personal Freedom and Choice: The proprietary indicator Basic religious freedoms was replaced with the publicly available Freedom of religion indicator (Pew Charitable Trusts). Contraceptive prevalence rate was replaced with the indicator Satisfied demand for contraception, which covers more countries and excludes women who forgo contraception by choice. The newly created measure from the Walk Free Foundation, the Global Slavery Index, fills a data void and is used as our measure of Modern slavery, human trafficking, and child marriage. The indicator Corruption (Transparency International) was also added. Finally, Access to childcare was removed because the data is not publicly available from the source.

Tolerance and Inclusion: This component's name was changed from Equity and Inclusion to Tolerance and Inclusion to better reflect the concepts the indicators measure. The proprietary indicator, Equity of opportunity for ethnic minorities, was replaced with the publicly available Discrimination and violence against minorities (Group Grievances in the Fund for Peace's Failed States Index). A measure of Religious tolerance (Pew Charitable Trusts) was added to the component.

Access to Advanced Education: Tertiary school enrollment was replaced by Years of tertiary schooling, a better measure of attainment of education. Female tertiary school enrollment was replaced by the slightly different measure, Women's mean years in school (formerly in the Access to Basic Knowledge component), which provides a more complete picture of schooling for women. Two new indicators were added: a measure of Inequality in the attainment of education (UN Development Programme) and a measure of the number of world-class universities.

7 / CONCLUSION

The Social Progress Index provides a useful benchmark by which countries can compare themselves to others, and can identify specific areas of current strength or weakness. Additionally, scoring on a 0–100 scale gives countries a realistic benchmark rather than an abstract measure. This scale allows us to track absolute, not just relative, performance of countries over time on each component, dimension, and the overall model.

The Social Progress Index 2014 results, found in the main report, are a starting point for many different avenues of research into the ways a country is successful or not and whether conclusions can be drawn about the overall effect of social progress on economic growth and life satisfaction. Furthermore, while disaggregated scores provide insight into the behavior of the different components that contribute to a country's performance, we believe disaggregation within a country (e.g. regional or state) also provides important insight and actionable information to those seeking to increase social progress, and applying the framework at this level will be a key focus of research over the next year.

CHAPTER 2

Conceptual Foundations of the Social Progress Index

Patrick O'Sullivan, Professor of Business Ethics,
Grenoble School of Management and University of Warsaw

1 / FOUNDATIONS OF THE SOCIAL PROGRESS INDEX: SOME CRITICAL QUESTIONS

When bravely venturing to set out (yet) another index to measure in some way social and economic development and thus (hopefully) human progress inevitably lurking beneath the surface there will be a whole array of more or less disturbing philosophical questions. Of course the Social Progress Index was designed initially with a decidedly pragmatic or at least policy-oriented intent, to offer a new more wide-ranging and more balanced metric of social progress which could serve as a performance indicator for countries and their policy-makers in respect of economic, human and social development. But the construction of the index cannot but raise an array of questions of a philosophical nature to any critically thinking prospective user.

What constitutes social *progress* in the first place?

Does the very idea that societies progress not presuppose a distinctively Western idea of human history as a linear progression (albeit with cyclical fluctuations around the long term trend), a conception which would be challenged in many Eastern philosophies whose conception of human history is rather circular (the great wheel of life, reincarnation and karma)?

Inevitably attempts to identify progress will spill over into questions about what constitutes human happiness or well-being. That is a notoriously difficult question that has exercised the minds of great thinkers over many ages and so we should not be surprised that when constructing an index that somehow purports to measure progress towards wellbeing that there should be manifold views on what to include. How does the Social Progress Index cope with this?

Some other indices to measure overall human happiness have also been suggested and indeed concretely measured in recent years so why construct yet another index and in what way will the Social Progress Index measures differ from those of the other indices?

Entering into the detail of the Social Progress Index (where the devil is allegedly to be found) what is the rationale for excluding Gross Domestic Product per capita (GDP) from the index in contrast with most of the other indices of social progress/happiness which have been suggested?

In adopting positions on what elements to include in any index we are inevitably taking views about what constitutes human well-being and this inescapably involves making value judgments. Such judgments will not only inevitably be contested by some if not many commentators, to human scientists of a positivist disposition allergic to the presence of any form of normative discourse in the sciences they will seem indefensible.

It is clear then that the construction of the Social Progress Index raises an array of essentially philosophical questions and it is the aim of this chapter to address these frankly and in a manner which openly states the philosophical position taken by the Social Progress Index on them. We will now address these in the following order (of increasing philosophical abstraction). We start with a brief discussion of some of the other main alternative indices of socio-economic development which

have been suggested and measured in recent times and we note their contrasts with the Social Progress Index before proceeding to defend the reasoning which underpins specifically our index and our reasons for putting it forward as a preferable alternative for purposes of development policy guidance. We then go on to acknowledge the difficulties surrounding definitions of happiness and well-being before coming to a definitive but hopefully balanced position on our own view of well-being. It will be openly acknowledged that this position rests on the foundation of certain normative value judgments which we make explicit and transparent and it will be shown that, however shocking to more positivistically minded human scientists such explicit use of normative discourse may seem, that in fact all human science is irretrievably value-laden in any case. The chapter will close with some more deeply probing philosophical reflections on the possibly ideological character of the attachment to GDP and on the disturbing implications for the whole way of thinking about "progress" which are implicit in Eastern wisdom.

2 / A PROLIFERATION OF INDICES

Recent years have seen a proliferation of indices which are put forward as alternatives to GDP per capita as measures of economic and social development, as macroeconomic performance indicators most usually for nation states but also for regions, or regional trading blocs. The appearance of such indices is testimony to a widely felt dissatisfaction with the GDP measure. As a prelude to the philosophical defence of the Social Progress Index and in order to show why the Social Progress Index has been conceived in the way it has we will present a brief review of some of these main alternative measures of macro socio-economic performance.

GDP itself is of course the oldest index that has been systematically measured. Dating back to the work of Simon Kuznets for the US National Bureau of Economic Research in the 1930s GDP measures in effect the sum total of the goods, services and activities produced within a defined geographical area in a period of time (usually a year). It is therefore no more and no less than a measure of aggregate production over a defined geographical area. That this measure of aggregate production or at least its *per capita* version (GDP per head of population) should have come to be so widely used and interpreted as a measure of happiness or well-being in some sense is quite astonishing; yet that is precisely what has happened as the most cursory glance at any financial or economic newspaper comparing national performance or manifold reports to governments or NGOs will testify. When we measure growth rates in Economics we are measuring the proportionate annual rate of change of…GDP or GDP per head in economies and it is almost universally assumed that economic growth is a good thing for humanity. Just consider the question which is haunting European economists in particular this very day: they long for the return of economic growth to the many stagnant European economies for with the return of growth all, it is assumed, will be well again.

Yet as any first year student of Economics at any university which instils a modicum of critical thinking will have realised, to use GDP as a measure of happiness or well-being involves a deeply

problematic leap of logic. Most basically why should the sum total of production of material goods be equated to the sum total of happiness in a community? Is that not to make a crassly materialistic value judgment? Moreover what about free goods that may be available, or leisure time? We could increase GDP in a community by simply working every waking hour while taking no time ever to enjoy ourselves but would we in that way really increase our happiness or well-being? The more goods that are freely available in nature so that we do not need to toil to produce them presumably the greater will be human well-being…but the *lower* GDP will be. These last two points lead to the disturbing conclusion that in Paradise GDP would be…**zero!** These considerations might not matter so much if the amounts of leisure taken or the amounts of free goods available were essentially the same across all human communities but of course they are widely different (as we realise from the measurements of the Social Progress Index and other indices). Another fundamental objection to any interpretation of GDP as a measure of happiness and to a degree related to the free goods point is that GDP takes almost no account of environmental damage generated in the production process; and what is worse, if environmental regulation (based for example on the polluter pays principle) leads to increased costs of production for firms, that actually increases GDP.

In the light of these basic objections of principle it really is completely indefensible to continue to use GDP as in any way a measure of well-being and it is sobering to realise that Kuznets himself, the founding father of systematic GDP measurement had already warned us that *"the welfare of a nation can scarcely be inferred from a measure of national income"* [4]. There are other objections of a more technical nature to the GDP calculation even as a measure of production such as its failure to measure the unseen "black" economy or the assumptions made when calculating the contribution of the government sector to aggregate production but these need not concern us here.

The first attempt to go beyond GDP to develop an alternative index of macroeconomic performance was the Human Development Index of Sen and Ul Haq, an index that was developed in 1990 at the behest of the United Nations Development Programme with a view to getting a more accurate picture of social development than that of simple growth of GDP. That index takes into account, as well as the average GDP per capita[5], the average educational level of the population of the region/state measured by mean years of schooling[6] and the average life expectancy at birth of the population (seen as a proxy for health). Since 2010 a second version of the index that includes also inequality as measured by the Atkinson inequality index has been calculated. These indices of course mark a progression from the GDP measure as an index of well-being since clearly health is crucial to happiness while educational attainment would be held by most to be an ingredient of a better more fulfilled life. Inclusion of inequality involves perhaps a more politicised view of what constitutes well-being in a community. But of course the value judgments involved in this whole exercise of constructing indices of progress are already becoming apparent. This methodological issue we will address below.

[4] KUZNETS S (1934) ***"National Income, 1929–1932"***. 73rd US Congress, 2nd session, Senate document no. 124, page 7

[5] Since 2010 GDP per head is replaced by gross national income per head but this is a close first cousin of GDP being based on income generated by production of residents of the state/region as opposed to the value of the output produced within the state/region. The difference between the two is *net factor income from abroad.*

[6] Prior to 2010 the educational component was measured by literacy rates.

There is then an array of so-called happiness indices as measured for example by the Gross National Happiness Index (GNH: actually measured and used for economic policy purposes in Bhutan) or the World Happiness Report. The Bhutanese GNH index arises out of Buddhist thinking with its emphasis on promotion of harmony in all spheres of life. Rather than measuring the subjective happiness felt by the Bhutanese people, GNH is actually a mixture of indicators and includes attempted measures of sustainable development, preservation of cultural values and of the natural environment and good governance (whatever that might be). GNH relies to a significant degree on non-quantifiable elements and where it does quantify it tends to look at required ***inputs*** for happiness rather than at (output of) ***achieved*** happiness. Nonetheless it is worthy of a mention because it has at least been used by one state. It has also been an inspiration for a range of other attempts to construct more precise and sophisticated happiness indices based on psychological studies of happiness and/or well-being.

The fruits of these studies have been distilled in the World Happiness Report (WHR)[7], again an initiative that flows from the United Nations and in particular from a UN General Assembly resolution urging the world's states to measure their people's happiness to serve ultimately as a guide to policy. The WHR measures ***subjective*** well-being as experienced by individuals in the society and has been significantly influenced therefore both by psychological studies of individual happiness and by a methodological individualist perspective: societal well-being is seen as the sum total of individuals' subjective happiness. The WHR then looks to different factors that may explain happiness trends, such as GDP per capita, healthy life expectancy, social support, generosity, freedom to make life choices and finally perceptions of corruption. In its attempt at a wider interpretation of the components of happiness there is a certain affinity with our Social Progress Index but two fundamental differences remain: firstly in the fact that the Social Progress Index excludes GDP per capita and secondly in that the WHR remains wedded to an essentially utilitarian conception of well-being while the Social Progress Index takes a wider ***eudaimonic*** view[8]. Also while the authors of the index recognise the constant equivocation as between well-being and happiness the ambiguity remains throughout and is never really resolved[9].

Taking up on another widely perceived limitation of the classic GDP measure there are a number of indices that focus on the environmental impact and costs of production of material wealth with a view to correctly accounting for these. Here the essential perspective is not happiness per se despite the name of one well-known index, the Happy Planet (HPI), but rather the ***sustainability*** of the whole socio-economic process. Thus the HPI puts together a measure of subjective satisfaction with life (subjectively experienced well-being) closely similar to the subjective happiness elements of the World Happiness Report[10], life expectancy at birth (derived from the same data as the HDI index), these two measures being multiplied together to get a numerator of a fraction of which ***ecological footprint*** is the denominator. Ecological footprint is a measure of the number of hectares of (global) land of average fertility that are needed to support the consumption level of the state or region in question. To that extent the HPI is a measure of happiness that however takes account

[7] HELLIWELL A, LAYARD R, SACHS J (2014) ***World Happiness Report 2013*** Sustainable Development Solutions Network, UN New York
[8] This distinction will be discussed in greater detail in section 5 below.
[9] Mind you the ambiguity could be said to derive from the original UN resolution which spoke of measuring happiness.
[10] Derived as for the WHR from the Gallup World Poll Cantril ladder questions

of the environmental cost or efficiency of reaching it. The HPI, like Social Progress Index, excludes GDP altogether from its calculation but as with most of the other indices reviewed thus far it suffers from being too partial in coverage: surely there is more to well-being than just these three factors. To be entirely fair to the HPI its authors fully acknowledge this partial nature of the index and explicitly advise that it should be used for policy purposes only in conjunction with others[11].

The final index we may mention is the Sustainable Society Index (SSI). This index which has been produced since 2006 by the Sustainability Society Foundation[12] is directly inspired by the classic and influential definition of sustainability given in the Brundtland Report of 1987. Development is said to be sustainable when it meets the needs of the current generation without compromising the possibility for future generations to meet their needs. Brundtland in this definition was concentrating particularly on environmental sustainability but strictly speaking the notion of sustainability is much wider. In general sustainability can be defined as the degree to which a particular process or socio-economic system is capable of renewing itself indefinitely in the future. From this wider conception it can be said that sustainable development involves three distinct pillars: Economic, Environmental and Social sustainability. Economic refers to the ability of economic processes at both micro and macro levels to renew themselves indefinitely[13] while social sustainability in effect refers to the degree of equality and social inclusion in a society because where the gap between the richest and the poorest becomes too wide (especially if the riches are very narrowly concentrated in a few hands) the society will degenerate into criminality, increasing social unrest and eventually into social revolution. The SSI index is not strictly speaking an attempt to measure the happiness of states/regions but rather their sustainability, and it does so by a simple combination of measures of each of the three pillars of sustainability. It achieves this through the collection of data on 21 separate indicators on such matters as air quality, biodiversity, use of renewable energy, health, equality; and economic sustainability or "well-being" as measured by GDP, employment levels and public sector debt levels[14]. There are however some difficulties with the index. In the first place although it explicitly sets out to be a sustainability index it slips imperceptibly into presenting itself as an index of well-being. This involves the questionable assumption that being sustainable is the equivalent of being in a state of well-being. One could however imagine some very depressing systems which are well capable of sustaining themselves into the long run. Let us simply recall how Malthus argued that wars and pestilence would solve the problems of scarce food supply and render human societies sustainable in terms of nutrition. Hence the equation of sustainability with well-being is seriously problematic, probably even more so than the implicit equation of happiness with material wealth and possessions that underpins using GDP as a measure of well-being. While the Social Progress Index resembles the SSI in the collection of a wide range of indicators (21 in all), like all of the other indices (apart from Happy Planet) SSI includes GDP as one of the elements in the final index. This marks a key contrast with the Social Progress Index as we shall see in the next section.

Before we leave the discussion of alternative indices we should also note that in addition to all of these specific practical efforts to develop alternative indices of socio-economic development there

[11] See http://www.happyplanetindex.org/about/ section on ***What the Happy Planet Index does not measure.*** Accessed 26 February 2014.
[12] See the website of the Foundation for more details on the index and its calculation http://www.ssfindex.com/ accessed 27 February 2014.
[13] So a loss-making private firm or an asset price bubble are economically unsustainable
[14] This latter reflects no doubt the Dutch origins of the index given the current situation on public debt levels within the Euro area. It represents an interesting addition to the more usual discussions of economic sustainability.

has also been a growing consensus among economists that something needs to be done about our traditional macroeconomic indicators especially in relation to the guidance that they afford to policy. This dissatisfaction was clearly expressed in the detailed report prepared for the French President Nicolas Sarkozy in 2009 by Stiglitz, Fitoussi and Sen[15]. This report brings together a range of the limitations which have been recognised in measurement of socio-economic development and issues a set of recommendations for the construction of better indices but without actually developing an index of its own. The focus of the report is rather on the detailed minutiae of measurement of a significant number of the elements that have been actually included in some of the indices mentioned above: subjective happiness, sustainability etc. Moreover being written by three eminent economists there is a strongly economic slant in the thrust of the discussions and recommendations whereas one might argue for giving a greater prominence to the psychological and fundamental philosophical questions which as we shall see below need to be confronted when we seek to measure social progress.

3 / KEY ELEMENTS FOR A BETTER INDEX OF SOCIAL PROGRESS

The foregoing discussion allows us to identify some key features which should be borne in mind if we undertake to propose another and better index which seeks to improve on these earlier efforts to move beyond GDP or GDP per capita as an index. This is in no way to denigrate any of the earlier efforts because the task of devising new measurable and practically usable indices to measure well-being or progress is a daunting one. Rather we aim to learn from the limitations of the earlier indices. But the Social Progress Index will also draw as we shall see on some entirely new philosophical and economic reflections.

The first key point relates to the exclusion of GDP and GDP per capita from the Social Progress Index. The fundamental philosophical reason for this exclusion can be summed up in a nutshell by the awkward realisation that in Paradise GDP would be zero. Whatever may be said about the existence or otherwise of Paradise the point demonstrates something very fundamental about GDP: if we consider Paradise as simply a theoretical infinite limiting case of maximum well-being and if in Paradise GDP would be zero then it follows at the very least that we cannot at all assume that every increase in GDP per capita represents an increase in well-being. On the contrary if certain climatic changes or other natural events were to make an array of now scarce goods that need to be produced industrially available freely in Nature, GDP would *fall* (as their industrial production fell) but well-being or happiness would clearly rise. From this simple reflection two fundamental points for any measure of well-being follow: it is potentially seriously inaccurate to include GDP per capita in a measure of human happiness or well-being; and since what people would above all gain if certain goods became freely available is more leisure time (less time spent in production of the now free goods in the community) we should probably be thinking of including leisure time as a key component of the well-being or happiness in any region or state.

[15] STIGLITZ J, FITOUSSI J-P, SEN A (2009) *"Report by the Commission on Measurement of Economic performance and Social Progress"*, available at http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf. Accessed 03 March 2014

A second and equally definitive reason for exclusion of GDP from the index is linked to environmental costs and concerns. As already noted if businesses are required to pay the costs of the pollution they generate that will actually increase GDP. If for example a firm generates a significant level of pollution in an uncontrolled environment the environmental damage is not in the first place counted (which already points to a well-known defect of GDP). But if anti-pollution regulations are introduced which require for example the installation of filters or more responsible disposal of toxic waste these will be reflected now as an *increase* of GDP (production of the new filters, emergence of specialist waste disposal firms adding their "production" to GDP). In this case GDP is being increased but only to bring us back up to a level of well-being that prevailed before the environmental damage was done. To interpret GDP increase as a well-being increase is here again perverse in the extreme.

It is clear therefore that there is no simple relationship between increase of GDP per capita and increase in happiness or well-being; in fact in certain sorts of not so hypothetical situations (increase of leisure time, offsetting of pollution etc) increase of GDP may be associated with a drop in happiness or well-being. Consequently GDP per capita is excluded from the Social Progress Index. A further advantage of this approach is that it will allow us on construction of the Social Progress Index to examine without prejudice the degree to which or in what situations increase of GDP is indeed linked to an increase in happiness or well-being; or put another way it will allow us to estimate the degree to which GDP per capita and well-being are correlated and in what sense.

Another general point or lesson to be learned from the experience with some of the other indices that have been suggested and measured is that we need to avoid being too narrow in our interpretation of happiness or well-being. A number of the indices examined, in particular the HDI and Happy Planet, are subject to the criticism that while they make welcome additions to the measurement of well-being their interpretation of what contributes to happiness is patently too narrow. There is more to human well-being than simply life expectancy, educational attainment, GDP per capita and ecological footprint. Consequently in the Social Progress Index a very wide range of indicators are taken and combined to form the index; and we remain open to suggestions for widening of the index if it is felt that significant dimensions of well-being are being overlooked. There are 12 major headings and 54 indicators in the Social Progress Index as currently calculated (see section 1.2.5 for the details). This not only means that almost every conceivable source of happiness and well-being is being included; it also means that the Social Progress Index is much less vulnerable to the danger of being seriously distortive if any one indicator is either inappropriate or inaccurately measured in practice. The fact of being open to the addition of new categories could be seen to be problematic since it could be argued that statistical continuity and consistency is damaged by such openness and so variability in the range of indicators. But the wide diversity of indicators in the Social Progress Index once again means that the impact of addition of new indicators when deemed appropriate (or when more reliable measures become available) will typically have a fairly limited impact on the index. It is in any case important to retain such an openness to new indicators since it is an inescapable fact that the contributors to human happiness and well-being evolve through time. A fulfilled existence today seems inconceivable without access to internet and the ability to travel; yet only 200 years ago such considerations were entirely irrelevant to human well-being[16]...

[16] And therein lies perhaps food for a profound philosophical reflection: were people happier 200 years ago. Of this more below...

Hence the Social Progress Index is an index which encompasses a much wider array of indicators than any of the alternatives that have been proposed but it excludes GDP as an element in any format for good philosophical and economic reasons. The exact detail of the categories and detailed indicators used in the index will be found in Section 1.2.5.

4 / DEEP INTO PHILOSOPHY

If we probe more deeply into these questions about the manner of construction of the Social Progress Index and about the past use of GDP as an indicator of happiness, well-being or progress in some sense we will realise that beneath the surface lies a veritable Pandora's box of philosophical questions and presumptions. It is the aim of this section to address these deeper philosophical questions.

Most basically there is the question of what precisely we are trying to measure. All who have attempted the construction of indices in this area have been motivated by a desire or aim to measure social or economic **progress**. But progress necessarily implies an idea either literally or metaphorically of movement towards a desired goal or end; it would be difficult nay impossible to speak of progress if we were literally going nowhere. Progress therefore carries with it the idea of getting closer to our desired goal: and since the attainment of the goal will be regarded as somehow **good** for the actors involved (otherwise why pursue the goal) progress towards the goal will be seen as an **improvement**. But here we are clearly in the realm of normative as opposed to positive discourse: we are making value judgments about what is good and bad for us and so about how we ***ought*** to act. Whenever therefore we dare to speak of ***social progress*** in any field or any index it is inevitable that we will be making value judgments about what is good for the community for which the index of social progress is being measured. As an illustrative example consider the tendency to use GDP per capita as a crude indicator of social progress. As a simple measure of aggregate production in a state or region it might seem fairly innocuous but it is quite clear on a moment's critical reflection that to use the GDP index in this way involves value judgments according to which production of more material wealth is good and marks a social improvement; and given the points we have made above in relation to free goods and pollution there is often a further implicit value judgment to the effect that more work is good for human beings[17]. A defender of GDP measurement might retort that of course he or she is only measuring production and as a good rigorous (positivist) scientist is not passing any value judgments: it is the hapless politicians or commentators who do that. Well in that case why are GDP or GDP growth rate tables so often presented by economists in league table or ranking format with the highest GDP or GDP growth rate states at the top of the ranking?

However we are touching here on a methodological sensitivity of capital importance. In much of mainstream human science and especially in Economics since the early 1950s it has been a methodological canon of good practice that value judgments should be entirely banned from rigorous

[17] This latter value judgment about work being good in itself is in fact central to the puritanical Calvinist variant of Protestant Christianity which in turn has been a definitive underpinning of American capitalism; c.f. WEBER M (2002) ***The Protestant Ethic and the Spirit of Capitalism,*** Penguin Harmodsworth

human science and from economics in particular. The origin of this ban is in fact the epistemology of Logical Positivism as enunciated in particular by Alfred Ayer in his 1936 treatise Language Truth and Logic[18]. In that influential but much challenged work Ayer had enunciated the "Verification Principle of Meaning" according to which all meaningful discourse is either tautologous (mere statements of definitions in language) or empirically testable. This carries the implication among other things that all normative discourse, that is to say value judgments about how the world or people ***ought*** to be or behave is literally meaningless nonsense (because clearly neither tautologous; nor empirically testable because normative discourse is not about observable facts but about ideals to which we aspire[19]). This principle was enthusiastically adopted by wide ranges of human scientists at least in the Anglo-American world and it has been particularly influential in Economics. In fact it was made into a centrepiece of Milton Friedman's methodology for ***positive*** Economics as enunciated in his influential 1953 article[20]. Friedman tells us explicitly that value judgments have no place in a rigorous science: they are meaningless wishful thinking at best and they are to be left to politicians or the political process to make. Where differences over value judgments arise science has nothing ultimately to offer and rational discussion is impossible. ***"About differences in fundamental values men can ultimately only fight"***[21]. As a result of this injunction whole generations of economists have sought studiously to avoid anything that resembles a value judgment in the conduct of their scientific research: and so it will be profoundly shocking to many contemporary economists to suggest that in the construction of indices of social progress and improvement value judgments will inevitably be present whether implicitly or explicitly.

However there is upon critical reflection no need for such a hang-up. The great Swedish economist and development analyst Gunnar Myrdal had already pointed out by the early 1960s that Friedman's idea of a purely positive economics was entirely untenable[22]. Myrdal showed us how value judgments are inescapably present at the very foundations of economics and other human sciences and so that the idea of a purely value-free human science is a chimera. In the first place when we select areas for the pursuit of research value judgments inevitably creep in to guide us. That is true both at the level of the individual scientist choosing a PhD topic or the area of his or her next research article: one might perhaps think that something ought to be done about this or that social or human problem and so research it with a view ultimately to improving the world through policy initiatives or therapies. In the case of research commissioned by governments or NGOs the value judgment is more explicit: research is commissioned in areas regarded as of vital social concern and so again with a view ultimately to improving the world. Thus value judgments are being made right at the start of our scientific enquiry and these are inevitable. Myrdal also went on to show that since any science involves a degree of abstraction from the myriad detail of everyday reality with a view to focusing on essential features influencing significantly that reality in the case of the human sciences this may mean abstracting from aspects of the human condition treating them as irrelevant for

[18] AYER A J (1946) ***Language Truth and Logic*** » 2nd ed Penguin Harmondsworth

19 Note that it is not the fact of having the ideals that is in question but the validity or truth of the value judgment that underpins the ideals; and this is not something factually observable. The ideal is in fact valid or invalid entirely independently of the facts. Thus for example to say that "ideally there ought to be no nuclear weapons in the world" is a normative proposition whose validity qua value judgment is entirely unaffected by whether or not there are in fact any such weapons present in the world.

20 FRIEDMAN M (1953) "The Methodology of Positive Economics" in ***Essays in Positive Economics,*** University of Chicago Press. Chapter 1

21 FRIEDMAN M (1953) op.cit.

22 MYRDAL G (1959) ***Value in Social Theory*** Routledge and Kegan Paul, London. See particularly the summary introduction to the volume by Paul Streeten.

purposes of the theorising in question. But any decision to treat an aspect of the human condition as irrelevant can potentially and often does involve implicit value judgments, especially when it comes to using the theories as a guide to practical policy or therapy. Myrdal gave the example of the classic treatment of labour and capital on an equal footing as merely alternative factors of production in the theory of the production function in Economics. This is an abstraction involving a value judgment to the effect that we can ignore the "humanity" so to speak of labour at least for purposes of production theory. The implications of such a judgment become morally charged if the theory is then used as a basis to advise a policy of cost reduction through "downsizing": laying off workers will be seen as essentially no different from abandoning machinery and plant when in fact morally there is obviously a huge difference in the consequences[23]. In the context of the discussion here on GDP and other indices the manner in which GDP has for example ignored and so in effect abstracted from leisure time embodies implicit value judgments about work and leisure and their significance for the human condition and happiness.

Myrdal has thus shown us that value judgments are present in the human sciences in two crucial and inescapable ways. But does this somehow compromise the scientific rigour of the human sciences? Only if one adheres to the positivist epistemology on which Friedman had based his influential article. In fact the Verification Principle of meaning as put forward by the positivists is self-defeating and untenable. For if we ask of the Verification Principle if that principle it is itself meaningful it will have to be either a tautology (a statement of definition of words) which it is not and was never intended as such by positivists; or else it will have to be empirically verifiable or testable. But if we try to test empirically the proposition ***"all meaningful propositions are either tautologies or empirically verifiable"*** we will first of all need to be able to recognise meaningful propositions when we encounter them. If one proceeds to say that meaningful propositions can be recognised…as those which are tautologous or empirically verifiable…we are involved in a vicious circularity and the argument fails. If on the other hand we use a non-circular definition of meaningful proposition such as for example a proposition that can be understood by another rational being when uttered, i.e. a proposition that conveys meaning to other people, then it is easy to produce many propositions which are meaningful (comprehensible) but which are neither tautologous nor empirically testable. For example "God cannot permit evil in the world"; or "elves have pointy ears"; or "you ought not to kill people other than in self-defence". Any one of these propositions being clearly meaningful in that you can understand them they are direct refutations of the generalisation according to which ***"all meaningful propositions are either tautologies or empirically verifiable"***. Hence when we apply the verification principle of meaning to itself it turns out to be either viciously circular or simply falsified[24].

For the human sciences this is an epistemological conclusion of the utmost importance. It means that not only are value judgments inescapable in the manner which Myrdal had shown us, the presence of value judgments in no way reduces the rigour of the human sciences. We may therefore freely use value judgments without having misplaced complexes about the scientific character of our work, and all that we may expect is that instead of remaining implicit (or even purposively hidden as in certain ideologies) these value judgments should be made open and fully transparent.

[23] At the risk of stressing the obvious machines have not families to feed and do not suffer when left idle: human beings thrown out of a job do however suffer.

24 On all of this see O'SULLIVAN P (1987) « *Economic Methodology and Freedom to Choose* » Allen and Unwin, London; reprinted as a Routledge Revival 2011. See chapter 2.

5 / NORMATIVE JUDGMENTS PRESUPPOSED IN THE SOCIAL PROGRESS INDEX

Now that we have cleared the way for value judgments to enter into rigorous human science we turn to the question of the specific value judgments that underpin the Social Progress Index. The notion of social progress implies necessarily some sort of ultimate social goal which is deemed to be good for the society/community in question; it involves a value judgment about the **common good** or social welfare as economists have tended to call it. But what is this common good and how concretely are we to identify and judge what contributes to it? This is of course a topic which has exercised the minds of political and moral philosophers at least since ancient Greece and there are some quite distinctive answers which have been given to the question by the philosophers; one can mention for example Virtue Ethics, Buddhism, Natural Law, Natural Rights, Kantian Categorical Imperative, and Utilitarianism. It will also be evident from a cursory examination of the various indices reviewed earlier in this chapter that there are quite different value judgments underpinning them. GDP as we saw is underpinned (at least when used as an indicator of social progress) by a materialist value judgment and work ethic; the HDI index is underpinned by a mix of the same materialism with some vague notion that education and good health are key contributors also to well-being. The World Happiness Report which presents some very interesting and explicit reflections about its value basis seeks to bring together notions of subjective happiness as a criterion of goodness (an approach which derives directly from Utilitarianism) and some broader conceptions of what objectively contributes to human well-being. The Happy Planet Index and the Sustainable Society Index are based on value judgments related to sustainability in which the notion of stewardship of the natural environment deriving from Natural Law and from many religions is clearly present. And of course the Bhutan Gross National Happiness index is derived from explicitly Buddhist values. From a Myrdalian point of view most of these later indices have the advantage that they make their values basis clear and transparent.

So where does the Social Progress Index lie in respect of all of this? First of all on the question of the nature of the ultimate goal in the light of which we define social progress the Social Progress Index lies in what might be called the ***eudaimonic*** as opposed to the utilitarian tradition in conceptualization of the ultimate good. In the utilitarian tradition deriving from the work of Jeremy Bentham human happiness is taken as the ultimate good, a proposition which has a certain *prima facie* appeal. Happiness is at root a subjective state and while that is not per se a problem it does lead to a huge array of underlying problems both theoretical and in respect of the practical question of measurement of this subjective happiness. At the theoretical level there is immediately the question of intellectual pleasures or acquired tastes which John Stuart Mill had already raised in the 19th century against Bentham's original hedonic calculus of purely physical pleasure and pain. Then there is the equally awkward set of questions surrounding the fool's paradise (a fool may be happy in a blissful ignorance) not to mention the implication that if we want to maximise physical pleasure then we should all serially do hard hallucinatory drugs and die quickly like the butterflies. Hence most theorists outside of the utilitarian tradition have argued that subjective happiness cannot be said to be an ultimate good; but they would concede that subjective happiness is a key contributory factor to another rather more vague concept: **spiritual well-being** or in Greek (ευδαιμονία) **eudaimonia**.

At a practical level while Bentham had been confident that subjective happiness (cardinal utility in Economics) could one day be directly measured in practice there are huge difficulties with this. Getting "objective" measures of subjective happiness from observations of brain states is still a pipe dream although contemporary neurophysiology has made big advances in this respect and the prospect is much more realistic than it was in Bentham's time. However there remains the difficulty that what we could measure in this way is transitory emotional happiness as opposed to a broader sense of more permanent happiness with one's overall life and prospects[25]; and in any case is the observed brain state identical with the spiritual state of mind or the result of it[26]? Economists who in the 19th century abandoned the idea of ever being able to measure utility (subjective happiness) then pursued the possibility of ordinal utility: that is to say that they sought to see how far they could go with a theory which only assumed that preference *orderings* could be known in principle and in practice through revealed preference. In the context of discussions of social welfare and social progress this yielded the famous Pareto value judgment which has been the cornerstone of welfare economics: any social change which leaves some people better off while leaving none worse off marks a social improvement. But ordinal utility theory when used in the context of social welfare or public policy choices encounters the Arrow Inconsistency paradox[27]. That is to say that if we seek to develop a rank ordering of policy choices by asking people (voters) simply to rank the policies in a series of bilateral choices (Policy A v. Policy B; then Policy B v. Policy C; then Policy A v. Policy C) they may in many cases produce inconsistent rankings even without any emotional interference or irrationality. In fact the key to understanding what is going on in the Arrow paradox is to measure cardinally; that is to say to observe not just what people's preference orderings are but also by how much they prefer one option to another. Hence provided we are using full cardinal measures of level of subjective happiness (utility) the Arrow paradox in measurement of happiness in relation to communities dissolves. That is not much consolation for utilitarian approaches to measurement of social welfare since the cardinal measurement of subjective happiness or utility at least in the objective sense intended by utilitarians remains impossible.

There remains the possibility of simply asking people about their perceptions of their own happiness. This usually takes the form of questions about immediate emotional states (in the previous day to the survey in fact) which may be heavily influenced by transitory factors; and also subjective overall life evaluation (are you happy overall with your life?), this latter being much less subject to transitory events In a sense these questions get to the heart of the matter of happiness at an individual level since who better than the self-conscious thinking subject to tell us about their subjective experience of happiness. However there is one central weakness in this approach: how do we know that different people mean the same thing when they speak subjectively of happiness? For example a manic depressive will tend to report much more negatively than a happy go lucky sanguinic person

[25] This important distinction between different senses of subjective happiness is already well recognised in the World Happiness Report (op. cit.) See HELLIWELL A, LAYARD R, SACHS J (2014) p.3

[26] An old philosophical-psychological conundrum: do I get an adrenalin rush and then feel courageous in the face of danger: or do I first experience a spiritual/mental emotion of fear which then generates the psychosomatic response of adrenalin flow? There are opposing views on this but it could hardly be described as a settled dispute.

[27] The paradox was first outlined by the economist Kenneth Arrow in 1950. See ARROW K (1950) "A Difficulty in the Concept of Social Welfare" in *Journal of Political Economy* 58:4 pgs 328-346. This paradox subsequently came to be known as the Arrow Impossibility Theorem since in the absence of consistency in policy choices as evidenced in the paradox Arrow had concluded that an ordinal utility function for overall social welfare (a social indifference curve map) could not be constructed because such functions/maps require the axiom of consistency in choices to hold. Otherwise the function cannot be constructed.

on day to day emotional experiences even when both have had exactly the same experiences. Equally if we ask the perhaps more pertinent question about overall happiness with life the manic depressive is surely going to report lesser happiness (as also may many atheists incidentally since life for them can seem pointless and absurd); and there remains the awkward question of whether or not different people mean the same thing by "happiness"[28].

Hence in the construction of the Social Progress Index we have sought to avoid all of these potential pitfalls within the utilitarian tradition regarding the meaning of happiness and its measurement (a) by adopting a consistently ***eudaimonic*** approach to the common good and (b) by an approach to measurement that is based as far as possible on objective ***output*** measures rather than on subjective impressions or input type variables].

Adopting a eudaimonic approach involves making some fairly explicit value judgments about what constitutes spiritual well-being. In the light of the Myrdalian considerations regarding the inevitably value-laden character of any human science presented earlier this should not now seem in any way shocking but it is incumbent upon us to make fully explicit and transparent whet these value judgments are: what is the normative basis of our work. In looking through the 12 major categories of the Social Progress Index as currently calculated we shall find a confluence of an array of different normative moral bases but perhaps predominantly Natural Rights theory. The twelve major current categories of the Social Progress Index (see Figure 2) are outlined in detail elsewhere in the report but we are here interested in their moral basis.

Under the heading of **Basic Human Needs** we find the categories Nutrition and Basic Health Care; Water and Sanitation; Shelter; Personal Safety. The inspiration for these elements is clearly the moral and political philosophy of Natural Rights theory. This theory was first enunciated by John Locke and Jean-Jacques Rousseau in the eighteenth century and it is the direct inspiration of a variety of declarations of rights embodied in constitutions of many states worldwide (including of course the US Bill of Rights which was taken directly from Locke and the European Union's Charter of Fundamental Human Rights[29]); and perhaps most important for us in the construction of a worldwide index of social progress it is embodied in the UN Declaration of Human Rights. Natural Rights theory holds that to the spiritual well-being and fulfilment of our potential as individual human beings certain rights should be respected as absolute for each and every human being except to the extent that the exercise of these rights may infringe on the rights of others to exercise their rights. The most basic of these rights to be guaranteed are the rights to basic survival (there will not be very much fulfilment of anything if one is dead or starving); this implies to live in security, shelter, with sufficient water food and basic medical care to be able to survive to maturity. It is the performance of states or regions in guaranteeing these basic rights as ingredients of spiritual well-being and fulfilment that is being measured by the categories under the first category of the index.

[28] One need only consider the hyperbolic claims made in so much advertising to realise how different conceptions of happiness may be. Sure marketers are exaggerating hugely when they make claims like "Happiness is a cigar called Hamlet" (a pervasive advert of the 1970s); but underlying this is a very simple fact: for such advertising to even begin to be plausible there must be significant differences in what people mean by happiness.

[29] For the European Charter see http://www.europarl.europa.eu/charter/pdf/text_en.pdf Accessed 02 March 2014. The UN Declaration for its part can be found at http://www.un.org/en/documents/udhr/ Accessed 02 march 2014

Under the second heading **Foundations of Wellbeing** we find the categories Access to Basic Knowledge; Access to Information and Communications; Health and Wellness; Ecosystem Sustainability. The moral inspiration of the first two of these categories is again fairly clearly Natural Rights theory. The exercise of freedom of thought and conscience, a fundamental right that appears in all such declarations from Locke up to the present, underpins these first two categories and indeed in the European Charter of Fundamental Rights a right to education is explicitly and separately included. Education is deemed to be essential to the fulfilment of our potential and to the realisation of the highest attainable well-being. The same can be said of the access to information and communication especially today. With the categories of health and wellness (which in turn are measured through indicators of life expectancy; deaths from non-communicable diseases between the ages of 30 and 70, as a measure of healthcare quality; obesity, which is a morbidity measure; deaths from air pollution, which measures environmental health; and, suicide rate, as a proxy for the morbidity burden of mental health in the absence of better indicators) the moral basis is shifting towards a more happiness-based or utilitarian value judgment about well-being. Since happiness (whatever that may be for different people) is certainly an element that contributes to well-being there is no inconsistency in this shift of moral basis; and in any case one could argue that a variety of distinct normative bases or value judgments is if anything a strong point of any index. Finally under this heading we find ecosystem sustainability. Here again the moral basis shifts and we are in the presence of Natural Law. This is a moral philosophy dating back at least as far as Aristotle which is eudaimonic in orientation and which holds that human well-being, eudaimonia, is reached through a life lived in harmony with the greater natural order of the universe. What is natural is good in short. Hence it will follow that human development should be carried out in a manner which respects the sustainability of the ecosystem of which we are a part and in which we live out our lives[30].

Turning to the third and last heading of Social Progress Index, **Opportunity**, we find the following categories: Personal Rights; Personal Freedom and Choice; Tolerance and Inclusion; Access to Advanced Education. These might seem the most controversial or dubious in terms of moral foundation but in fact they are quite consistent with the moral basis found under the two previous headings. Personal Rights which are measured by indicators of political rights, freedom of speech, freedom of assembly and association, freedom of movement, and private property rights are all elements which are included in all of the key contemporary declarations of human rights; and while there may be room for disagreement about how best to measure respect of these rights their moral basis is clearcut; and if states are serious about their adherence to the UN Declaration of Human Rights, their inclusion in an index of social progress should be welcome and beyond controversy. The second category under the opportunity heading is personal freedom and choice and this is a direct implication again of Natural Rights theory since freedom of thought and conscience and freedom of life choices are guaranteed explicitly in the key contemporary declarations of rights as well as being more or less explicit in the classic philosophies of natural rights theory. They are also of course a direct implication of the norms of liberal political philosophy but it would be a mistake to see the third category as just liberal apologetics since it is clearly an integral part of natural

[30] This is an idea which was spelled out in some detail in the Brundtland Report of 1987 which gave us the now widely current definition of sustainable development as "development which meets the needs of the present (generation) without compromising the ability of future generations to meet their needs", a definition in which the moral notion of stewardship of the environment is clearly implicit. See BRUNDTLAND G (ed.) 1987 ***"Our Common Future"*** World Commission on Environment and Development and Oxford University Press.

rights philosophy and of the declarations based on it. Thirdly we have the category of tolerance and inclusion. Undoubtedly the most controversial heading of the Social Progress Index since it is measured by the degree of equality of opportunity for women, degree of respect shown to women, the existence of a community safety net, tolerance of immigrants and tolerance of lesbians, gays, and transsexuals; yet this too follows from the respect of fundamental human rights as defined in contemporary declarations[31]. Equally we could cite as a moral basis for this category the moral imperative of equality of opportunity for all human beings, a norm which is present in both socialist and in liberal political thought. Access to higher education is again clearly linked to natural rights theory; to the extent that education allows attainment of the highest possible levels of human fulfilment (echoes of J S Mill's higher pleasures!) access to such education can be seen as a right to be guaranteed for all. Also detectable here however is distinct moral value of equity or fairness which would require us to guarantee equality of opportunity to all citizens. This moral value of equity derives at once from Natural Law in which there are clearly present ideas of natural justice or balance; from socialist thinking of all stripes where it is perhaps the central value judgment; and from the 20th century moral philosophy of Justice of John Rawls. Equality of opportunity is indeed also a key element in the liberalism of J S Mill and so a wide variety of moral philosophies concur on the moral imperative of guaranteeing equality of opportunity in general and in particular through a right of access to all levels of education[32].

6 / CONCLUDING REFLECTIONS: STRENGTH IN DIVERSITY

It will be evident that the categories on which the Social Progress Index is constructed involve value judgments coming from an array of different moral philosophies but predominantly from a Natural Rights philosophy. Moreover the conception of the ultimate goal in the light of which social progress is to be gauged is a broadly defined ***eudaimonia*** (spiritual well-being) rather than a more narrowly defined subjective happiness or "utility" such as underpins more utilitarian approaches to ethical and economic questions. We have established that any indicator of social progress or social development inevitably involves value judgments and even the old GDP or GDP per capita indicator make implicit value judgments involving a narrowly materialistic conception of subjective well-being and the work ethic of Calvinism. Hence if we are to measure social progress the question becomes not ***if*** we are to pass normative value judgments but rather upon ***which*** normative value judgments we are to base ourselves. In that context we would argue that the wideness of our approach is a decided strength of the Social Progress Index. It is a truism to note that there are significant differences in moral values around the world and even within otherwise unified states; hence any index which bases itself on just one moral philosophy or set of value judgments will always[33] be open to the objection by those who do not share those values that it is inappropriate and does not actually measure social progress. We have sought to avoid this danger and to construct an index of social progress with a universal appeal by

[31] It is worth quoting verbatim the relevant article of the European Charter of Fundamental Rights (op.cit.) Article 21 on this: *"Any discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited".*

[32] In fact the only political philosophies which do not incorporate equality of opportunity at least as a declared goal are the most strictly conservative or monarchist/sultanate which seek to reserve power to a privileged élite, usually designated by bloodline.

[33] In other words catholic in the non-religious sense of that term.

1. Drawing as we have just seen on a range of different moral philosophies in the various categories of the index.

2. According a central normative role to the universal declarations of human rights which are supposed to distil a universal set of values for all mankind and which all signatory states are supposed to apply. Unless states are being entirely hypocritical[34] we have here a useful source of universal norms on which to build the index.

3. Using a very wide range of different indicators. Under each of the 3 headings there are as we saw 4 categories for measuring performance and under each category an array of rather than just one individual indicator is used so that in the end **54** different indicators (coming from a variety of different sources) are combined to arrive at the eventual overall indictor of social progress. This diversity we see as a positive strength of the index rather than as a sign of confusion or indecision. On the one hand it means that almost every normative view of well-being is being catered for both in principle and in the detail of measurement. On the other hand it means that the overall index is much less vulnerable to inaccuracies or distortion than indices which are based on a narrow range of indicators such as GDP (one single indicator) or HDI (three or at best four indicators in effect). More fundamentally it is also probably a truism to say that human well-being is a complex phenomenon to which many streams and experiences contribute: and so any index of progress in well-being we should expect in principle to be complex.

We do not claim in this chapter to have covered every possible philosophical and/or economic aspect or reservation which might arise in respect to the Social Progress Index but we hope to have covered at least some of the most significant questions which might arise for a critical mind versed in philosophy and political economy. We are aware that if we were to press the critique to a deeper level we might for example ask why we presume that there is progress in human history. If we were to adopt a more circular conception as in the Wheel of Life of Eastern wisdom (especially Buddhism) how would we measure progress in a world where history is repeating itself. Or bowing to the insights of the Frankfurt School of Critical Social Theory we could recognise that the value judgments which underpin the various indicators are the expression of specific interests or interest groups in human society and may thus have a deeper ideological function acting as apologetics for the interests of such groups or social classes. If the latter is a concern to be taken seriously then at least the Social Progress Index by drawing on so many different indicators and value judgments can say that it is not the tool of any one narrow ideology and related interest group.

[34] That admittedly is a very big reservation. But ideally all states are committed to the UN declaration at least I principle while EU states are unquestionably committed to the Charter of Fundamental Rights.

Appendix 1 / Data sources

	COMPONENT	INDICATOR NAME	PRIMARY SOURCE
Basic Human Needs	Nutrition and Basic Medical Care	Undernourishment	Food and Agriculture Organization of the U.N.
		Depth of food deficit	Food and Agriculture Organization of the U.N.
		Maternal mortality rate	World Health Organization
		Stillbirth rate	World Health Organization
		Child mortality rate	UN Inter-agency Group for Child Mortality Estimation
		Deaths from infectious diseases	World Health Organization
	Water and Sanitation	Access to piped water	World Health Organization/UNICEF Joint Monitoring Programme for Water Supply and Sanitation
		Rura vs urban access to improved water source	World Health Organization/UNICEF Joint Monitoring Programme for Water Supply and Sanitation
		Access to improved sanitation facilities	World Health Organization/UNICEF Joint Monitoring Programme for Water Supply and Sanitation
	Shelter	Availability of affordable of housing	Gallup World Poll
		Access to electricity	UN Sustainable Energy for All Project
		Quality of electricity supply	World Economic Forum Global Competitiveness Report
		Indoor air pollution attributable deaths	Institute for Health Metrics and Evaluation
	Personal Safety	Homicide rate	Institute for Economics and Peace
		Level of violent crime	Institute for Economics and Peace
		Perceived criminality	Institute for Economics and Peace
		Political terror	Institute for Economics and Peace
		Traffic deaths	World Health Organization
Foundations of Wellbeing	Access to Basic Knowledge	Adult literacy rate	UN Educational, Scientific, and Cultural Organization
		Primary school enrollment	UN Educational, Scientific, and Cultural Organization
		Lower secondary school enrollment	UN Educational, Scientific, and Cultural Organization
		Upper secondary school enrollment	UN Educational, Scientific, and Cultural Organization
		Gender parity in secondary enrollment	UN Educational, Scientific, and Cultural Organization
	Access to Information and Communications	Mobile telephone subscriptions	International Telecommunications Union
		Internet users	International Telecommunications Union
		Press Freedom Index	Reporters Without Borders
	Health and Wellness	Life expectancy	World Development Indicators
		Non-communicable disease deaths between the ages of 30 and 70	World Health Organization
		Obesity rate	World Health Organization
		Outdoor air pollution attributable deaths	World Health Organization
		Suicide rate	Institute for Health Metrics and Evaluation
	Ecosystem Sustainability	Greenhouse gas emissions	World Resources Institute
		Water withdrawals as a percent of resources	World Resources Institute
		Biodiversity and habitat	Environmental Performance Index using data from the World Database on Protected Areas maintained by the United Nations Environment Programme World Conservation Monitoring Centre
Opportunity	Personal Rights	Political rights	Freedom House
		Freedom of speech	Cingranelli-Richards (CIRI) Human Rights Dataset
		Freedom of assembly/association	Cingranelli-Richards (CIRI) Human Rights Dataset
		Freedom of movement	Cingranelli-Richards (CIRI) Human Rights Dataset
		Private property rights	Heritage Foundation
	Personal Freedom and Choice	Freedom over life choices	Gallup World Poll
		Freedom of religion	Pew Research Center
		Modern slavery, human trafficking and child marriage	Walk Free Foundation's Global Slavery Index
		Satisfied demand for contraception	The Lancet
		Corruption	Transparency International
	Tolerance and Inclusion	Women treated with respect	Gallup World Poll
		Tolerance for immigrants	Gallup World Poll
		Tolerance for homosexuals	Gallup World Poll
		Discrimination and violence against minorities	Fund for Peace's Failed State Index
		Religious tolerance	Pew Research Center
		Community safety net	Gallup World Poll
	Access to Advanced Education	Years of tertiary schooling	Barro-Lee Educational Attainment Dataset
		Women's average years in school	Institute for Health Metrics and Evaluation
		Inequality in the attainment of education	United Nations Development Programme
		Number of globally ranked universities	Times Higher Education, QS World University Rankings, and Academic Ranking of World Universities

Appendix 2 / Factor analysis weights

	COMPONENT	INDICATOR NAME	WEIGHT	SCALED WEIGHT (0-1)
Basic Human Needs	Nutrition and Basic Medical Care	Undernourishment	0.18	0.16
		Depth of food deficit	0.18	0.16
		Maternal mortality rate	0.19	0.17
		Stillbirth rate	0.18	0.16
		Child mortality rate	0.19	0.17
		Deaths from infectious diseases	0.19	0.17
	Water and Sanitation	Access to piped water	0.37	0.34
		Rura vs urban access to improved water source	0.34	0.32
		Access to improved sanitation facilities	0.37	0.34
	Shelter	Availability of affordable of housing	0.15	0.12
		Access to electricity	0.37	0.30
		Quality of electricity supply	0.37	0.30
		Indoor air pollution attributable deaths	0.35	0.28
	Personal Safety	Homicide rate	0.25	0.20
		Level of violent crime	0.26	0.21
		Perceived criminality	0.26	0.21
		Political terror	0.24	0.19
		Traffic deaths	0.23	0.19
Foundations of Wellbeing	Access to Basic Knowledge	Adult literacy rate	0.24	0.21
		Primary school enrollment	0.20	0.18
		Lower secondary school enrollment	0.24	0.21
		Upper secondary school enrollment	0.23	0.20
		Gender parity in secondary enrollment	0.22	0.19
	Access to Information and Communications	Mobile telephone subscriptions	0.39	0.32
		Internet users	0.44	0.36
		Press Freedom Index	0.38	0.32
	Health and Wellness	Life expectancy	0.53	0.25
		Non-communicable disease deaths between the ages of 30 and 70	0.53	0.25
		Obesity rate	0.47	0.17
		Outdoor air pollution attributable deaths	0.56	0.20
		Suicide rate	0.35	0.13
	Ecosystem Sustainability	Greenhouse gas emissions	0.39	0.26
		Water withdrawals as a percent of resources	0.41	0.28
		Biodiversity and habitat	0.69	0.46
Opportunity	Personal Rights	Political rights	0.28	0.23
		Freedom of speech	0.22	0.18
		Freedom of assembly/association	0.25	0.20
		Freedom of movement	0.25	0.20
		Private property rights	0.24	0.19
	Personal Freedom and Choice	Freedom over life choices	0.29	0.20
		Freedom of religion	0.20	0.14
		Modern slavery, human trafficking and child marriage	0.30	0.21
		Satisfied demand for contraception	0.30	0.21
		Corruption	0.33	0.23
	Tolerance and Inclusion	Women treated with respect	0.09	0.06
		Tolerance for immigrants	0.26	0.18
		Tolerance for homosexuals	0.30	0.22
		Discrimination and violence against minorities	0.30	0.21
		Religious tolerance	0.20	0.14
		Community safety net	0.25	0.18
	Access to Advanced Education	Years of tertiary schooling	0.30	0.26
		Women's average years in school	0.32	0.27
		Inequality in the attainment of education	0.30	0.26
		Number of globally ranked universities	0.25	0.21

Appendix 3 / Best and worst-case indicator values

INDICATORS	BEST CASE	WORST CASE
Undernourishment	5	75
Depth of food deficit	0	714
Maternal mortality rate	0	1100
Stillbirth rate	0	47
Child mortality rate	0	219
Deaths from infectious diseases	0	1552
Access to piped water	100	0
Rura vs urban access to improved water source	0	64
Access to improved sanitation facilities	100	8
Availability of affordable of housing	100	12
Access to electricity	100	0
Quality of electricity supply	7	1
Indoor air pollution attributable deaths	3	1
Homicide rate	1	5
Level of violent crime	1	5
Perceived criminality	1	5
Political terror	1	5
Traffic deaths	0	68
Adult literacy rate	100	24
Primary school enrollment	100	30
Lower secondary school enrollment	100	9
Upper secondary school enrollment	100	0
Gender parity in secondary enrollment	1	0
Mobile telephone subscriptions	100	0
Internet users	100	0
Press Freedom Index	7	1
Life expectancy	85	41
Non-communicable disease deaths between the ages of 30 and 70	0	60
Obesity rate	0	71
Outdoor air pollution attributable deaths	0	103
Suicide rate	0	33
Greenhouse gas emissions	4	0
Water withdrawals as a percent of resources	0	5
Biodiversity and habitat	100	0
Political rights	1	7
Freedom of speech	2	0
Freedom of assembly/association	2	0
Freedom of movement	4	0
Private property rights	100	0
Freedom over life choices	100	24
Freedom of religion	4	1
Modern slavery, human trafficking and child marriage	1	100
Satisfied demand for contraception	100	14
Corruption	100	8
Women treated with respect	100	17
Tolerance for immigrants	100	9
Tolerance for homosexuals	100	0
Discrimination and violence against minorities	1	10
Religious tolerance	4	1
Community safety net	100	28
Years of tertiary schooling	2	0
Women's average years in school	16	0
Inequality in the attainment of education	0	0
Number of globally ranked universities	5	0

Appendix 4 / Bibliography

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