

A Quarterly Review of Social Reports and Research on Social Indicators, Social Trends, and the Quality-of-Life.  
*News Included of Research Committee 55 on Social Indicators and Social Reporting of the International Sociological Association.*

## THE CONTRIBUTION OF FALLING MORTALITY RATES AND RISING LIFE EXPECTANCY TO GROWTH IN THE CANADIAN STANDARD OF LIVING<sup>1</sup>

Andrew Sharpe and Matthew Calver<sup>2</sup>

A major goal of public policy is to maximize the well-being of the population. Gross domestic product (GDP) has become the standard indicator of the living standards of a population, but it is generally understood that there are many aspects of well-being which it fails to adequately capture. Broader measures of living standards may allow for a better understanding of how quality of life is improving and the relative contributions of different factors to this improvement. Understanding where improvements in living standards originate is important for sound development of policy.

This article examines a specific source of improvement in living standards, health, as proxied by life expectancy at birth. Life expectancy at birth measures the number of years that a newborn individual would be expected to live based upon the prevailing age-specific mortality rates at the time of birth. While life expectancy is certainly an imperfect measure of health because it only captures quantity and not quality of life, it is nevertheless understood to be informative about the general health of a population. The objective is to better understand the role of rising life expectancy in the growth of Canadian living standards in recent years by estimating the contributions of reduced mortality from specific causes of death and comparing these to the contribution of rising incomes.

Achieving this goal is complicated by the fact that it is unclear how aggregate living standards should be measured. In particular, how should the various components of well-being be weighted? One could, for example, take a standard measure of living standards like the human development index (HDI) and calculate the growth in the HDI attributable to increased life expectancy and the equivalent amount of income required to achieve this growth. However, like many other measures, the HDI relies on a simple-to-understand but arbitrary approach to weight its components. The results would be highly dependent upon this assumed weighting scheme, but there is no guarantee that this reflects the true relative importance of these outcomes to well-being.

We approach this problem by using a new “inclusive growth” framework for measuring living standards developed by the Organization for Economic Co-Operation and Development (OECD) (Boarini et al., 2014b; OECD, 2014). This methodology, which is based on economic theory, allows for less arbitrary aggregation of relevant outcomes and provides more reasonable estimates of the sources of increased living standards. We utilize preliminary results of ongoing research by the OECD (Boarini et al., 2014a) to obtain estimates of the contribution of life expectancy to the inclusive growth measure of living

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#### Editor's Note:

*This issue leads off with a review essay by Andrew Sharpe and Matthew Calver of the Centre for the Study of Living Standards in Ottawa, Canada that examines the contribution of health, as proxied by life expectancy at birth, to improvement in living standards in Canada. A second review essay then reviews a recent book on the new world of molecular biology and its relevance to quality-of-life research. This is followed by a Comment from Wolfgang Glatzer and then reports and announcements on conferences and a new prize – from ISQOLS President Rhonda Phillips, Giovanna Boccuzzo and Filomena Maggino, and Martijn Burger.*

<sup>1</sup> This essay presents findings from a recent study by the Centre for the Study of Living Standards entitled “Measuring the Appropriate Outcomes for Better Decision-Making: A Framework to Guide the Analysis of Health Policy.” This study is posted at <http://www.csls.ca/reports/csls2015-IG.pdf>.

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# SINET

Social Indicators Network News

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standards in Canada between 2000 and 2011. We then use a standard decomposition method to estimate the contributions of specific causes of death to this growth in living standards. People already have a sense of what the important sources of increased life expectancy are, but this exercise allows us to say something new about how these sources affect living standards more broadly. We are able to use the OECD's research to express these reductions in mortality in terms of an approximate equivalent increase in per capita income.

## The Inclusive Growth Index of Living Standards

The inclusive growth approach to measuring living standards developed by the OECD has three major features:

- **Multidimensionality:** Inclusive growth recognizes that many factors determine the well-being of a population. It offers a way to consolidate multidimensional outcomes into a single metric.
- **Inequality:** Living standards should be informative about the overall well-being of the population and not just that of the average. The distribution of outcomes matters and should be explicitly accounted for when measuring social welfare.
- **Policy Orientation:** More comprehensive measurement facilitates better policymaking. The inclusive growth framework has been developed to be readily applicable for assessing policy.

In simple terms, the OECD's inclusive growth measure of living standards is income adjusted to reflect life expectancy, the unemployment rate, and inequality. Its calculation involves putting a dollar value on each of the non-income outcomes. This valuation is performed using a standard approach from economics based upon willingness to pay. A year of life is valued based upon the amount of income an individual would be willing to sacrifice to obtain it.

The key to making valid comparisons of multidimensional outcomes (ie, income, life expectancy, and the unemployment rate) is the selection of a baseline level for all dimensions except for income. For a given set of multidimensional outcomes, one can reduce comparison to a single dimension (dollar of income) by identifying equally valuable outcomes to the originals which consist of the baseline level of life expectancy, the baseline unemployment rate, and some level of income. The levels of income which characterize these equivalent outcomes are referred to as equivalent incomes. The OECD chooses the best outcome as baseline, which means that the adjustment to the original level of income required to obtain the equivalent income represents the willingness to pay of an individual to achieve this idealized outcome.

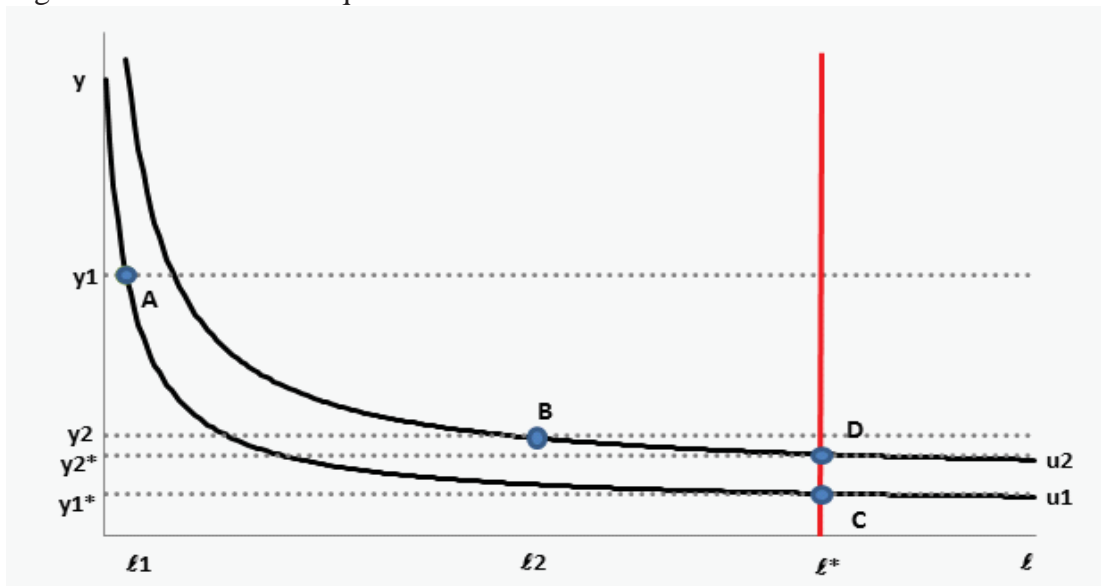
For concreteness, the comparison of two two-dimensional outcomes (A and B) using equivalent income is illustrated in Chart 1. Each outcome is defined by a level of income,  $y$ , and a life expectancy,  $l$ . The points A and B are difficult to compare directly because they differ along two dimensions. Suppose that the indifference curve  $u_a$  represents all combinations of  $y$  and  $l$  which would be considered equally desirable to outcome A. Similarly,  $u_b$  represents all combinations of  $y$  and  $l$  which would be considered equally desirable to outcome B. Inclusive growth reduces the comparison of A and B to a comparison along a single dimension by choosing an arbitrary baseline life expectancy,  $l^*$ , and identifying a pair of outcomes C and D which are, respectively, equal in value to A and B and also lie on the line  $l=l^*$ . The values  $y_{a^*}$  and  $y_{b^*}$  are the equivalent incomes of A and B.

Ideally, equivalent incomes would be calculated for each individual, and then outcomes would be aggregated using an Atkinson generalized means approach to adjust for inequality using an assumed aversion to inequality. In practice, due to limited data availability at the individual level in many countries, the OECD has constructed equivalent incomes at the national level and then adjusted these using a Kolm-Atkinson index (Atkinson, 1970) for income inequality (Boarini et al., 2014a, 2014b).

This general approach still has the problem of how to determine a reasonable willingness to pay - how does one determine how the indifference curves are shaped? There are many ways to do this and unfortunately they can yield different results. The OECD assumes a simple form of the relationship between living standards, income, life

(Continued on next page.)

Figure 1: Illustration of Equivalent Income



expectancy, and the unemployment rate and runs an OLS regression using a measure of self-reported life satisfaction as a proxy for well-being (utility). The regression is estimated using subjective well-being data from the Gallup World Poll survey for 32 countries over the 2006-2010 period (Boarini et al. 2014b).

**Sources of Growth in Canadian Living Standards, 2000-2011**

The OECD’s measure of inclusive growth suggests that Canadian living standards grew at an average annual rate of 3.52 per cent between 2000 and 2011. This pace was above average when compared to 19 other OECD countries over the period. The (unweighted) average annual growth rate of living standards among all 20 countries was 3.10 per cent.

This growth can be attributed to improvements in the four components underlying the measure. Strong income growth of 2.15 per cent annually explains the majority of the improvement in Canadian living standards (61 per cent). The other major factor was life expectancy at birth, which increased by 2.43 years over the period. This increased life expectancy increased the growth rate of aggregate living standards by 1.45 per cent annually, or 41.1 per cent of the total growth. This suggests that excluding improvements in life expectancy results in a significant understatement of growth in living standards.

The other two components of the index only had minor effects. The unemployment rate rose from 6.89 per cent in 2000 to 7.53 per cent, lowering living standards growth by 0.13 percentage points (3.7 per cent). Income inequality, as measured by a Kolm-Atkinson inequality index, exhibited a very small decline, accounting for just 1.4 per cent of the growth in living standards.

*(Continued on next page.)*

Table 1: Sources of Growth in OECD’s Measure of Living Standards, Canada, 2000-2011

	Levels		Absolute Change, 2000-2011	Contribution to Annual Growth in Living Standards (Percentage Points) 2000-2011	Contribution to Growth in Living Standards (Per cent) 2000-2011
	2000	2011			
Year	2000	2011	2000-2011	2000-2011	2000-2011
Average Adjusted Disposable Income per Capita (2010 CDN Dollars)	29,416	37,164	7,748	2.15	61.1
Life Expectancy (Years)	79.23	81.66	2.43	1.45	41.2
Unemployment Rate (Per cent)	6.89	7.53	0.64	-0.13	-3.7
Kolm-Atkinson Inequality Measure	0.225	0.223	-0.002	0.05	1.4
Living Standards (Dollars of Equivalent Income)	15,514	22,696	7,182	3.52	100.0

Note: Equivalent income value of living standards is less than the actual amount of income because of penalties applied reflecting the extent to which Canadian life expectancy was below the level observed in Japan in 2011, Canada’s unemployment rate was above 0, and Canadian incomes were unequal.

Source: Author’s calculations using data from provisional results of ongoing research by the OECD.

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### Living Standards and Reductions in Mortality by Cause of Death

The increase in Canadian life expectancy between 2000 and 2011 of 2.43 years can be decomposed by cause of death using a straightforward variation of the classic Arriaga (1984) method as described in Auger et al. (2012). This is accomplished using life tables from the Canadian Human Mortality Database in combination with data on age and cause-specific mortality rates from Statistics Canada's Vital Statistics Death Database. Under the assumption that the impact of a reduction in mortality on life expectancy's contribution to growth in living standards is proportional to that reduction in mortality's impact on life expectancy, we can quantify the contribution of reduced mortality from 113 specific causes on life expectancy.

The parameter estimates used by the OECD in producing the inclusive growth index imply that an increase in life expectancy of 1 year is worth about 5.3 per cent of per capita income. Given that Canadian income per capita in 2011 was \$37,164, this implies that a year of life expectancy is worth approximately \$1,969 of income per capita. We use this figure to estimate the equivalent dollar value of the reductions in mortality. For example, the total improvement in life expectancy of 2.43 years would be equivalent to an increase in average income of approximately \$4,796. Multiplied by the national population of 33,476,688 reported in the 2011 census, this is akin to an aggregate increase in annual income of \$161 billion.

Table 2 summarizes the contributions to Canadian living standards between 2000 and 2011 of the ten causes of death associated with the greatest improvements in life expectancy at birth. Perhaps not surprisingly, the bulk of the increase in life expectancy can be traced to cancer (malignant neoplasms) and major cardiovascular disease. These two broad categories in greater detail in the table.

Reductions in mortality from cardiovascular disease explain 58.3 per cent of the increase in life expectancy and 23.9 per cent of the growth in the inclusive growth measure of living standards. About one-fifth of this is due to changes in mortality rates from cerebrovascular disease (strokes) and three-fifths can be linked to reduced mortality from heart disease. Mortality rates from heart disease fell over the period as the result of improved treatment methods, faster response times, the widespread use of new pharmaceuticals, and reductions in risk factors. These improvements led a reduction in mortality from heart disease which was equivalent to an increase in per capita income of \$2,066.

Changes in mortality rates from cancer also had a very large impact on living standards. Malignant neoplasms were associated with nearly 25 per cent of the gains in life expectancy which translates into 10 per cent of the overall increase in living standards. This improvement is equivalent to about \$1,168 of annual income per capita. Reductions in mortality from colorectal cancer, cancers of the respiratory system, breast cancer, prostate cancer, and non-Hodgkin's lymphoma were the major contributors. These improvements are linked to better treatment, earlier and more effective screening, and reductions in risk factors, especially smoking.

Several other causes of death can be linked to improvements in life expectancy, but they had much smaller impacts. The third greatest source of improvement was from falling mortality due to chronic lower respiratory diseases, but it only accounts for 3.7 per cent of the increase in life expectancy. Nonetheless, the effect of this improvement on living standards is non-negligible, estimated to be worth as much as an increase in per capita income of \$176. Reduced mortality from accidents and diabetes can also explain more than one per cent of the overall growth in living standards.

### Conclusion

This decomposition exercise presented in this article emphasizes that growth in income is not the only major source of improvement in living standards. The OECD's inclusive growth framework measure of living standards captures multiple dimensions of well-being (income, life expectancy, unemployment, and inequality), weighting them in a way which is consistent with economic theory and data. This allows for an estimation of the relative importance of each of these factors underlying growth in living standards. Life expectancy increases account for 41 per cent of the growth in Canadian living standards in recent times. Improvement in living standards is more than just higher income.

While it should come as no surprise that reductions in mortality from cardiovascular disease and cancer are significant sources of improvement in Canadian living standards, we are able to produce fairly specific estimates of how important these improvements are and how much they are worth in terms of income. Reductions in mortality from these two major causes of death account for one-third of the growth in Canadian living standards between 2000 and 2011, which is estimated to be the equivalent of income per capita rising by \$3,961.

In addition to the obvious difficulties with estimating the value of increased life expectancy, there are several other measurement problems which merit mentioning. In addition to the direct effects of better health on life expectancy, improvements in health likely raise living standards by raising average income so that the importance of health improvements relative to income growth is probably understated. The specific measure of health could also be improved if the life expectancy were health adjusted to account for quality of life. Finally, the importance of both income and health in rising quality of life is somewhat overstated because many other relevant factors, such as the environment and security, are not captured by the inclusive growth measure used in this study.

The inclusive growth methodology has been designed as a more comprehensive approach to the analysis of policies which have consequences for multiple dimensions of well-being. The decomposition exercise used in this article allows for identification of the effects of reductions in mortality on aggregate living standards. If specific health related policies could be quantitatively linked to reductions in cause-specific mortality rates and changes in average income, then this exercise could easily be extended to allow for a simple way to evaluate the overall consequences of these policies.



**Table 2: Growth in Life Expectancy and OECD's Measure of Living Standards Canada by Cause of Death, 2000-2011**

Cause of Death	Contribution to Increased Life Expectancy at Birth (years)	Share of Increased Life Expectancy at Birth (per cent)	Contribution to Growth in Living Standards (percentage points)	Share of Growth in Living Standards (per cent)	Equivalent Change in Income per Capita <sup>a</sup> (2010 \$CDN)	Total Value of Equivalent Change in Terms of Income (billions, 2010 \$CDN)
Major cardiovascular diseases	1.42	58.25	0.84	23.93	2793.28	93.51
Diseases of heart	1.05	43.09	0.62	17.7	2066.34	69.18
Essential hypertension and hypertensive renal disease	0	-0.11	0	-0.05	-5.43	-0.19
Cerebrovascular diseases	0.28	11.53	0.17	4.74	552.88	18.5
Atherosclerosis	0.03	1.27	0.02	0.52	60.83	2.03
Other diseases of circulatory system	0.06	2.42	0.03	0.99	116.17	3.89
Malignant neoplasms	0.59	24.36	0.35	10.01	1168.4	39.11
Malignant neoplasms of colon, rectum and anus	0.04	1.79	0.03	0.74	86.06	2.87
Malignant neoplasms of trachea, bronchus and lung	0.14	5.75	0.08	2.36	275.92	9.24
Malignant neoplasm of breast	0.07	3.03	0.04	1.24	145.17	4.85
Malignant neoplasm of prostate	0.06	2.27	0.03	0.93	109.02	3.65
Malignant neoplasms of lymphoid, haematopoietic and related tissue	0.07	2.91	0.04	1.2	139.59	4.67
All other and unspecified malignant neoplasms	0.21	8.61	0.13	3.54	412.64	13.83
Chronic lower respiratory diseases	0.09	3.67	0.05	1.51	175.93	5.88
Accidents (unintentional injuries)	0.09	3.61	0.05	1.48	173.07	5.79
Diabetes mellitus	0.08	3.22	0.05	1.32	154.35	5.16
Nephritis, nephrotic syndrome and nephrosis	0.05	1.89	0.03	0.78	90.69	3.04
Intentional self-harm (suicide)	0.04	1.81	0.03	0.74	86.64	2.9
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	0.04	1.59	0.02	0.65	76.49	2.57
Alzheimer's disease	0.04	1.57	0.02	0.64	75.26	2.51
Influenza and pneumonia	0.04	1.52	0.02	0.62	72.84	2.43
All other causes	-0.05	-1.49	-0.01	-0.6	-71.3	-2.36
<b>Total, all causes of death</b>	<b>2.43</b>	<b>100</b>	<b>1.45</b>	<b>41.08</b>	<b>4795.65</b>	<b>160.54</b>

**Source:** Author's calculations using data from Statistics Canada's Vital Statistics Deaths Database and the Canadian Human Mortality Database. Decomposition performed using the Arriaga method. One additional year of life expectancy is estimated to be worth \$1,969 of household income per capita based upon provisional results of ongoing OECD research.

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## RECENT DEVELOPMENTS IN MOLECULAR BIOLOGY RELEVANT TO QUALITY-OF-LIFE RESEARCH

Schattner, Peter. 2014. *SEX, LOVE AND DNA: What Molecular Biology Teaches Us About Being Human*. Foster City, CA: Olingo Press.

The author of this book, Peter Schattner, originally was trained and worked in physics. Later he retrained himself as a molecular biologist and started working in 2001 as a researcher in the Biomolecular Engineering Department of the University of California, Santa Cruz. As he began to appreciate the emerging coherent picture of the world of DNA (deoxyribonucleic acid) and its close relative RNA (ribonucleic acid), genes, chromosomes, and the proteins they produce, he became motivated to help nonbiologists appreciate the beauty and profound implications of this exciting new world of molecular biology. And that motivation led to this book. With this review, I am calling the book to the attention of social indicators/quality-of-life/well-being scholars, as it contains information relevant to our research agenda.

The range of topics covered in the book is expansive. **PART I PROTEINS AND GENES: THE CONSTITUENTS OF LIFE** contains two chapters that set up the general subject matter of the book – how recent research on proteins and DNA help us to understand age-old questions about the human experience. Schattner addresses these questions from the perspective of recent research in molecular biology and genomic science in an engaging non-technical exposition that uses stories and anecdotes that illustrate how the interactions of proteins and DNA shape an animal's life and how and how they affect the lives of people, as well.

**PART II DNA: OUR LINK TO THE PAST AND THE FUTURE** contains four chapters, 3. Who are our Fathers? 4. Who are our Mothers? 5. Can We Raise the Dead? 6. and Who Owns Our Past? Who Controls Our Future? As these titles suggest, these chapters introduce readers to research on DNA transmission across generations and the resulting information about ancestral lines of current living humans. The chapters also address research on cloning, the resurrection of viruses, animals, and humans, and the prospect of developing “designer” fetuses and babies.

**PART III DNA AND RNA: HOW GENES ARE REGULATED** has five chapters: 7. Can a Gene Keep You from Thinking Clearly? 8. How Much Sleep Do You Need? 9. What Is Love? 10. What Is Kindness? 11. What Is Sex? Each of these chapters reviews research on genetic variants that help to understand the questions posed in the titles. For instance, Chapter 8 begins with

anecdotal stories of two people, a mother (Lois, age 69) and her daughter (Clara, age 44), who are “short sleepers” (defined as people who rarely get more than six hours of sleep per night yet don't feel any more tired or sleepy than other people, nor do they suffer from health problems related to their lack of sleep). The chapter cites research which estimates that between 1% and 3% of human populations are such short sleepers (surely some readers have one or more hyperproductive colleagues who fall into this category – the present reviewer admits to being one of them). It turns out that when the sleep laboratory at the University of California, San Francisco tested Lois and Clara's DNA sequences for a gene called DEC2, they discovered that both women had a rare mutation that changed a single proline amino acid to an arginine amino acid in the DEC2 protein. The remainder of the chapter describes related research on transgenic mice (mice with DNA modified to enhance protein functionality) and how this helps to understand the effects of the DEC2 gene on our need for sleep.

**PART IV EPIGENETICS** contains three chapters: 12. Can You Get Cancer from a Gene? 13. What is Learning? What is Memory? 14. Can We Live to 120 – By Eating Less. As the section title indicates, these chapters introduce the subject of epigenetics – how the environment affects us at the cellular level, that is, how a chromosome's DNA is chemically modified without rearranging its biological chemicals.

The materials of the first four parts of the book then are applied in **PART V NATURE AND NURTURE** with chapters 15. Can We Live to 120 – And Still Eat Cake? 16. What Makes a Super-athlete? Part 1: Size Matters 17. What Makes a Super-athlete? Part 2: Energy Matters Too 18. Why Are Some People So Smart? and 19. Where Does Language Come From? and in **PART VI THE MOLECULAR BIOLOGY OF BEHAVIOR AND EMOTIONS** with chapters 20. What Is Gender? 21. What Is Pain? What Is Pleasure? 22. Why Are Some People Happy ... and Others Depressed? 23. What Is Fear? 24. What Is Aggression? and 25. What Are Science's Limits? As the titles of the chapters indicate, each addresses a question all of us likely have studied or at least wondered about at some point in our lives. Likely many readers will have a personal interest in the research reported in

Chapter 18 on genetic variants that have been found to be associated with brain size and intellectual ability.

A main motivation on my part for reviewing this book for SINET and for bringing it thereby to the attention of social indicators/quality-of-life/well-being scholars, however, is Chapter 22. This chapter begins by citing the United Nation's first World Happiness Report published in 2012, with which most SINET readers will be familiar. That report noted that genes might be relevant to our happiness as well as environmental factors such as secure employment, good health and satisfying relationships and that genetic differences might account for a third to a half of within-country variance in happiness. This sets up the problematic for the chapter which reviews 1) research on the set-point theory of happiness with which well-being researchers are familiar, 2) the serotonin-deficiency model of depression, 3) how variants in the human serotonin transporter gene, called SLC6A4 might influence feelings of well-being in people, and 4) epigenetic research on maternal nurturing and emotional resilience. This leads to a report on a research study of a panel of young adults which found that among those who had experienced more than three stressful life events or who had experienced child maltreatment, individuals with two copies of the shorter SLC6A4 variant were twice as likely to have had an episode of depression as people with two copies of the longer SLC6A4 variant. To the extent that social indicators/quality-of-life/well-being researchers seek to understand individual-level variations in happiness, this research is most relevant. And, given the continuing study of how genetic variants and their interactions with the environment relate to human traits by thousands of researchers across the world, including those in the interdisciplinary fields of biopsychology, biodemography, bioeconomics, and biosociology, it surely opens up a line of research that will yield many intriguing empirical findings in years to come.

In sum, this book is very well written for non-specialists and makes for an informative, good read for social indicators/quality-of-life/well-being researchers who want a quick nontechnical review of advances in microbiology and genomic science over the past few decades.

# SUNNY Side Down? Comment on Ronald E. Anderson “Progress in Measuring Human Suffering”

Wolfgang Glatzer

Many years ago, when I spent my first time in the United States, I had to learn how I want to see my breakfast eggs: “sunny side up”. When quality of life and well-being emerged I had the same experience: the interest was mainly directed towards the attractive side of human existence, towards happiness and satisfaction, how they look like, what differences are there and how we can explain and enhance it. This had a good reason. In the long past, it was much more usual to regard the negative sides of societies than the positive sides. Therefore, the time was ready to change the perspective more to the options of betterment, to quality of life and wellbeing.

It is to the merit of Ron Anderson to have brought back with his new book an emphatic view on World suffering and Quality of Life. When I compiled the Global Handbook on Quality of Life, I had a deficit-feeling in respect to negative wellbeing and wrote myself a chapter on “Worries and Pains: The Dark Side of Quality of Life”. In this context, I noted that the great early American qol- and wb-studies gave full attention to the problem behind, that positive and negative wellbeing are independent from each other (Campbell, Converse Rodgers 1976, p. 58). If this is true, then it is important to recognize the two contradictory components for a comprehensive quality of life measurement.

We should not overlook that suffering and worrying are inevitable and that they can have positive functions for people. Worries and pains can be regarded as signals to develop actions for improvement. In the good case, suffering works as a self-destroying mechanism. Another positive function is hidden in the question of Ron Anderson: “Without suffering, would we have humanitarian action and charitable giving?” There are some good reasons to take a more intensive note of the dark side of life.

# 13th ISQOLS Quality of Life Conference Phoenix, Arizona October 15-17, 2015

Dear ISQOLS members and friends,

I personally invite you to join me and your colleagues October 15-17 for the ISQOLS conference. Our keynote speakers include Richard Easterlin, Carol Graham, Ed Diener, and Claudia Senik. There will be numerous sessions exploring dimensions of quality of life research, ranging from economic to health, and environmental to social concerns. This is THE conference to attend if you’re interested in quality of life and well-being!

There’s a few new features added to this year’s convening – a “meet the authors” breakfast to talk with researchers about interests and ideas for publishing, and a poster session for students and other new to research. It promises to be an excellent convening for exploring ideas and pushing the forefront of knowledge in quality of life research.

Here’s a sample of things you can do when you join us in Phoenix:

- Sign up for a planned dinner group for Friday night of the conference (these small groups are a way to get to know others and see an exciting venue in the area)
- Explore the Sonoran Desert – a unique ecosystem - we’ll have info on tours, horseback riding, and many other desert oriented activities!
- See the Grand Canyon – one of the natural wonders of the world – with an optional trip beginning Sunday morning after the conference.
- See sustainable development venues at Arizona State University, the largest public university in the US by enrollment.

Register at <http://www.isqolsorgphoenix2015.info/>.

~ See you soon, Rhonda Phillips, Purdue University, ISQOLS President

# Conference On Dealing with Com- plexity in Society:

From Plurality of Data to Syn-  
thetic Indicators  
Padua (ITALY), September 17-  
18, 2015

<http://complexity.stat.unipd.it>

Mid-term Conference of ISA-RC55 (<http://www.isa-sociology.org/rc55.htm>)

Satellite Meeting of the Italian Statistical Society 2015 Conference “Statistics and Demography: The Legacy of Corrado Gini” (<http://meetings.sis-statistica.org/index.php/ginilegacy/SIS2015>)

The globalized world in which we live is characterized by complex human and social phenomena, like well-being, human development, environmental sustainability, welfare, etc., whose conditions determine the progress of the society.

At the same time, data availability and technical opportunities increase day by day. The need of effective synthesis of data, based on robust conceptual and methodological framework is even more evident.

In the last ten years, the methodology of multivariate analysis and synthetic indicators construction significantly developed. In particular, starting from the classical theory of composite indicators many interesting approaches have been developed to overcome the weaknesses of composites.

The Conference will focus on recent developments in synthesizing indicators and, more generally, in quantifying complex phenomena. The conference will also identify important problems and new research directions in the field of social indicators.

The provisional program is now available: <http://complexity.stat.unipd.it/content/programme>

The Conference Program will include:

- a Round Table (The role of composite indicators in the data revolution, Keynote Speaker: Enrico Giovannini) and
- two lectio magistralis (Epistemology of Complexity: The Rethoric Way and the Scientific Way, Alberto Peruzzi; and Scalability of Composite Indices: Complexity Complications, Kenneth Land).

Registration: <http://complexity.stat.unipd.it/content/registration>

Giovanna Boccuzzo and Filomena Maggino, Conference Chairs

# THE RUUT VEENHOVEN PRIZE 2015

The Ruut Veenhoven Prize 2015, granted by the Erasmus Happiness Economics Research Organization, was created in 2014 and will from 2015 be awarded annually in honor of Emeritus Professor Ruut Veenhoven (1942), a prominent researcher and one of the founders of the field of Happiness Studies. The prize carries an award of the equivalent of 2,500 Euro plus a certificate of appreciation. It is intended to award outstanding research in the field of Happiness Studies by a promising researcher; a researcher who has performed exceptional research and is just embarking on a research career (having obtained a doctorate within the last six years).

The Erasmus Happiness Economics Research Organization (EHERO) invites the submission of research work written in English. The 2015 prize will be presented at the Ruut Veenhoven Seminar in Happiness Studies to be held in Rotterdam on November 24, 2015. The winner will be selected by a committee headed by Emeritus Professor Justus Veenman, Erasmus University Rotterdam, The Netherlands. The deadline for submission for the 2015 prize is September 18, 2015. More information about the procedure can be found at <http://www.eur.nl/english/ehero/veenhovenprize2015/>

~ Martijn Burger

# SINET

## Subscription Information

As a service to the world-wide social indicators community, SINET is issued quarterly (February, May, August, November). Subscribers and network participants are invited to report news of their social indicator activity, research, policy development, etc., to the Editor for publication. Deadlines are the 20th of the month prior to each issue.

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# SINET

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