Alex C. Michalos

Development of Quality of Life Theory and Its Instruments

The Selected Works of Alex C. Michalos

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Alex C. Michalos
University of Northern British Columbia
Prince George, BC
Canada

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Other Books by Alex C. Michalos

North American Social Report, 5 volumes
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Essays on the Quality of Life
Ancient Views on the Quality of Life
Militarism and the Quality of Life
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The Popper-Carnap Controversy

For Deborah, with love

Acknowledgements

Most of the previously published papers in this set of four volumes (and most of my books) appeared in a publication of Springer, Kluwer, Reidel or Nijhoff, a chain of publishers that I have had the opportunity to work with since the 1960s. Since the original source of each paper in the collection is given on its first page in this collection, there is no need to repeat all these sources and express my thanks for permission to reprint them in each occurrence. I am happy to express here my gratitude for the lot and for the many years of our pleasant and productive work together.

In each of the volumes in this set, I will acknowledge permission to reprint each of the previously published papers appearing in scholarly journals, books or newspapers apart from the chain of publishers listed above. In this third volume, I would like to thank the Italian Society for Economics, Demography and Statistics for Chap. 9. Michalos, A.C. (2003). Identifying the horse, the cart and their proper order in sustainable development. *Revista Italiana de Economia Demografica e Statistica*, 52: 151–162; Organization for Economic Co-operation and Development (OECD) for Chap. 10. Michalos, A.C. (2008). Connecting communities with community indicators. In *OECD Statistics, Knowledge and Policy 2007: Measuring and Fostering the Progress of Societies*, (pp. 133–146). Paris: OECD.

In the Appendix of each volume I included some photographs and pictures to provide a somewhat different kind of historical context to my narrative. What I have been able to contribute over the past 50 years or so has been influenced by many more people than I have been able to picture here, but when I reflect on what I have done, most of the people pictured here are very much a part of the story. Most of the photographs and pictures are from my family albums, but some have come from friends and a couple of newspapers. I would like to express my thanks to the following for allowing me to reprint their items: Wolfgang Glatzer for photographs in How Good Policies and Business Ethics Enhance Good Quality of Life, numbered v2.1 (short for photo #1, volume 2), in Development of the Quality of Life Theory and its Instruments (v3.3, v3.5, and v3.6), and in Connecting the

Quality of Life Theory to Health, Well-Being and Education (v4.1); to Ferran Casas for photographs v2.6, v3.1, v3.2 and v3.4; to Filomena Maggino for v4.4, v4.5 and v4.6; to Anna L.D. Lau and Robert A. Cummins for v4.3, v4.8 and v4.9, to Valerie Moller for v3.7 and v3.8; to Joanna Kit-Chun Lam for v3.11; to Daniel T.L. Shek for v4.2; to the Cleveland Plain Dealer for Philosophical Foundations of Quality of Life (v1.4), and to the Detroit Free Press for v1.7.

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Introduction to "Selected Works of Alex C. Michalos"

Biographical Notes

The central aim of this set of volumes was to describe and explain the context and connections among a subset of papers and books produced over the past 50 years. Rather than a mere reproduction of work already published, this will be an attempt to disclose the productive processes in their various historic contexts that led to the various research projects and publications. In Michalos (2003), I published a collection called *Essays on the Quality of Life* containing 20 articles focused on the quality of life, 3 of which appear in other volumes of this set because they seemed to be so central to the array of issues in the 70 articles in these volumes. For completeness, I mention articles from the earlier collection and books that are directly relevant to the themes in these volumes.

Some years ago (these days it seems that most things begin with "some years ago", unfortunately), in a debate about the existence of God, a member of the audience put the question to us "Why would God want to watch re-runs?". The question made sense from the point of view of one of the debaters, since God was supposed to know everything that is going to happen before it happens. As the atheist in the debate, I could only say that I have no idea why, although a lot of people seem to enjoy them.

While I also enjoy some re-runs, I would not find much joy in re-binding some old papers for a new audience. I do, however, find the idea of describing the historical context in which similar research questions more or less simultaneously appeared to people in diverse parts of the globe and were addressed first individually and then collectively. Here, the historical context includes some of my own biographical material. This is offered as a kind of second-best effort substituting for an autobiography that I have never had the courage to write, notwithstanding having thought about it many times.

My father ended his formal education in the sixth grade and my mother ended hers in the eighth grade. As far as I have been able to discern, in 1917, when he was about 17, my father, Charles K. Michalos, emigrated from the island of Chios, Greece, to work in the steel mills of Gary, Indiana. He arrived with a pocket-sized Greek–English dictionary, learned to speak English with a heavy Greek accent, moved from the mills to driving a Nabisco bread and pastry truck for another 17 years, bought a small hamburger joint, then a somewhat bigger one and finally something more like a diner on Euclid Avenue in Cleveland, Ohio. Its claim to fame was the fact that many of the Cleveland Browns ate there, which was quite a big deal in 1947 when the Browns were the All American Football Conference champions and I was one of their biggest junior high school fans. My father died in January 1951, at about 51. We were never sure, because he was never sure, how old he was. I was daddy's boy and his loss was a great loss to me.

My mother, Josephine Pucci, was born in Akron, Ohio, one of eight children of immigrants from Palermo, Sicily. She worked at the May Company department store, sang in the chorus of the Cleveland Opera Company, married my father in 1931, produced my brother in 1932 and me in 1935, and provided the mom part of our mom-and-pop diner. Unlike my dad, she was not a particularly happy person, but she lived to be 93 years old, dying in June 1998. Like my dad, and the rest of us I guess, she did the best she could with what she had.

I was generally an above average but not outstanding primary and secondary school student. In secondary school and the first half of university, I was more interested in sports and girls than scholarship, though I enjoyed mathematics and history. I went to what was then Western Reserve University (now Case-Western Reserve University) in 1953, majoring in history with minors in philosophy and religion. When I read Plato's *Republic*, I felt as if he was talking directly to me. It had never occurred to me to ask what a good life might be, but the more I thought about it, the more I *had* to think about it.

I grew up in a very mixed religious family. The story my mother told was that her family were Catholics until the local priest did something that led my grandfather to tell him to go to hell and he took the whole gene pool into a more friendly Baptist church. My father seemed to practice the religion of washing his car on Sundays, but he thought his sons had to be baptized Greek Orthodox in order to preserve something or other that was important to him. So, we were. However, because our house was one block away from a small Quaker church, my brother, Chuck Michalos, and I were sent off together as soon as we were old enough to find our way there and back. I have a gold medal showing that I accumulated three years of Sundays without missing Quaker Sunday school.

Given this background, when I began to think seriously about a good life, I thought I should make my peace with God if there were one. So, besides studying philosophy, I studied the history of religions. Then, I went to graduate school at the University of Chicago. Because I was what one would have called a doubter, I wanted to study religion in a school of believers, assuming that if anyone could convince me that I was wrong, they could. At least they would be inclined to try. So, in 1957 I enrolled in the Divinity School, which seemed to have the most diverse faculty, including visiting experts in Buddhism, which especially interested me.

I also married in the summer of 1957, a marriage that lasted about 23 years and produced Cyndi (1960), Ted (1961) and Stephanie (1963). In 1985, I married the love of my life, Deborah Poff, a lucky break for both of us at the time and ever since.

While studying the history of religions, I took courses in philosophy and it seemed to me that philosophers had more precise and decisive methods of pursuing the truth than theologians. The University of Chicago had a wonderfully flexible approach to higher education, allowing students to pursue more than one degree at a time. To get a Bachelor of Divinity degree, a student was required to pass 7 comprehensive examinations and have a year internship in some relevant field of practice. I took some courses designed to prepare one to take the exams and some courses in philosophy that I found interesting. At the 1961 convocation, I received a B.D. and an M.A. in philosophy and then proceeded to pursue a Ph.D. in philosophy of science. I completed the latter in 1965 with a dissertation on a dispute between Rudolf Carnap and Karl Popper on the nature and use of probability theory in the assessment of scientific theories (Michalos 1971).

Many of the most salient and important features of the following 50 years of research and other activities may be regarded as relatively natural developments of these earlier initiatives. In a memorable essay on the best teacher he ever had, Nathan Keyfitz (2003) said that scholars should replace the metaphor of providing building blocks for a relatively durable corporate body of knowledge with that of providing biodegradable nutrition out of which new knowledge would grow. In a sense, today's nutrient is tomorrow's fertilizer. What I did until 1965 provided the ingredients for what followed, just as the latter will feed what comes afterwards. Most importantly, I think my general approach has been informed by a pragmatic and philosophic interest in a holistic, comprehensive understanding of any particular object of investigation. I will try to explain this approach in the next few paragraphs.

Broadly speaking, there are two ways to define "*philosophy*". From a *functional* point of view, philosophy may be identified as critical thinking about anything at all, from asphalt to zebras. From a *content* point of view, philosophy may be identified as a body of knowledge answering three questions. What is it? What good is it? How do you know?

Answering the question "What is it?" gives one a discussion of the nature or being of something. In short, it gives one an *ontology*, a word derived from the Greek "on" meaning nature or being, and logos, meaning discourse (among other things). Descriptions of the nature of things, ontologies, have at least two aspects. Everything has, after all, a form, structure, morphology or anatomy on the one hand, and a function, activity or physiology on the other. A duck, smile or football game, for examples, can be described at a minimum by describing their structural parts and how the parts function. What Isaac Newton might have referred to as natural philosophy and we now would call natural science is close to what philosophers would call ontology.

Answering the question "What good is it?" gives one a discussion of the value, worth or goodness in some sense of something. In short, it gives one an *axiology*, a word derived from the Greek "axios" meaning worthy or valuable, and logos. Of the variety of kinds of value that may be described, it is most useful to distinguish intrinsic from instrumental value. *Intrinsic value* refers to the worth or goodness of a thing in itself, its value as an end in itself rather than as a means to something else. *Instrumental value* refers to the worth or goodness of a thing as a means to something else, not as a thing in itself. Standard examples include things such as eating an apple or throwing a ball at a target having instrumental value insofar as the former produces nutrition and the latter scores points, which in this context have intrinsic value.

Since practically anything might be a useful means to something else for someone in some circumstances for some purposes, practically anything can have instrumental value. However, some people believe that all alleged sorts of intrinsic value may be reduced to a single one. For example, they would argue that the nutrition obtained from eating an apple is really only instrumentally valuable as a means to good health, which is itself instrumentally valuable for a life of pleasure, happiness or satisfaction. Those who believe that there is finally only one intrinsically valuable thing such as pleasure, happiness or satisfaction may be called monists with respect to the ultimate nature (ontological status) of value, while those who believe that there are many intrinsically valuable things may be called *pluralists*.

For a monist, then, it may be said that ontologically distinct things such as music, cheese and justice have different degrees of some sort of value such as pleasure, happiness or satisfaction, while for a pluralist, such ontologically distinct things have ontologically distinct values (music value, cheese value and justice value) regardless of how much pleasure, happiness or satisfaction these things produce. From an ontological point of view, then, a monist would have a numerically smaller number of ontologically distinct things in his or her world (e.g. music, cheese, justice and some degree of pleasure, happiness or satisfaction generated by the other three), while a pluralist’s world would have music, cheese, justice plus music value, cheese value and justice value.

For a monist, the task of measuring the total value of something, a person, event, object, attitude, belief, proposition, action or life itself, is in principle straightforward. One simply needs to measure the degree of intrinsic value generated by that thing in terms of or operationalized as pleasure, happiness or satisfaction. For pluralists, the task of measuring the total value of something is not at all straightforward because there may be no way to compare ontologically distinct values like the value of music versus the value of cheese or justice. There does not appear to be any common measure, scale or instrument available to answer questions such as “How much is music worth compared to the value of justice or cheese?” or “What is the value of this piece of music in terms of the value of justice or cheese?”

Given the severe comparability problems faced by all value pluralists, it is not surprising that the most frequently studied theories of economists and decision theorists, namely preference theory, choice theory, utility theory and game theory, and one of the most popular ethical theories studied by philosophers, utilitarianism, assume value monism of some sort. As we will see in many of the papers in this collection and many more cited in those papers, scholars have invented a great variety of methods for living in and managing a world apparently containing a plurality of values. In particular, I will describe my own efforts over about 50 years, which have been interesting but largely unsuccessful.

Answering the question “How do you know?” gives a discussion of one’s knowledge of something. In short, it gives one an *epistemology*, a word derived from the Greek “episteme” meaning knowledge and logos, hence, a theory of knowledge. Strictly speaking, one ought, prudentially and morally, to have a fairly clear answer to the epistemological question before one attempts to answer the ontological and axiological questions. Since a philosopher aims to obtain a body of knowledge about the nature and value of things to be used in the practice of living a good life, a patently necessary condition of achieving that aim is clarity with respect to knowledge itself and its production. That is why the earliest essays in these 4 volumes concern epistemological issues.

Comments on the Articles

All of the papers in this set of volumes are arranged partly in chronological order and partly by their logical connections. Each volume has its own major themes and within those themes, articles have been selected and arranged to provide some idea of the time at which they appeared and its relation to my own and others’ research agendas around that time.

Following this introduction, Chap. 1 is a short article from the *Encyclopedia of Quality of Life and Well-Being Research* (2014) summarizing my fundamental assumption about the nature of quality of life or human well-being. It is based on the common sense view of most people that there is a difference between a Fool’s Paradise and the real thing, a Real Paradise as we might say with some exaggeration. In a Real Paradise, conditions would be good, all things considered, as assessed by any relatively dispassionate, objective and unbiased observer and they would warrant and get the appreciation (satisfaction) of any particular participant in those conditions. On the contrary, in a Fool’s Paradise, there is satisfaction with insufficient or mistaken warrant, proceeding perhaps from formal or informal fallacies (Michalos 1969), or both.

The most important explorations in Chap. 2 concerned tests of two competing explanatory models of happiness and global as well as domain satisfaction. In what I called the “Michigan model” satisfaction and happiness were posited as the result of the perceived gap between what respondents have and want to have (goal-achievement gap), and the latter gap is a result of two other perceived gaps, between what respondents have and the best they ever had before (have-best previously achieved) and what they have and what they believe average folks their age have (have-others have, social comparison). In the competing model, satisfaction and happiness were posited as the result of three equally important perceived gaps, goal-achievement, have-best previously achieved and have-others have. I showed that in every case, for the global and domain assessments, the Michigan model performed better than its competitor.

The robust results that I described in the previous paragraph made it difficult for me to see the more important results right before my eyes. Although the goal-achievement gap mediated the association between satisfaction and happiness on the one hand and the have-best previously achieved gap and social comparison gap on the other, it was also the case that the latter two gaps had direct influence on satisfaction and happiness. I had forced a choice between only direct and only indirect effects for my predictors, while the evidence showed that the predictors had both direct and indirect effects. Once that became clear to me, the general structure of multiple discrepancies theory (MDT) appeared to me. The first relatively complete statement of the theory in roughly axiomatic form is presented and tested in Chap. 3, from Michalos (1985). For a sample of nearly 700 university undergraduates, MDT was able to account for 49% of the variance in happiness scores, 53% of the variance in life satisfaction scores and 50% or more in 7 out of 12 domain satisfaction scores.

Chapter 4 is a note written to explain my views about being a feminist and the role of feminist philosophy in development studies.

Given the success of MDT on university students in Canada, from the fall of 1984 to the fall of 1986 I undertook a much more ambitious test of the theory on 18,000 undergraduates in 39 countries, using a questionnaire translated from English to 19 other languages. I had the help of 68 scholars in 76 universities. Chapter 5 is a brief overview of the four-volume *Global Report on Student Well-Being* (1991a, b, 1993a, b) that resulted from the international surveys. "On average, MDT explained about 55% of the variation in reported satisfaction and happiness scores, reaching as high as 71% for living partner satisfaction and as low as 41% for overall happiness with life". For 12 domains of living and life as a whole, the most influential predictors of satisfaction and happiness were the goal-achievement and social comparison gaps. Social comparison was most important for male respondents and goal-achievement was most important for females.

The first issue of *Social Indicators Research*, Volume 34 (1995) contained 6 articles making use of the global student data set by diverse authors, and Chap. 6 is my brief response to them from the same issue. I was, of course, quite pleased that the data we collected were put to additional good use by very able scholars. Among the 6 articles, using data from 1354 US undergraduates, Lance et al. (1995) produced "the most extensive direct test ever made of three familiar alternative models of the relationships between domain satisfaction and satisfaction with life as a whole". They showed that a model in which the causal arrows run in both directions from domain satisfaction to life satisfaction and from the latter to domain satisfaction (bidirectional model) performed better than either the traditional bottom-up model (from domain satisfaction to global satisfaction) or a top-down model (from global satisfaction to domain satisfaction). In a later paper, using a sample from 32 of the 39 countries in my global student data set, Mallard et al. (1997) showed that "globally" a bidirectional model best describes domain-life satisfaction relationships. This paper is reprinted in Connecting the Quality of Life Theory to Health, Well-Being and Education of this set.

The University of Northern British Columbia was established in 1990 and its main campus in Prince George was officially opened in 1994 by Queen Elizabeth II with 1500 students. I joined the university in the fall term of 1994, and in the summer of that year, I undertook the first community quality of life survey the city had ever had. Chapter 7 summarizes results of that survey. My aim was to establish a baseline of information about the city that might at some later time form the "before" part of a "before and after" investigation of the impact of a new university on a small city. My questionnaire included items on people's use of public services, spending preferences for taxes, satisfaction with a variety of aspects of their community and their lives, and questions about the best and worst things in their lives, and "things they would change first to improve the quality of their lives". The three most frequently mentioned things to change involved first, beautifying the central city; second, reducing crime; and third, eliminating air pollution. Over several years repeating this change question, these three issues regularly appeared at the top in some order. On crime-related issues, see Michalos and Zumbo (2000), and Michalos (2002), reprinted in Michalos (2003).

In 1998, my colleague, Bruno Zumbo, and I established the Institute for Social Research and Evaluation at the university. It was a collaborative initiative of the City of Prince George, Northern Interior Regional Health Board, Human Resources Development Canada, Regional District of Fraser Fort George, Prince George United Way and UNBC. Over my time in Prince George, 1994–2009, the Institute produced at least two surveys every year, one for the city and others for other cities and other clients. Michalos (2003) contains several published reports from the Institute and Michalos (2005a) contains reports on 30 surveys taken from 1994 to 2004, some published and some not. Working with our funding partners and others, we helped create a culture of evidence-based policy making in our City Council. We evaluated the regional employment assistance programme for Service Canada, renal services in our hospitals, the system of walking trails in the city, amenities in the region's provincial parks, services of the Royal Canadian Mounted Police, city services of all sorts, options for new gambling casinos, arts-related activities identified by the local Arts Council, routine aspects of the quality of UNBC's student services and the quality of student lives, and a wide variety of health, well-being and overall quality of life issues for the community.

Table 1 lists average happiness scores, satisfaction scores for 11 domains, overall life satisfaction and satisfaction scores for the overall quality of life taken from 13 Prince George community surveys over 14 years from 1994 to 2008. We have no good way to measure the impact of the new university on these scores, but examining the first and last columns, one finds that only two domains had changes greater than 0.02 from the first to the last survey. Average satisfaction with one's own health decreased from 5.6 to 5.1 and average satisfaction with one's financial security increased from 4.7 to 6.0. Across the whole period, average satisfaction with one's living partner and family received the highest scores in every survey.

Table 1 Prince George mean satisfaction* and happiness** scores, 1994–2008

Life domains	1994 June N = 501	1997 July N = 715	1997 Nov. N = 737	1998 Nov. N = 723	1999 Dec. N = 743	2000 April N = 554	2000 Nov. N = 430	2001 May N = 698	2003 Nov. N = 618	2004 Nov. N = 387	2005 Nov. N = 519	2007 April N = 411	2008 May N = 657
Your house	5.8	5.4	5.5	5.8	5.6	5.8	5.7	5.6	5.6	5.7	5.6	5.6	5.6
Neighbourhood	5.7	5.4	5.3	5.9	5.3	5.6	5.6	5.5	5.6	5.5	5.7	5.5	5.7
Family relations	5.9	5.9	6.0	5.7	5.6	6.0	5.9	5.9	5.9	5.8	5.8	5.9	5.8
Living partner	6.1	6.1	6.3	5.9	6.0	6.3	6.4	6.2	6.1	6.1	6.2	6.2	6.2
Job	5.4	5.4	5.4	5.1	5.3	5.4	5.5	5.2	5.2	5.3	5.3	5.6	5.3
Friendships	5.8	5.9	5.8	5.6	5.8	5.9	5.8	5.8	5.6	5.7	5.6	5.8	5.6
Health	5.6	5.6	5.4	5.3	5.3	5.5	5.6	5.4	5.2	5.4	5.2	5.3	5.1
Spiritual fulfil	5.4	5.4	5.3	5.0	5.2	5.4	5.5	5.2	5.3	5.2	5.3	5.3	5.3
Finance security	4.7	4.8	4.6	4.3	4.0	4.8	4.6	4.6	4.5	4.8	4.7	5.2	6.0
Recreation	5.0	4.9	4.9	4.7	4.9	5.1	5.0	5.1	5.0	5.1	4.8	5.1	5.0
Self-esteem	5.5	5.6	5.5	5.2	5.4	5.6	5.7	5.5	5.4	5.5	5.4	5.7	5.6
Life satisfaction	5.6	5.8	5.8	5.5	5.6	5.9	5.7	5.7	5.6	5.7	5.6	5.8	5.6
Quality of life	5.7	5.6	5.6	5.5	5.3	5.7	5.6	5.7	5.4	5.6	5.5	5.6	5.6
Your happiness	5.6	5.6	5.5	5.6	5.4	6.0	5.5	5.8	5.7	5.9	5.7	5.9	5.8

Source Surveys by the Institute for Social Research and Evaluation, University of Northern British Columbia

*Based on 7-point Likert scale running from ‘very dissatisfied = 1’ to ‘very satisfied = 7’

**Based on 7-point Likert scale running from ‘very unhappy = 1’ to ‘very happy = 7’

Chapter 8 is a report of our community survey in Jasper, Alberta. Jasper is a town inside Jasper National Park, "one of Canada's most beautiful and famous park areas". Our survey contained an unusually large number of domain satisfaction items that allowed us to create 15 indexes, 8 of which had Cronbach's alpha ranging from 0.79 to 0.91. When we regressed our 3 global indicators (happiness, life satisfaction and satisfaction with the quality of life) on the 15 indexes plus some singular items, we found that our index of personal worth was the most influential predictor for each of the 3 global indicators. This index was an average score on satisfaction with one's own self-esteem and what one is accomplishing in life, $\alpha = 0.79$.

As we approached the third millennium, we thought it would be interesting and useful to researchers if we took the pulse of British Columbians regarding their expectations and attitudes towards the future. Chapter 9 is a report of two independent surveys of the province taken in October and November of 1999 based on a rough division of what is called the "lower mainland" versus "the north", using the town of Hundred Mile House as the dividing line. Among other things, the questionnaire had a list of "42 events and states of affairs that might occur in the next one hundred years, and respondents were asked to indicate whether they thought 'it would be good (or bad) if it happened' and then if they thought it was 'probably going to happen (or not)'". For about half of the items, northerners and southerners gave very similar responses, e.g. "fairly large majorities" thought "it would be bad to change our political geography by merging with the United States…or breaking up the country in any way". On the other hand, "Ninety percent of northerners but 62% of southerners thought it would be good if there were tax breaks for northern residents", although only "26% of northerners and 38% of southerners thought it would happen". In response to our question about what to change to improve the quality of their lives, northerners and southerners mentioned the same top three things in the same order, namely issues related to employment and financial security, then health and third educational opportunities.

Chapter 10 is based on a presentation that was to be made at a conference of the Italian Society of Interdisciplinary Studies in Bari, Italy, May 2003. A back injury prevented me from participating. The thesis of the paper arose in response to a comment made by the British Columbia Minister of Sustainable Resource Management at the 2003 Annual General Meeting of the Fraser Basin Council. The Council is responsible for managing a huge natural resource, the Fraser River, and I attended the meeting as a member of the Fraser Basin Council Sustainability Indicators Advisory Committee. I was shocked to hear his apparent assumption that what we were supposed to be sustaining was "*economic development*" rather than "social well-being supported by a vibrant economy and sustained by a healthy environment". The bottom line of my somewhat drawn-out argument in the paper is that because market value does not correlate well with what people might need or what they might deserve as a matter of fair or just treatment, it is wrong to determine what morally ought to be done (including what ought to be sustained) by what its commercial or market value happens to be. I still think that the case for this thesis is compelling.

As early as 1970, the Organization for Economic Co-operation and Development (OECD) declared that "…'[economic] growth is not an end in itself, but rather an instrument for creating better conditions of life,' from which it followed the notion that quality of life should be given operational content so that policies, including economic policies, could be geared towards it" (Verwayen 1980, p. 237). Nearly 30 years later, the second OECD World Forum on "Statistics, Knowledge and Policy" was held in Istanbul, Turkey, producing, among other things, the Istanbul Declaration in 2007. Chapter 11 is my contribution to the Forum. I made the case for increasing use of (1) multi-levelled statistical analysis in order to give proper weight to the great variety of interactions among the different "nests" in which human beings live, from their own homes to families, friends, neighbourhoods, cities, provinces, and so on, and (2) theories that include human agency (attitudes, motives, intentions, feelings, thoughts, beliefs and knowledge). As complex as our social scientific analyses have increasingly become, human beings and their living conditions are still far more complex than our statistical and conceptual machinery can accommodate.

Chapter 12 is a modest attempt to test the assumption that "27 of the most frequently used measures to assess aspects of the quality of people's lives…are sensitive to the changes in the circumstances of one's life measured by self-perceptions of change and by self-assessments of the net balance of salient positive and negative events one has experienced in some specified period of time". We surveyed a panel of British Columbia residents at three points in time, February 2005, 2006 and 2007, and found that "The success rate of the assumption using self-perceptions of change (61.7%) was much higher than the success rate using a net balance of experienced events (37.3%)".

The impact of arts-related activities on the perceived quality of life is one of the most under-investigated areas in the field of quality of life research, surpassed only by the impact of food and sexual activity. In forty years of editing *Social Indicators Research*, I saw no studies submitted on the importance of food and sexual activity in all their aspects (social, economic, health, psychological, political) for the quality of life. Studies of arts-related activities could be counted on at best a finger or two beyond one hand. So, there is a great deal of work to be done in these areas. Chapter 13 is a report of our third study of arts-related activities. It is based on a 2007 province-wide survey and 5 individual, small community surveys in 2006 in British Columbia. We measured time spent by the hour (e.g. listening to music) or by the numbers of events (e.g. attending live theatre performances) and levels of satisfaction obtained for over 67 kinds of arts-related activities, and we regressed perceived quality of life scores measured in seven different ways on the arts-related activities and other frequently used measures. We showed that the different ways of measuring overall perceived quality of life had a variety of associations with different arts-related activities, i.e. the measures were by no means equally sensitive to changes in all kinds of activities and other predictors. From this, we concluded that to avoid being misled by the varied and limited sensitivity of diverse global measures to different predictors, researchers should always use more than one kind of dependent variable.

In February 2008, President of the French Republic, Nicolas Sarkozy, formed a Commission on the Measurement of Economic Performance and Social Progress, chaired by the Nobel Laureat Joseph Stiglitz and including several other former Laureats. The Commission's Report came out in 2009 and received considerable publicity and discussion. Chapter 14 is my contribution to a symposium with 6 scholars held at the Seventeenth World Congress of Sociology in July 2010 at Gothenberg, Sweden, organized by Heinz-Herbert Noll and sponsored by the International Sociological Association. All of the papers were published together in *Social Indicators Research* in 2011. Given the distinguished scholars on the Commission, social indicators/quality of life researchers all had high hopes that it would produce a thorough state-of-the-art Report with good guidelines for future research. Most of us were disappointed. The Report had three parts, the first telling us what we already knew about the limitations of the national income and product accounts, the second telling us quite a bit less than we knew about quality of life research and the third telling us to get someone else to address problems of measuring sustainable development. Maybe our hopes were too high and our criticisms too severe, but all the documents are publicly available and readers can judge for themselves. In May 2013, Stiglitz was asked by the OECD to lead a high-level expert group to continue the work of Commission. The rest of us will continue to hope.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) was the lead agency for the UN Decade of Education for Sustainable Development, 2005–2014, and I was appointed to the UN Monitoring and Evaluation Expert Group to assess the degree to which the aims of the designated decade were achieved. I thought we would not be able to make a rigorous assessment without some standardized baseline measures of what students know and what their attitudes and behaviours are towards sustainable development. Accordingly, with colleagues at Brandon University and the province of Manitoba Ministry of Education and Advanced Learning, we undertook some surveys leading to the construction of such measures. Chapter 15 is a report of our third investigation. We were able to craft a pretty good 20-item Index of Knowledge of Sustainable Development, a 15-item Index of Attitudes Favourable to Sustainable Development and a 16-item index of Behaviours Favourable Toward Sustainable Development, although only about 25% of the variance in the Behaviours scores could be accounted for by scores for Knowledge and Attitudes. In the future, much more work needs to be done on measuring appropriate behaviours.

Chapter 16 is a short farewell note for readers of *Social Indicators Research*. In Michalos (2005b), I published a report on the development of the journal based on a paper presented at the Ninth World Congress of Sociology in Uppsala, Sweden, in 1978. In that paper, I explained how I came to initiate the journal like the Little Red Hen in the children's story, after everyone else I suggested might do it seemed quite happy to leave it to me. It turned out to be one of the most rewarding initiatives I ever had.

The last Chap. 17 in this volume describes some features of what we call the Michalos-Zumbo Well-Being Index. It is a measure of subjective well-being built on 4 single item, 7-response category, Likert-type measures frequently used as dependent variables covering life satisfaction, happiness, overall quality of life and standard of living. Besides the studies cited in the article, its usage can be compared with other familiar measures in Michalos (2003, 2005a, b; Michalos et al. 2005, 2011).

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