

QUALITY-OF-LIFE RESEARCH

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in: Bryant, C.D. & Peck, D.L. '21st Century Sociology, A Reference Handbook'
Sage, Thousand Oaks, California USA 2007. ISBN 978-1-4129-1608-0 Volume 2, chapter 7, pp 54-62

1 INTRODUCTION

As a fairly new interdisciplinary field of inquiry the quality of life research has benefited greatly from the discipline of sociology. The field consists of five overlapping traditions, namely 1) social indicators research, 2) happiness studies, 3) gerontology of successful aging, 4) psychology of wellbeing and 5) health related quality-of-life research. The efforts of sociologists are particularly prominent in the first two of these traditions. Quality-of-life is also a major issue in the fields of the sociology of work and sociology of the family.

Quality-of-life has always been a topic of interest in philosophy where quality of life or the good life is viewed as a virtuous life. However, philosophers tend to disagree on what virtues are the most important. Thus, the philosophical approach is speculative and tends to be based on the philosopher's personal experiences in life. In the late 20th century, however, quality-of-life became a topic of interest in the social sciences. Social scientists deal in a more empirical way with the subject and systematically gather data on the experiences of other people. In 1995, Quality-of-life research became institutionalized with the founding of the International Society for Quality Of Life Studies.

Scientific roots

The theme of "quality-of-life" developed almost simultaneously in several fields of the social sciences. In sociology, quality-of-life was often an implicit theme in socio-graphic studies, such as the portraits of rural life in the United States conducted by Ogburn (1946). Quality-of-life became a main issue in the 'social indicators research' that emerged in the 1960s as a reaction against the domination of economic indicators in the policy process. Initially, the emphasis was on 'objective' indicators of wellbeing, such as poverty, sickness and suicide, subjective indicators were added during the 1970s. Landmark books in this latter tradition are *Social Indicators of Well-being: Americans Perceptions of Life Quality*, by Andrews and Withey (1976) and *The Quality of American Life: Perceptions, Evaluations and Satisfaction*' by Campbell (1981). Perceived quality-of-life is now a central issue in social reports in most developed countries and items on that matter are standard in periodical social surveys. Quality-of-life has also become an area of interest within the sociology of work, the sociology of housing and family sociology (Schuessler and Fisher 1985; Ferriss 2004).

In psychology, the first quality-of-life studies were conducted as a part of research into 'successful aging'. A typical book of this kind would be *Personal Adjustment in Old Age*' by Cavan, Burgess, Goldhamer, and Havighurst (1949). In the 1960s, the topic also appeared studies of mental health such as *Americans View their Mental Health: A Nationwide Interview Survey*' by Gurin, Veroff and Feld (1960) and the groundbreaking cross-national study on

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The Pattern of Human Concerns by Cantril (1965) in a book by that same title now a common issue in psychological research and is often referred to as "subjective well-being" (Diener, Lucas, Smith, and Suh (1999).

In the 1980s, quality-of-life issues also began to appear in medical research with a focus on patient perceptions of their condition. Typically measured using standard questionnaires such as the Lancaster Quality-of-Life Inventory developed by Lehman (1988), this area of inquiry field has focused on "Health Related Quality-of-Life" and on "Patient Reported Outcomes". Other medically related quality of life studies include residential care (e.g. Clark and Bowling 1990) and handicapped persons (e.g. Schalock 1997).

In the 1990s, quality-of-life became also an issue in economy. An early bird n was Bernard VanPraag who summarized much of his work in *Happiness Quantified: A Satisfaction Calculus Approach* (2004). Another recent account is '*Happiness and Economics*' by Bruno Frey and Alois Stutzer (2002).

Social Roots

Quality-of-life research has its roots in several social developments. One is the rise in the material standard of living and a concomitant reduction of famine and physical illness. The more humans are free of these ills, the more evident ways for further improvement became. Interest in quality-of-life was also stirred by the rise of individualism. The more choices available the more interested people become in quality of life issues and alternative ways of living. Ideologically, this orientation is manifested in a revival of utilitarian moral philosophy, in which happiness is the central goal (Bentham 1789).

When the post-war economic boom of the 1960s was followed by disenchantment with economic growth, a common slogan of that time was 'more well-being rather than more wealth', and this raised questions of what well-being actually is and how it can be furthered. These period of time also witnessed disenchantment with medical technology and a related call for more 'quality-of-life' rather than mere extension-of-life. Much of this criticism was voiced by the patient-organizations that developed around this time. Health related quality-of-life research was also furthered by the movement towards 'evidence based' treatment in healthcare that began to come into force in the 1980s. Quality-of-life was soon seen as a relevant side effect of *cure* and as a major outcome of *care*. Consequently, quality-of-life became one of the indicators in systematic research into the effects of drugs and treatment protocols.

2 CONCEPTS OF 'QUALITY-OF-LIFE'

All social science deals with 'quality-of-life' in some way. Sociological subjects such as income, power and prestige can be seen as qualities and this is also true for psychological subjects such as intelligence and mental health. The crux of quality-of-life research is in its inclusiveness, quality-of-life research is not about specific qualities of life but about overall quality. The concept is typically used to strike a balance and designate the desired overall outcome of policies and programs (Schuessler and Fisher 1985: 129).

In practice the term 'quality-of-life' is used for different notions of the good life. For the most part quality of life denotes bunches of *qualities* of life, bunches that can be ordered on the basis of two distinctions. The first distinction is between *opportunities* for a good life and the *outcomes* of life. This distinction is quite common in the field of public-health research. Pre-conditions for good health, such as adequate nutrition and professional care are seldom mixed up

with health itself. A second difference is between *external* and *inner* qualities. In the first case the quality is in the environment, in the latter it is in the individual. This distinction is also quite common in public health. External pathogens are distinguished from inner afflictions. The combination of these two dichotomies yields a fourfold matrix, as shown in [scheme 1](#).

In the upper half of the scheme, we see next to the outer opportunities in one's environment, the inner capacities required to exploit these. The environmental conditions can be denoted by the term *livability*, the personal capacities by the term *life-ability*. This difference is not new. In sociology, the distinction between 'social capital' and 'psychological capital' is sometimes used in this context, and in the psychology of stress the difference is labeled negatively in terms of 'burden' and 'bearing power'.

The lower half of the scheme is about the quality of life with respect to its outcomes. These outcomes can be judged by their value for one's environment and by their value for oneself. The external worth of a life is denoted by the term *utility of life*, the inner valuation of which is called appreciation of life.

2.1.1 Livability of the environment

The left top quadrant denotes the meaning of good living conditions, or 'livability'. One can also speak of the 'habitability' of an environment, though that term is also used for the quality of housing (Veenhoven 1996:7-9). Ecologists view livability in the natural environment and describe it in terms of pollution, global warming and degradation of nature. Currently, livability is typically associated with environmental preservation. On the other hand, city planners see livability in the built environment and associate it with sewerage systems, traffic jams and ghetto formation. Here the good life is seen as a fruit of human intervention. In public health this all is referred to as a 'sane' environment.

Society is central in the sociological view. Firstly, livability is associated with the quality of society as a whole. Classic concepts of the 'good society' stress material welfare and social equality, sometimes equating the concept more or less with the welfare state. Current notions of community emphasize close networks, strong norms and active voluntary associations; the reverse of this livability concept is 'social fragmentation'. Secondly, livability is seen in one's position in society. For a long time, the emphasis was on the 'under-class' but currently attention is shifting to "class exclusion" or a class of people who are deprived and excluded.

2.1.2 Life-ability of the person

Life-chances or "life-ability" suggest how well people are equipped to cope with the problems of life. The most common depiction of this aspect of quality of life is the absence of functional defects. This is 'health' in the limited sense, sometimes referred to as 'negative health'. In this context, doctors focus on unimpaired functioning of the body, while psychologists stress the absence of mental defects. This use of words presupposes a 'normal' level of functioning. Good quality of life is the body and mind working as designed. This is the common meaning used in curative care.

Next to absence of disease is the excellence of function, or "positive health" that is associated with energy and resilience. Psychological concepts of positive mental health also involve autonomy, reality control, creativity and inner synergy of traits and strivings. This broader definition is the favorite of training professions and is central to the 'positive psychology' movement.

2.1.3 Utility of Life

The utility of life represents the notion that a good life must be good for something more than itself. When evaluating the external effects of a life, one can consider the utility of life functionality for the environment. In this context, doctors stress how essential a patient's life is to their intimates. At a higher level, quality of life is seen in contributions to society, the contributions

an individual can make to human culture. Moralists see quality in the preservation of the moral order, and would deem the life of a saint to be better than that of a sinner. In this vein, the quality of a life is also linked to effects on the ecosystem. Ecologists see more quality in a life lived in a 'sustainable' manner than in the life of a polluter. Gerson (1976: 795) calls this the 'transcendentalist' conception of quality of life.

2.1.3 Enjoyment of life

As we deal with conscious humans, the enjoyment of life is the subjective appreciation of life. This is commonly referred to by terms such as 'subjective well-being', 'life-satisfaction' and 'happiness' in a limited sense of the word.

Humans are capable of evaluating their life in different ways. We have an ability to appraise our situation affectively. We feel good or bad about particular things and our mood level signals overall adaptation. These affective appraisals are automatic, but unlike other animals humans can reflect on this experience. Humans also have a sense of how they have felt in the past. Humans can judge life cognitively by comparing their experience with notions of how it should be.

3 MEASURES OF QUALITY OF LIFE

Quality-of-life research is about measurement. Hence the field can be aptly described by the measures used, of which there are many. In the following sections examples of measures used in quality-of-life research are presented. The substantive dimensions these measures are thought to represent will be brought to light using the [Scheme 1](#) classification.

3.1 Meanings in multi-dimensional measures of quality of life

Most of these measures are 'multi-dimensional' and assess different qualities of life, which are aggregated in one 'quality-of-life *score*'. Often, the different qualities are also presented separately in a 'quality-of-life *profile*'. Multi-dimensional measures figure in medical 'quality of life' research, gerontological research on 'successful ageing', psychological 'wellbeing' research, sociologically oriented research on individual 'welfare' and comparative studies on quality-of-life in nations. Below I present some.

3.1.1 Example of a medical quality of life index

One of the most common measures used in health-related quality-of-life research is the 'SF-36 Health Survey' (Ware 1996). It is a questionnaire on topics on physical limitations in daily chores (10 items); physical limitations to work performance (4 items); bodily pain (2 items); perceived general health (6 items); vitality (4 items); physical and/or emotional limitations to social functioning (2 items), emotional limitations to work performance (3 items); self characterizations as nervous (1 item); and recent enjoyment of life (4 items). [Scheme 2](#) shows how these topics fit the above classification of qualities of life. Most elements of this scale refer to performance potential and belong in the life-ability quadrant right top. This will be no surprise, since the scale is aimed explicitly at health. Still, some of the items concern outcomes rather than potency, in particular the items on recent enjoyment of life (last on the list). As a proper health measure, the SF-36 does not involve outer qualities. So the left quadrants in [scheme 2](#) remain empty.

Several other medical measures of quality of life involve items about environmental conditions that belong in the livability quadrant. For instance, the 'Quality Of Life Interview Schedule' by Ouelette-Kuntz (1990) is about availability of services for handicapped persons. In this supply centered measure of the good life, life is better the more services are offered and the more greedily they are used. Likewise, the Quality of Life Index for cancer patients (Spitzer et al 1981) lists support by family and friends as a quality criterion. Some medical indexes also include outer effects that belong to the utility quadrant. Some typical items are continuation of work tasks and support provided to intimates and fellow patients.

Similar indexes have been developed in sociology, mostly in the context of marketing research for the welfare state. One of the first attempts to chart quality of life in a general population was the made in the Scandinavian 'Study of comparative welfare' under the direction of Erik Allardt (1976). Welfare is measured using the following criteria: income; housing; political support; social relations; being irreplaceable; doing interesting things; health; education; and life-satisfaction. Allardt classified these indicators using his, now classic distinction, between 'having', 'loving' and 'being'. These indicators can also be ordered in the fourfold matrix proposed here (See [scheme 3](#)). Most of the items belong in the left-top quadrant because they concern pre-conditions for a good life rather than good living as such, and because these chances are in the environment rather than in the individual. This is the case with income, housing, political support and social relations. Two further items also denote chances, but these are internal capabilities. This is the health factor and level of education. These items are placed in the top-right quadrant of personal life-ability. The item 'being irreplaceable' belongs in the utility bottom left quadrant. It denotes a value of life to others. The last two items belong in the enjoyment bottom right quadrant. 'Doing interesting things' denotes appreciation of an aspect of life, while life-satisfaction concerns appreciation of life as a whole.

3.1.2 Example of a measure of quality of life in nations

Next to these measures for comparing quality-of-life *within* nations, there are also multi-dimensional measures for comparing quality-of-life *across* nations. These measures are typically meant as an alternative to the common economic metric for quality-of-life, that is, GNP per head. They all offer something more, but differ in the mix of additions. The most commonly used indicator in this field is the 'Human Development Index'. This index was developed for the United Nations Development Program, which describes the progress in all countries of the world in its annual 'Human Development Reports' (UNDP 1990). The Human Development Index is the major yardstick used in these reports. The basic variant of this measure involves three items, namely public wealth, measured by buying power per head; education, as measured by literacy and schooling; and life-expectancy at birth.

Later variants of the HDI involve further items gender-equality measured using the 'Gender empowerment index', which involves male-female ratios in literacy, school enrolment and income and poverty measured by prevalence of premature death, functional illiteracy and poverty.

In a theoretical account of this measure the UNDP states the focus should be on how development enlarges people's choice, and there by, their chances for leading long, healthy and creative lives (UNDP 1990: 9).

As shown in [Scheme 4](#), this index can have three meanings. First, it is about living conditions in the basic index material affluence in society and, in the variants, the degree of social equality. These items belong in the top left quadrant. In the case of wealth it is acknowledged that this environmental merit is subject to diminishing utility. Secondly, the HDI includes education abilities. Although a

high level of education does not guarantee high physical and mental health, it means that many citizens at least hold basic knowledge. Finally, the item 'life-expectancy' is an outcome variable. However, the bottom left quadrant remains empty since the UNDP's measure of development does not involve indicators of utility of life.

The HDI is the most concise measure of quality of life in nations. Extended variants in this family provide more illustration. For instance, Naroll's (1984: 73) 'Quality of Life Index' includes contributions to science by country, which fits the utility lower left quadrant. This index also includes suicide rates and mental health, which belongs in life-ability-quadrant left top. The power of these indices is that they summarize the various qualities of life in one number thereby allowing comparison with others and monitoring over time. Since most of these measures consist of sub-indexes, they also provide an overview of strong and weak points. Further, these indexes have public appeal; they list things that are typically valued.

Yet there are also weaknesses to this multi-dimensional measurement approach. One such limitation is that the lists of valued things are never complete, but are restricted to a few measurable items. We may value true love and artistic innovations, but these dimensions are not to be captured in numbers nor is a list of valued things time-bound. Because valued things may reflect the current political agenda, these are ill-suited for extended periods of monitoring.

Typically all items are treated alike, but the relative importance can differ. Differential weights are used in some cases, but the basis for this is typically weak and does not acknowledge that the importance of living-conditions depends on life-abilities.

A more basic problem is found in aggregation in that one cannot meaningfully add environmental chances to life-abilities. It is the *fit* of chances and abilities that counts for quality of life, not the *sum*. Likewise it makes no sense to add chances for a good life (both top quadrants) and the outcomes of life (right below), certainly not if one wants to identify critical chances. This lack of a clear meaning reduces the descriptive relevance of these measures, and it impedes explanation.

3.2 Measures for specific qualities of life

Next to these encompassing measures of quality of life there are measures that are used to denote specific qualities. These indicators can also be mapped on the matrix. Again some illustrative examples will suffice.

3.2.1 Measures of livability

Environmental life-chances are measured in two ways, by the possibilities embodied in the environment as a whole, and by relative access to these opportunities. The former measures concern the livability of societies, such as nations or cities. These indicators are typically used in developmental policy. The latter are about the relative advantage or deprivations of persons in these contexts, and are rooted mostly in the politics of redistribution.

Measures of livability of society focus on nations; an illustrative example is Estes' (1984) 'Index of Social Progress'. This measure involves aspects such as wealth of the nation, peace with neighbors, internal stability and democracy. There are similar measures for quality of life in cities and regions. There are also livability counts for institutions such as army bases, prisons, hospitals for the mentally ill and residences for geriatrics. Measures of relative deprivation focus on differences among citizens for such things as: income, work and social contacts. Differences in command of these resources are typically interpreted as differential access to scarce resources. All these measures work with a points system and summate scores based on different criteria in some way.

These inventories have the same limitations as multi-dimensional measures of quality-of-life, but one problem specific to the measurement of livability is in the implicit theories behind the measure. The ingredients of these indexes are things *believed* to add to the quality of life, but these beliefs are not necessarily rooted in knowledge of what people really need. In this respect measures of the livability of the social environment differ from the indicators used for the physical environment. On the basis of much research we can now estimate fairly well how certain pollutants will affect illness and longevity. However, a similar evidence base is largely lacking for the livability of social environments, leaving a vacuum that is typically filled with ideological prepossession. . As a result there is some circularity in the use of the measures, though they are meant to show policy makers the way to the good life, they draw heavily on what policy makers believe already.

3.2.2 *Measures of life-ability*

Different measures exist to assess “capabilities for living.” First there is a rich tradition of health measurement in the healing professions. Second there is a trade in psychological skill measurement which serves selection within education and at work.

Measures of health are, for the greater part, measures of negative health. There are various inventories of afflictions and functional limitations, several of which combine physical and mental impairment scores. Assessment is based on functional tests, expert ratings and self-reports. There also are self-report inventories for positive health in the tradition of personality assessment (e.g. Ryff and Keyes 1995)

As in the case of livability, these measures do not provide a complete estimate of life-ability. Again we meet the same fundamental limitations of completeness and aggregation. Unlike the case of livability, there is some validation testing in this field. Intelligence tests in particular are gauged by their predictive value for success at school and at work. Yet many of the other ability-tests lack any validation.

3.2.3 *Measures for utility of life*

There are many criteria for evaluating the usefulness of a life, of which only a few can be quantified. When evaluating the utility of a person's life by the contribution that life makes to society one aspect is good citizenship as measured by law abidance and voluntary work. Where the utility of a life is measured with its effect on the environment, consumption is a relevant aspect. And while there are several measures of ‘green living’, it is less easy to quantify moral value. For some criteria we have better information at the aggregate level. Wackernagel's (1999) measure of ecological footprint indicates the degree to which citizens in a country use irreplaceable resources. Patent counts per country give an idea of the contribution to human progress and are part of Naroll's (1984) index.

3.2.4 *Measures of appreciation of life*

Measurement of the subjective appraisal of life is relatively straightforward. Interviews are conducted though direct questioning such as an interview or a questionnaire. Since the focus is on 'how much' the respondent enjoys life rather than 'why', the qualitative interview method is limited in this field. Most assessments are self-reports in response to standard questions with fixed response options.

Many of these measures concern specific appraisals such as satisfaction with ones sex life or perceived meaning of life. As in the case of life-chances, these aspects cannot be meaningfully added in a whole, because satisfactions cannot be assessed exhaustively and differ in

significance. Yet humans are also capable of overall appraisals. As noted earlier, we can estimate how well we feel generally and report on that. So, encompassive measurement is possible in this quality quadrant.

There are various ways to ask people how much they enjoy their life-as-a-whole. One way is to ask them repeatedly how much they enjoy it right now, and to average the responses. This is called 'experience sampling'. This method has many advantages, but is expensive. The other way is to ask respondents to estimate how well they feel generally or to strike the balance of their life. Almost all the questions ever used for this purpose are stored in the 'Item Bank' of the 'World Database of Happiness'.

Questions on enjoyment of life typically concern the current time. Most questions refer to happiness 'these days' or 'over the last year'. Obviously the good life requires more than this, hence happiness must also be assessed over longer periods. In several contexts we must know happiness over a lifetime, or better, how long people live happily. At the individual level it is mostly difficult to assess how long and happy people live, because we know only when they are dead; however at the population level the average number of years lived happily can be estimated by combining average happiness with life expectancy. For details of this method see Veenhoven (1996).

There are doubts about the value of these self-reports, in particular about interpretation of questions, honesty of answers and interpersonal comparability. Empirical studies, however, show reasonable validity and reliability. There are also qualms about comparability of average response across cultures, it is claimed that questions are differently understood and that response bias differs systematically in countries. These objections have also been checked empirically and appeared to carry no weight. This literature is aptly summarized in Diener et. al. (1999) and Schyns (2003). (see [Scheme 5](#))

4 SOCIOLOGY OF HAPPINESS

Sociologists have studied happiness at two levels, at the macro level for comparing across nations and at the micro-level for identifying differences within nations. The magnitude of insight these quality-of-life measures provide is somewhat difficult to assess simply because they measure many different aspects of life. However, happiness is one of the most important of these and, for this reason, the following summary discussion to measurement of the happiness provides a focus on one of the most inclusive measure of quality-of-life, especially when combined with life expectancy in happy life years.

4.1 Happiness and society

Comparative research on happiness started in the 1960s with Cantril's (1965) global study on 'the pattern of human concern'. The range of Happiness item is commonly used for international survey programs such as the World Values Survey. This standard item of life satisfaction is:

Taking all together, how satisfied or dissatisfied are you currently with your life as a whole?

1	2	3	4	5	6	7	8	9	10
Dissatisfied									Satisfied

The data can also be used for measuring inequality in quality-of-life among citizens and this

dimension can be quantified using the standard deviation of responses. Mean and standard deviation are combined into an index of 'Inequality-Adjusted Happiness'. Mean happiness can also be combined with indications of physical thriving, such as life expectancy and for example an index of 'Happy Life Years' (Veenhoven 1996). In the year 2005 comparable data are available for 90 nations. In the following I offer some insights into what these data suggest about the quality-of-life in contemporary societies.

4.1.1 *Level of happiness in nations*

Most level of happiness research has focused on average happiness finding sizable and consistent differences across nations (see Diener and Suh 2000). As shown in [Scheme 6](#), average happiness is above neutral in most countries, meaning that great happiness for a great number is possible. However for Russia and for most former Soviet states the average score is less than 5. One possible reason for this finding is the result of the political, social and economic transformations undertaken in these countries. Average happiness is also low in several African countries.

There is a system in these differences. People live happier in rich nations than in poor ones and happiness is also higher in nations characterized by rule of law, freedom, good citizenship, cultural pluriformity and modernity. However, happiness is not related to everything deemed desirable. Income inequality in nations appears to be unrelated to average happiness, though it does accompany some inequality of happiness as shown for 90 nations in the 1990s and presented in [scheme 7](#).

There is considerable interrelation between the societal characteristics. The most affluent nations are also the most free and modern ones. It is therefore difficult to estimate the effect of each of these variables separately. The correlations are much abated when level of income is controlled and the correlation with social security can even become negative. Still, with the exception of inequality, sizable correlations remain. Whatever their relative contribution, these variables explain 83% of the differences in average happiness across nations.

Comparable data on average happiness are available for the USA since 1945, for Japan since 1958 and for the first eight member states of the European Union since 1973. These data show that happiness rose somewhat in the U. S. and the EU, but stagnated in Japan.

These findings do not fit the common theory that happiness depends on social comparison. Since people compare with compatriots in the first place, this would imply little difference across nations and no change over time. The findings neither fit the theory that happiness is a fixed mental trait, if so, there would not be such strong correlations with societal qualities, nor any change over time. The findings fit best with the 'livability-theory of happiness, which holds that happiness depends on the gratification of innate human needs and that not all societies meet human needs equally well (Veenhoven 1995). Another noteworthy implication of the above findings is that modern society is not so badly livable as much of problem-focused sociology suggests.

4.1.2 *Inequality of happiness in nations*

The cross-national pattern of inequality of happiness resembles the pattern of differences in average happiness. Inequality of happiness is typically lower in the economically most developed nations of this time. Inequality is also lower in the freest nations and in the best-governed ones. Not surprisingly, inequality of happiness is higher in nations with relatively large income disparities.

Comparison over time shows a consistent decline in inequality of happiness in modern nations over the last decade. Inequality of happiness has declined even in Japan, where the average remained unchanged (Veenhoven 2005a). These findings contradict common belief about new inequalities causing a growing split in modern society, rather they suggest that the equalizing effects

of modernization are still holding. The findings also show that inequality-in-quality of life is not merely a matter of distribution of scarce resources, it also depends on the general level of living and on freedom in society.

4.1.3 *Inequality adjusted happiness in nations*

Level and inequality of happiness in nations can be combined in an index of 'Inequality-Adjusted Happiness' (IAH) that marries together the utilitarian wish for greater happiness of a greater number with the egalitarian wish for fairness. The rank-order of nations is again similar to average happiness and the correlations with nation characteristics are also alike, which indicates that there is little conflict between utilitarian and egalitarian policy.

4.1.4 *Happy life years*

People prefer a long and happy life to a short but happy life and hence the length of life is taken into account by adjusting life-expectancy for average happiness. This is analogous to the computation of Disability Adjusted Life Years in international health statistics (WHO 2001). The number of 'Happy Life Years' (HLY) is computed by multiplying life expectancy with happiness expressed on a 0 to 1 scale. For example, if in a country average life expectancy is 60 and average happiness on scale 0 to 10 is 6, HLY is $60 \times 0,6 = 36$ years.

In **Scheme 6** wide differences in HLY across nations are shown: almost 63 in Switzerland and less than 13 in Zimbabwe. The rank order is similar to but not identical to average happiness. For instance, the Japanese are not too happy, but live long and therefore rank higher on HLY than on happiness. The pattern of correlation with nation characteristics is also similar, but the explained variance of HLY is higher. HLY rose in all modern nations in the late 20th century. Since 1973, Europeans have gained 4.3 happy life years, the Japanese 4.4 and Americans 5.2. This means that the quality-of-life has improved in modern society and this trend is likely to extend well into the 21st century (Veenhoven 2005b).

4.2 **Happiness and place in society**

Sociological studies of happiness have focused on differences within societies, looking primarily for links between happiness and social position. As summarized in **scheme 8**, in western societies Happiness is moderately related to social rank; the correlations tend to be stronger in non-western nations. Happiness is also related to social participation and this relation seems to be universal. Being linked into a primary network appears to be most crucial to happiness, especially being married. This relation is universal, but the presence of offspring is unrelated to happiness, at least in contemporary western nations.

Little data exists for assessing trends in these correlations over time. Some basic findings suggest that in the United States people of African descent have become somewhat happier (Thomas and Hughes 1986) and that happiness has also risen among the elderly (Witt et. al. 1979). But there have been no systematic studies on shifts in social conditions for happiness.

5 **PROSPECTS FOR THE 20TH CENTURY**

The main objective of sociological quality-of-life research is to guide public policy. In this area multi-dimensional indexes are useful for informing policy makers only about how they are doing. As noted above, these measures typically reflect the current political agenda and thus the scores inform policy makers how they have advanced along a chosen way. Happiness research also

provides information about the way to choose, at least if ‘greater happiness for a greater number’ is a policy aim. The idea that happiness should be promoted is the core of ‘utilitarian’ moral philosophy (Bentham 1789) and the application of this idea in public policy is known as ‘rule-utilitarianism’. This ideology is currently gaining ground and consequently there is a corresponding growth of interest in the implications of empirical research findings on happiness. For example the British government commissioned research by Donovan et. al. (2003) and several more reviews have been published recently (Frey and Stutzer, 2002, Layard, 2005, Veenhoven 2004). Since the evidence base is expanding rapidly, this literature is likely to continue to develop in the 21st century.

Quality-of-life research also can be used to assist individuals to make informed choices in their private life, such as choosing an occupation, having children, and the appropriate time to retire. Predicting how much satisfaction will be derived from behavioral options is not very exact; for this reason we can profit from the documented experiences of others. Such information would be particularly useful in the contemporary ‘multiple-choice society’, but current quality-of-life research does not meet this demand very well. The focus is still very much on given conditions of life, such as social class and personality and not on things one can choose, such as early retirement. Moreover, most of the current research is in the form of correlations and does not inform about causal effects. Still another problem is that there is little specification by kinds of people, yet this is required if one is to obtain tailored advice. This then defines yet another task for research on quality-of-life in the 21st century.

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Scheme 1: Four qualities of life

	<i>Outer qualities</i>	<i>Inner qualities</i>
<i>Life chances</i>	Livability of environment	Life-ability of the person
<i>Life results</i>	Utility of life	Enjoyment of life

Scheme 2: Meanings measured by Ware's SF 36 Health Survey

	<i>Outer quality</i>	<i>Inner quality</i>
<i>Life-chances</i>		No limitations to work and social functioning Not nervous Energetic General health good
<i>Life results</i>		No pain No bad feelings Happy person

Scheme 3: Meanings measured by Allardt's 'Dimensions of Welfare': having, loving, and being

	<i>Outer quality</i>	<i>Inner quality</i>
<i>Life-chances</i>	Income (h) Housing (h) Political support (h) Social relations (l)	Health (h) Education (h)
<i>Life results</i>	Being irreplaceable (b)	Doing interesting things (b) Life-satisfaction (b)

Scheme 4: Meanings measured by the UNDP's 'Human Development Index'

	<i>Outer quality</i>	<i>Inner quality</i>
<i>Life-chances</i>	Material wealth Gender equality Income equality	Education
<i>Life results</i>		Life-expectancy

Scheme 5: Measures for specific qualities of life

	<i>Outer quality</i>	<i>Inner quality</i>
<i>Life-chances</i>	<i>Quality of society</i> Livability scores <i>Position within society</i> Deprivation indexes	Impairment indexes Positive health inventories Capability tests Educational grades
<i>Life-results</i>	?	Satisfaction summations Self-ratings of happiness Happy life-years

Scheme 6: Happiness in nations around 2000 Derived indicators and illustrative scores

<i>Nation</i>	<i>Average happiness</i> <i>mean on scale 0-10</i>	<i>Happy Life Years</i> <i>life expectancy multiplied by 0-1 happiness</i>	<i>Inequality</i> <i>standard-deviation on scale 0-10</i>	<i>Inequality adjusted happiness</i> <i>0-100 index</i>
Switzerland	8.3	62.9	1.9	73
Sweden	7.9	58.9	2.0	69
USA	7.4	56.9	2.1	67
Argentina	7.0	49.6	2.5	60
Germany (W)	6.9	54.8	2.2	64
France	6.7	51.5	2.2	58
Philippines	6.3	43.7	2.7	54
Japan	6.1	49.6	2.1	55
Iran	5.9	41.5	2.7	51
Poland	5.8	42.8	2.8	50
India	4.6	42.8	2.8	48
Russia	4.1	35.7	2.7	35
Zimbabwe	3.3	12.5	3.1	23

Source: World Database of Happiness, Distributional Findings in Nations, Finding Reports 2005

Scheme 7: Happiness and society; 90 nations in the late 1990s

<i>Condition in nation</i>	<i>Correlation with</i>			
	<i>Average happiness</i>	<i>Inequality of happiness</i>	<i>Inequality Adjusted Happiness</i>	<i>Happy Life Years</i>
Wealth				
• Purchasing power per head	+ .67	– .64	+ .68	+ .78
Security				
• Lethal accidents	– .51	+ .37	– .51	– .50
• Social security	+ .31	– .51	+ .32	+ .55
Freedom				
• Economic freedom	+ .59	– .48	+ .61	+ .64
• Political freedom	+ .46	– .34	+ .43	+ .59
• Personal freedom	+ .44	– .74	+ .51	+ .48
Inequality				
• Disparity in incomes	+ .06	– .33	+ .02	– .17
• Discrimination of women	– .45	+ .38	– .48	– .76
Brotherhood				
• Tolerance	+ .50	– .33	+ .50	+ .49
• Trust in people	+ .37	– .50	+ .54	+ .39
• Voluntary work	+ .04	+ .22	– .00	– .11
Justice				
• Rule of law	+ .53	– .57	+ .56	+ .68
• Respect of civil rights	+ .56	– .44	+ .54	+ .61
• Corruption	– .60	+ .65	– .63	– .74
Explained variance: Adjusted R ²	83%	71%	85%	87%

Data: World Database of Happiness, States of Nations.

Scheme 8: Happiness and position in society

	<i>Correlation within western nations</i>	<i>Similarity of correlation across all nations</i>
Social rank		
• Income	+	-
• Education	±	-
• Occupational prestige	+	+
Social participation		
• Employment	±	+
• Participation in associations	+	+
Primary network		
• Spouse	++	+
• Children	0	?
• Friends	+	+
	++ = Strong positive	+ = Similar correlations
	+ = Positive	± = Varying
	0 = No relationship	- = Different correlations
	- = Negative	?
	? = Not yet investigated	? = No data

Source: World Database of Happiness, Correlational Findings.