

THE FOUR QUALITIES OF LIFE

Ordering concepts and measures of the good life

Ruut Veenhoven

Published in: Mark McGillivray & Mathew Clark (Eds.) 'Understanding Human Well-being', 2006, United Nations University Press. Tokyo-NewYork-Paris. Pages 74-100, ISBN 92-808-1130-4

There are many words that are used to indicate how well we are doing. Some of these signify overall thriving; currently the terms *quality of life* and *well-being* are used for this purpose, and sometimes the word *health*. In the past the terms *happiness* and *welfare* were more commonly used. There are several problems with these terms.

One problem is that these terms do not have an unequivocal meaning. Sometimes they are used as an umbrella for all that is good, but on other occasions they denote specific merit. For instance, the term *well-being* is used to denote the quality of life as a whole and to evaluate life aspects such as dwelling conditions or employment chances. Likewise, the phrase *quality of life* refers in some contexts to the quality of society and in other instances to the happiness of its citizens. There is little consensus on the meaning of these words; the trend is rather to divergence. Over time, connotations tend to become more specific and manifold. Discursive communities tend to develop their own quality-of-life notions.

The second problem is in the connotation of inclusiveness. The use of the words as an umbrella term suggests that there is such a thing as *overall* quality of life and that specific merits can be meaningfully added in some wider worth; however, that holistic assumption is dubious. Philosophers have never agreed on one final definition of quality of life, and in the practice of empirical quality-of-life measurement we see comparisons of apples and pears.

The above problem of many meanings is partly caused by the suggestion of inclusiveness. One of the reasons why the meanings become more specific is that the rhetoric of encompassing crumbles when put into practice. The broad overall meaning appears typically unfeasible in measurement and decision-making. Hence connotations tend to become more specific and diverse. As a result, rhetorical denotation of the overall good requires new terms periodically. New expressions pop up, as opposed to narrower meanings. For instance, in the field of healthcare the term *quality of life* emerged to convey the idea that there is more than mere quantity of survival time. Likewise, the word *well-being* came into use in contrast to sheer economic *welfare*. Yet, in the long run, these new terms fall victim to their success. Once they are adopted as a goal for policy, analysts and trend-watchers start extracting palpable meanings and make the concepts ever more multidimensional.

Obviously, this communicative practice causes much confusion and impedes the development of knowledge in this field. In reaction there have been many proposals for standard definitions. Elsewhere the author has listed 15 definitions of happiness

Acknowledgements

This is a shortened version of an article originally published in the *Journal of Happiness Studies* (2000), 1(1): 1-39, "The Four Qualities of Life: Ordering Concepts and Measures of the Good Life", by Ruut Veenhoven, © Kluwer Academic Publishers, and is included here with kind permission from Springer Science and Business Media.

(Veenhoven, 1984: 16-17). More recently Noll (1999) listed many meanings of quality of life in nations.

Since we cannot really force the use of words, we can try to clarify their use better. We can elucidate the matter by distinguishing different meanings. An analytic tool for this purpose is proposed in this chapter. First, a fourfold classification of qualities of life is presented. By means of this taxonomy, common terms and distinctions are placed. The matrix is then used to chart substantive meanings in common measures of the good life. Finally the question is raised as to whether we can meaningfully speak about comprehensive quality of life.

1. GROUPING QUALITIES OF LIFE

A classic distinction is between *objective* and *subjective* quality of life. The first refers to the degree a life meets explicit standards of the good life as assessed by an impartial outsider - for instance, the result of a medical examination. The latter concerns self-appraisals based on implicit criteria; for example, someone's subjective feeling of health. These qualities do not necessarily correspond; someone may be in good health by the criteria of his doctor, but nevertheless feel bad. On the basis of this distinction, Zapf (1984: 25) has proposed a fourfold classification of welfare concepts. When conditions of life score well on objective measures and subjective appreciation of life is positive, he speaks of *well-being*; when both evaluations are negative, he speaks of *deprivation*. When objective quality is good but subjective appreciation is negative, the term *dissonance* is applied, and the combination of bad conditions and positive appreciation is labelled *adaptation*.

Though elegant, these distinctions have not proven particularly useful. The taxonomy does not explain much, mainly because the difference is more in observation than in substance. Objective health assessment aims at the same qualities as subjective appraisals, though by different means. Further, the labelling gives rise to misunderstanding. The word *objective* suggests indisputable truth, whereas the term *subjective* is easily interpreted as a matter of arbitrary taste. This suggestion is false: the fact that income can be measured objectively does not mean that its value is beyond question.

1.1 Chances and outcomes

A substantively more relevant distinction is between opportunities for a good life and the good life itself. This is the difference between potentiality and actuality, termed here as life chances and life results. Opportunities and outcomes are related, but are certainly not the same. Chances can fail to be realized, due to stupidity or bad luck. Conversely, people sometimes make much of their life in spite of poor opportunities.

This distinction is quite common in the field of public health research. Preconditions for good health, such as adequate nutrition and professional care, are seldom mixed up with health itself. Much research is aimed at assessing the relationships between these phenomena; for instance, by checking whether common nutritional advice really yields extra years lived in good health.

Yet in social policy discussions, means and ends are less well distinguished. For instance, in the Netherlands the term well-being is used for both social services, e.g. state pensions, and for the expected effects, satisfied citizens. This is not just sloppy thinking, it is also an expression of the ideology that there is quality to be found in the welfare society.

1.2 Outer and inner qualities

A second difference is between external and internal qualities. In the first case the quality is in the environment, in the latter it is in the individual. Lane (1994) made this distinction clear by emphasizing *quality of persons*. Likewise Musschenga (1994: 182) discerned *quality of conditions for living* from *the quality of being human*.

This distinction is also quite commonly made in public health. External pathogens are distinguished from inner afflictions, and researchers try to identify the mechanisms by which the former produce the latter and the conditions in which this is more and less likely. Yet again this basic insight is lacking in many social policy discussions. For instance, in the current discourse on city renewal, the phrase *quality of life* is used both for clean streets and feelings of being at home in the neighbourhood. All the research that found negligible relationships has not changed this use of words.

1.3 Four qualities of life

The combination of these two dichotomies yields a fourfold matrix (fig. 4.1). The distinction between chances and results is presented vertically, the difference between outer and inner qualities horizontally.

1.3.1 Two kinds of life chances

In the upper half of figure 4.1 we see two variants of potential quality of life, with the outer opportunities in one's environment and the inner capacities to exploit these. The environmental chances can be denoted by the term *liveability*, the personal capacities with the word *life-ability*. This difference is not new. In sociology the distinction between *social capital* and *psychological capital* is sometimes used in this context. In the psychology of stress the difference is labelled negatively in terms of *burden* and *bearing power*.

Liveability of the environment

The left top quadrant denotes the meaning of good living conditions. Often the terms *quality of life* and *well-being* are used in this particular meaning, especially in the writings of ecologists and sociologists. Economists sometimes use the term *welfare* for this meaning. Another term is *level of living*.

Liveability is a better word, because it refers explicitly to a characteristic of the environment and does not have the limited connotation of material conditions. One could also speak of the *habitability* of an environment, though that term is also used for the quality of housing in particular. Elsewhere the author has explored that concept of liveability in more detail (Veenhoven, 1996: 7-9).

Life-ability of the person

The right top quadrant denotes inner life chances: how well we are equipped to cope with the problems of life. This aspect of the good life is also known by different names. The words *quality of life* and *well-being* are used to denote this specific meaning, especially by doctors and psychologists. There are more names, however. In biology the phenomenon is referred to as *adaptive potential*. On other occasions it is denoted by the medical term *health*, in the medium variant of the word, or by psychological terms such as *efficacy* or *potency*. Sen (1992) calls this quality-of-life variant *capability*. The

present author prefers the simple term *life-ability*, which contrasts elegantly with "liveability".

1.3.2 *Two kinds of life results*

The lower half of the matrix is about the quality of life with respect to its outcomes. These outcomes can be judged by their value for one's environment and value for oneself. The external worth of a life is denoted by the term *utility of life*. The inner valuation of it is called *appreciation of life*. These matters are, of course, related. Knowing that one's life is useful will typically add to the appreciation of it. Yet not all useful lives are happy lives and not every good-for-nothing really cares. This difference has been elaborated in discussions on utilitarian moral philosophy, which praises happiness as the highest good. Adversaries of that view hold that there is more worth to life than just pleasures and pains. Mill ([1863] 1990) summarized that position in his famous statement that he preferred an unhappy Socrates to a happy fool.

Utility of life

The left bottom quadrant represents the notion that a good life must be good for something more than itself. This presumes some higher values. There is no current generic for these external outcomes of life. Gerson (1976: 795) referred to these as transcendental conceptions of quality of life. Another appellation is *meaning of life*, which then denotes *true* significance instead of mere subjective sense of meaning. The author prefers the more simple *utility of life*, admitting that this label may also give rise to misunderstanding. Be aware that this external utility does not require inner awareness. A person's life may be useful from some viewpoint without them knowing,

Appreciation of life

Finally, the bottom right quadrant represents the inner outcomes of life: that is, the quality in the eye of the beholder. As we deal with conscious humans, this quality boils down to 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. Life has more of this quality the more and the longer it is enjoyed. In fairy-tales this combination of intensity and duration is denoted with the phrase "they lived long and happily".

2. ORDERING CONCEPTS OF THE GOOD LIFE

With the help of this matrix we can now place the various notions about the good life. This section starts with an overview of concepts that neatly fit the quality quadrants before confronting the matrix with some other classifications of qualities of life.

2.1 Meanings within quality quadrants

Most discussions of the good life deal with more specific values than the four qualities of life discerned here. Within each quadrant there is a myriad of submeanings, most of which are known under different names. It would need a voluminous book to record all the terms and meanings used in the literature. Some of the main variants are presented below.

2.1.1 *Aspects of liveability*

Liveability is an umbrella term for the various qualities of the environment which seem relevant for meeting human needs. In rhetoric use, the word refers mostly to specific

kinds of qualities which typically root in some broader perception of the good society. The circumstantial qualities that are emphasized differ widely across contexts and disciplines.

Ecologists see liveability in the natural environment and describe it in terms of pollution, global warming and degradation of nature. Currently they associate liveability typically with *preservation*. City planners see liveability in the built environment and associate it with sewer systems, traffic jams and ghetto formation. Here the good life is seen as a fruit of human intervention.

In the sociological view, society is central. First, liveability 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 emphasize close networks, strong norms and active voluntary associations. The reverse of that liveability concept is *social fragmentation*. Second, liveability is seen in one's position in society. For long the emphasis was on an *underclass*, but currently attention shifts to an *outer class*. The corresponding antonyms are deprivation and exclusion.

2.1.2 *Kinds of life-ability*

The most common depiction of this 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. In their language, quality of life and well-being are often synonymous with mental health. This use of words presupposes a "normal" level of functioning. Good quality of life is the body or mind working as designed. This is the common meaning used in curative care.

Next to absence of disease one can consider excellence of function. This is referred to as *positive health* and associated with energy and resilience. Psychological concepts of positive mental health involve also autonomy, reality control, creativity and inner synergy of traits and strivings. A new term in this context is *emotional intelligence*. Though originally meant for specific mental skills, this term has come to denote a broad range of mental capabilities. This broader definition is the favourite in the training professions.

A further step is to evaluate capability in a developmental perspective and include acquisition of new skills for living. This is commonly denoted by the term *self-actualization*; from this point of view a middle-aged man is not *well* if he behaves like an adolescent, even if he functions without problems at this level. This quality concept is also currently used in the training professions.

Lastly, the term *art of living* denotes special life-abilities; in most contexts this quality is distinguished from mental health and sometimes even attributed to slightly disturbed persons. Art of living is associated with refined tastes, an ability to enjoy life and an original style of life.

2.1.3 *Criteria for utility of life*

When evaluating the external effects of a life, one can consider its functionality for the environment. In this context, doctors stress how essential a patient's life is to his/her intimates. The life of a mother with young children is valued higher than the life of a woman of the same age without children. Likewise, indispensability at the workplace figures in medical quality-of-life notions.

At a higher level, quality of life is seen in contributions to society. Historians see

quality as the addition an individual can make to human culture, and thus rate the lives of great inventors, for example, higher than those of anonymous peasants. 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. In a broader view, the utility of life can be seen in its consequences for long-term evolution. As an individual's life can have many environmental effects, the number of such utilities is almost infinite.

Apart from its functional utility, life is also judged on its moral or aesthetic value. Returning to Mill's statement that he preferred an unhappy Socrates to a happy fool. Mill did not say this just because Socrates was a philosopher whose words have come down to us. It was also because he admired Socrates as an outstanding human being. Likewise, most of us would attribute more quality to the life of Florence Nightingale than to that of a drunk, even if it appeared that her good works had a negative result in the end. In classic moral philosophy this is called *virtuous living*, and is often presented as the essence of *true happiness*.

This concept of exemplary utility sometimes merges with notions of inner life-ability, in particular in the case of self-actualization. Self-development is deemed well, even if it might complicate life. In some philosophies of life, reaching a state of enlightenment is more important than departing from it.

This quality criterion is external; individuals need not be aware of their perfection or may actually despise it. It is an outsider who appraises the quality of the individual's life on the basis of an external criterion. In religious thinking such a judgement is made by God on the basis of eternal truth; in post-modern thought it is narrated by self-proclaimed experts on the basis of local conviction.

Clearly, the utility of life is not easy to grasp; the criteria and those who would judge are multifarious. Later we will see that this prohibits comprehensive measurement of this quality of life. This quadrant is typically the playground of philosophers.

2.1.4 *Appreciation of life*

Humans are capable of evaluating their life in different ways. As already noted, we have in common with all higher animals the ability to appraise our situation effectively. We feel good or bad about particular things and our mood level signals overall adaptation. As in animals these affective appraisals are automatic, but unlike other animals it is known that humans can reflect on that experience. We have an idea of how we have felt over the last year, while a cat does not. Humans can also judge life cognitively by comparing life as it is with notions of how it should be.

Most human evaluations are based on both sources of information: intuitive affective appraisal and cognitively guided evaluation. The mix depends mainly on the object. Tangible things such as our income are typically evaluated by comparison; intangible matters such as sexual attractiveness are evaluated by how it feels. This dual evaluation system probably makes the human experiential repertoire richer than that of our fellow creatures.

In evaluating our life, we typically summarize this rich experience in overall appraisals. For instance, we appreciate several domains of life. When asked how we feel about our work or marriage, we will mostly have an opinion. Likewise, most people form ideas about separate qualities of their life, for instance how challenging their life is and whether there is any meaning in it. Such judgements are made in different time

perspectives, in the past, present and future. As the future is less palpable than the past and the present, hopes and fears depend more on affective inclination than on cognitive calculation.

Mostly such judgements are not very salient in our consciousness. Now and then they pop into mind spontaneously, and they can be recalled and refreshed when needed. Sometimes, however, life appraisals develop into pervasive mental syndromes such as depression or ennui.

Next to aspects of life, we also evaluate life as a whole. Jeremy Bentham ([1789] 2002) thought of this form of evaluation as a type of mental calculus, and currently most scholars in the field also see it as a cognitive operation. For instance, Andrews and Withey (1976) suggest that individuals compute a weighed average of earlier life-aspect evaluations, while Michalos's (1985) multiple discrepancy theory presumes comparisons of life as it is with various standards of how it should be. Many philosophers see it as an estimate of success in realizing one's life plan (e.g. Nordenfelt, 1989).

Yet there are good reasons to assume that overall life satisfaction is mostly inferred from affective experience (Veenhoven, 1997: 59-61). One reason is that life as a whole is not a suitable object for calculative evaluation. Life has many aspects, and there is usually not one clear-cut ideal model with which to compare. Another reason seems to be that affective signals tend to dominate: seemingly cognitive appraisals are often instigated by affective cues (Zajonc, 1980). This fits the theory that the affective system is the older in evolutionary terms, and that cognition works as an addition to that navigation system rather than a replacement.

This issue has important consequences for the significance of subjective appreciation of life as a criterion for quality of life. If appreciation is a matter of mere comparison with arbitrary standards, there is little of value in a positive evaluation: dissatisfaction is then an indication of high demands. If, however, happiness signals the degree to which innate needs are met, life satisfaction denotes how well we thrive.

Whatever the method of assessment, the fact that we are able to come to an overall evaluation of life is quite important. Later on we will see that this is the only basis for encompassing judgements of the quality of life.

2.2 Difference with other classifications of qualities of life

This is, of course, not the first attempt to chart concepts of the good life. A few examples will show how this matrix differs from other taxonomies. Philosopher Dan Brock (1993: 268-275) also tried to grasp "the broadest conception of ... what makes a life go best". He distinguishes three main concepts: the degree to which life fits current values and ideals; the degree to which life fits the individual's preferences; and the degree to which the individual enjoys life subjectively. He denotes the first concept as *objective* and the other two as *subjective*. Brock insists on the difference between satisfaction of preferences (contentment in the present author's terminology) and hedonic enjoyment (mood level).

These meanings are plotted in the matrix in figure 4.2. The difference is not so much in the appreciation quadrant, but in the other three. Brock's classification is less differentiated, and shovels all the objective meanings into one heap. As he is mainly concerned with healthcare, one can imagine that he leaves out societal liveability. Yet he does not distinguish either between *capability for life* and *utility of life*, though this distinction is quite relevant for medical decisions.

Sandoe (1999) proposes a similar classification which also separates realization of preferences and hedonic experience. The difference is that his *objective* qualities are

limited to the development of potentials. He refers to that quality as *perfectionism*; the present author terms it *self-actualization*. In the matrix it is a part of the life-ability quadrant.

Storrs McCall (1975) also distinguishes two main concepts of quality of life (see fig. 4.3). Next to happiness itself, he emphasizes conditions for happiness. In his view life has quality if the necessary social conditions are available, even if an individual fails to exploit these chances or opts not to use them. Happiness is seen to result from need gratification, and hence the necessary conditions are linked to basic human needs. In this concept, human nature is the major yardstick, and not normative ideals. Consequently, the utility quadrant remains empty in this case. McCall does not distinguish between external and internal requisites, thus the two top quadrants are merged.

3. ORDERING MEASURES OF THE GOOD LIFE

The last decades have witnessed a surge in empirical research on the good life, in particular in the fields of social indicators research and medical quality-of-life assessment. This has produced a wealth of measures. Testbanks contain hundreds of them - see, for instance, Cummins (1993), Spilker (1996) and Veenhoven (2006).

Most of these measures are multidimensional and are used to assess different qualities of life. Typically, the scores on the different qualities are presented separately in a "quality-of-life *profile*". Often they are also summed in a "quality-of-life *score*". Next, there are "unidimensional" measures which focus on one specific quality. Such single qualities are often measured by single questions; for instance, the condition of cancer patients is measured by simply asking them where they stand between the best and worst they have ever experienced (Bernheim and Buyse, 1983).

A lively discussion about the pros and cons of these measures is still going on. Psycho-metricians, who focus very much on factor loadings, reliability issues and inter-test correlations, dominate this discussion. There is less attention to matters of substance, so there is no clear answer to the question of what these measures actually measure. One of the reasons for this deficiency is a lack of a clear taxonomy of the qualities of life.

Now that we have a classification of meanings, we can give it another try. This section first outlines which of these qualities figure in measures that claim to cover the good of life inclusively, and then explores whether there are measures that fit one of the four qualities of life separately.

3.1 Meanings in comprehensive measures of quality of life

As there are so many measures of the good life, they cannot all be reviewed here: four examples must suffice to illustrate the approach. The examples are taken from different research fields: medical quality-of-life research, psychological well-being research, sociologically oriented research on welfare and socio-economic studies of national development.

3.1.1 Example of a medical quality-of-life index

One of the most common measures in medical quality-of-life research is the SF-36 Health Survey (Ware, 1996). It is a questionnaire on the following topics:

- 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)
- recent enjoyment of life (4 items).

Ratings on the first four topics are grouped in a "physical component subscore", ratings on the last four topics in a "mental component sub-score". These components are added into a quality-of-life total score.

Most elements of this scale refer to performance potential and belong in the life-ability quadrant at the top right in figure 4.4. 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). Pain and bad feelings are typically the result of health defects. Happiness is clearly also an outcome. As a proper health measure the SF-36 does not involve outer qualities, so the left quadrants in figure 4.4 remain empty.

Several other medical measures of quality of life do involve items about environmental conditions that belong in the liveability quadrant. For instance, the Quality of Life Interview Schedule by Ouellette-Kuntz (1990) is about availability of services for handicapped persons. In this supply-centred 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 indices also include outer effects that belong to the utility quadrant: typical items are continuation of work tasks and support provided to intimates and fellow patients.

3.1.2 Example of a psychological well-being scale

Cummins (1993) sees quality of life (QOL) as an aggregate of objective and subjective components. Each of these components is divided into the following seven domains:

- material well-being: measured by income, quality of house and possessions
- health: measured by number of disabilities and medical consumption
- productivity: measured by activities in work, education and leisure
- intimacy: contacts with close friends, availability of support
- safety: perceived safety of home, quality of sleep, worrying
- place in community: social activities, responsibilities, being asked for advice
- emotional well-being: opportunity to do/have things wanted, enjoyment of life.

Overall QOL is measured using a points system, objective QOL using simple scores and subjective QOL using satisfaction with domains weighted by their perceived importance. Finally the scores on objective and subjective QOL are added.

The objective scores of this list represent typically life chances, though the safety items are subjective appraisals. This item is therefore placed between brackets in the matrix in figure 4.5, Most of the items concern environmental chances and are placed in the liveability quadrant, top left. Two items concern inner capabilities and are placed in the life-ability quadrant, top right.

The subjective scores all refer to how the individual appreciates these aspects of life, and belong in the enjoyment quadrant on the bottom right. The Cummins scale has no items on overall satisfaction with life. The logic of his system produces the somewhat peculiar item "How satisfied are you with your own happiness?"

The bottom left quadrant remains empty in this interpretation; however, some of the life-chance items can also be seen as indicative of outer results. The measures of *place in community* imply not only better access to scarce resources, but can also denote contribution to society. Likewise, the productivity item may not only tap ability to work, but also the results of it. For this reason these items are placed in brackets in the meaning quadrant.

3.1.3 Example of a sociological measure of individual quality of life

One of the first attempts to chart quality of life in a general population was made in the Scandinavian Study of Comparative Welfare under the direction of Erik Allardt (1976). Welfare was measured using the criteria of income; housing; political support; social relations; irreplaceability; doing interesting things; health; education; and life satisfaction.

Allardt classified these indicators using his - now classic - distinction between *having*, *loving* and *being*. This labelling was appealing at that time, because it expressed the rising conviction that welfare is more than just material wealth, and because it fitted modish notions drawn from humanistic psychology. Though it is well known, the classification has not proven to be very useful.

These indicators can also be ordered in the fourfold matrix proposed here (see fig. 4.6). Most of the items belong in the top left quadrant because they concern preconditions 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 are internal capabilities: the health factor and level of education. These items are placed in the top right quadrant of personal life-ability. The item "irreplaceable" belongs in the utility bottom left quadrant: it denotes a value of a 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.

3.1.4 Example of a measure of quality in nations

Finally an illustration of measures used in cross-national comparisons of quality of life. The most commonly used indicator in this field is the human development index (HDI). This index was developed for the UNDP, which describes the progress in all countries of the world in its annual *Human Development Report* (UNDP, 1990). The HDI is the major yardstick used in these reports. The basic variant of this measure involves three items: public wealth, measured by buying power per head; education, as measured by literacy and schooling; and life expectancy at birth. Note that we deal now with scores drawn from national statistical aggregates instead of individual responses to questionnaires.

Later variants of the HDI involve further items: gender equality measured by the so-called "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 claims to focus on how development enlarges people's choice, and thereby their chances for leading long, healthy and creative lives (UNDP, 1990: 9).

When placed in our fourfold matrix, this index can be seen to have three meanings (fig. 4.7). First, it is about living conditions, in the basic variant of material affluence in society, and in the variant 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; this, however, is not so with the equalities. Second, the HDI includes abilities. The education item belongs in the top right quadrant. Though a high level of education does not guarantee high mental health and pronounced ability in the art of living, it means that many citizens have at least basic knowledge.

Lastly, the item *life expectancy* is an outcome variable and belongs in the bottom right quadrant. The bottom left quadrant remains empty. The UNDP's measure of development does not involve specific notions about the meaning 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 (1983: 73) "quality of life index" includes contributions to science by the country, which fits the utility quadrant. The index also includes suicide rates, which belong to the appreciation quadrant.

3.2 Measures for specific qualities of life

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

3.2.1 Measures of liveability

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 liveability of societies, such as nations or cities. These indicators are typically used in developmental policy. The latter are about relative advantage or deprivation of persons in these contexts, and are rooted mostly in the politics of redistribution. These chance estimates are seldom combined.

Contents

Measures of liveability of society concern firstly nations; an illustrative example is Estes's (1984) "index of social progress". This measure involves aspects such as wealth of the nation, peace with neighbours, internal stability and democracy. The physical habitability of the land is also acknowledged. There are similar measures for quality of life in cities (e.g. Kunz and Siefer, 1995) and regions (e.g. Korczak, 1995). There are also liveability scores for more or less "total" institutions such as army-bases, prisons, mental hospitals and geriatric residences.

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 (e.g. Townsend, 1979).

All these measures work with points systems and sum scores based on different criteria in some way. A part of the measures is based on objective assessments and is typically derived from social statistics. Others also include self-reports about living conditions and depend for this purpose on survey data.

Limitations

These inventories cannot really measure liveability comprehensively. First, the two are seldom combined; second, both labour under serious limitations.

The first limitation is that the topics in these inventories do not exhaustively cover environmental conditions. The indices consist of some dozens of topics that are deemed relevant and happen to be measurable. The inventories obviously lack sections on conditions we do not know of as yet; note, for example, that the list of environmental pathogens is growing each year. Further, not all the conditions we are aware of are measurable. For instance, there are no measures for highly valued qualities like *social solidarity* and *cultural variety*.

Problem number two is the significance of topics that are included. Since there is no complete understanding of what we really need, we can only guess at the importance of a topic. Though it is evident that we need food and shelter, it is questionable whether we need holidays and a welfare state. The choice of topics to include in a liveability index is not based on evidence that we cannot thrive without something, but on the researcher's preconceptions of the good life. Elsewhere the author has proposed gauging the significance of liveability topics by their effects on health and happiness (Veenhoven, 1996). The case of the welfare state can be used to illustrate that point. Several liveability inventories include expenditures on social security, e.g. Naroll's (1983: 73) "quality of life index". Yet people appear not to thrive any better in nations with high social security expenditures than in comparable nations where state social security is modest (Veenhoven, 2000b). Freedom appears to add more to happiness, in particular economic freedom (Veenhoven, 2000a).

The third problem is the degree of opportunities required; how many should an environment provide to be liveable? With respect to food and temperature, we know fairly well what amounts we need minimally and what we can use maximally. Yet on matters of safety, schooling, freedom and wealth we know little about minimum and possible maximum needs. Lacking this knowledge, most indices assume that more is better.

Problem number four is that the significance of opportunities is not the same for everybody, but depends on capabilities. For instance, freedom in nations appears to add to happiness only when people are well educated (Veenhoven, 2000a). This means that topics should be given weights according to conditions. In practice that is hardly feasible.

Lastly there is the problem of aggregation. The aim is inclusion of all relevant opportunities, but the practice is a summing of a few topics. The assortment of topics differs considerably across inventories, and it is not clear whether one collection is better than another. In fact each ideology of the good life can compose its own liveability index.

Together this means that inclusive assessment of liveability is not feasible. The best we can do is to make promising condition profiles. Liveability sum scores make little sense.

3.2.2 Measures of life-ability

Capabilities for living are also measured in different ways. First there is a rich tradition of health measurement, which is rooted in the healing professions. Second there is a trade in skill measurement, which serves selection within education and at work. Third, capacities are also measured by performance at school and work.

Contents

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 impairments. Assessments are based on functional tests,

expert ratings and self-reports. The above-mentioned SF-36 is an example of the latter kind of measure. In the self-report tradition, general health is also measured by single questions. For an overview of these health measures, see Spilker (1996). Next there are also some inventories for positive health, mainly self-report questionnaires in the tradition of personality assessment. Jahoda (1958) made the first selection of healthy traits; Verba (1988) reports a later attempt.

Measures of skillfulness concern mostly mental abilities, many of which are parts of so-called intelligence tests. Performance tests can be considered to be objective assessment. A new offspring of this tradition is testing for *emotional intelligence* (Mayer and Salovey, 1993), which is mostly a matter of subjective self-reporting. Next there are numerous tests for proficiency at work and in leisure, such as laying bricks or playing cards.

Lastly, many abilities manifest in real-life success. School success is measured in years of schooling and by the level of schooling achieved. People who do badly at school or receive no formal education in all probability lack several necessary abilities. In developing nations, literacy is a common topic. Life-ability is also inferred from apparent success at work and in love.

Limitations

As in the case of liveability, these measures do not provide a complete estimate of life-ability. Again the measures are seldom combined, and we meet the same fundamental limitations.

First, we cannot grasp all human capabilities; there are limitations to what we can conceive and what we can measure. Possibly the current measurement repertoire misses some essential talents, in particular aptitudes required for new challenges.

Second, we are again uncertain about the significance of topics in the inventories. Possibly some of the things we learn in school are irrelevant. Valued positive mental health traits may actually be detrimental for coping with the problems of life. Unlike the case of liveability, there is some significance testing in this field. Intelligence tests in particular are gauged by their predictive value for success at school and at work. Yet this validation criterion is not the most appropriate in this context, because success at school and work does not guarantee a happy life. Many of the other ability tests available lack any validation. Third, it is typically unclear how much of the ability is optimal; more is not always better. As there are limitations to skill acquisition, it is the right mix that counts. Fourth, the functionality of abilities is contingent to the situation and fit with other traits. For instance, assertiveness is more functional in an individualistic society than in a collectivist culture, and fits better with trait autonomy than with trait dependence. Lastly, we cannot adequately estimate general ability by adding up test scores. Though psychometrists dream about a general ability factor, this seems to be a statistical epiphenomenon rather than a reality.

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 could be good citizenship. That quality can be measured by criteria such as law abidance and voluntary work. The author has not yet seen examples of such measures. When the utility of a life is measured by its effect on the environment, consumption is a relevant aspect. There are several measures of *green living*. It is less easy to quantify moral value. Though it is not difficult to see that some people's lives stand out, there are no tools to rate the common man.

On some criteria we have better information at the aggregate **level**. Wackernagel et

al.'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 state participation in UN organizations could be seen as an equivalent of good citizenship.

Unlike the foregoing qualities of life, there have been no attempts to measure utility comprehensively. The obvious reason is that the criteria are too vague and varied. Utility is easier to conceive than measure.

Comprehensiveness is less of a problem when utility is measured subjectively. We can then assess the degree to which someone thinks of his/ her life as useful. There are several questionnaires that measure subjective sense of meaning (for a review of some see Chamberlain and Zika, 1988). These questionnaires do not measure actual usefulness of life, but rather the person's satisfaction with his perception of the matter. Though these feelings may have some reality basis, the measures say more about the subjective appreciation of life; because the utility of one's life is so difficult to grasp, judgement is easily overshadowed by how much one likes or dislikes life.

3.2.4 *Measures of appreciation of life*

It is easier to measure the subjective appraisal of life. Since this is something people have in mind, we can simply ask them. Interrogation is mostly done by direct questioning via an interview or a written questionnaire. Since the focus is on *how much* the respondent enjoys life rather than *why*, the use of qualitative interview methods is limited in this field. Most assessments are self-reports in response to standard questions with fixed response options. As well as numerous single items, there are various questionnaires. Incidentally, subjective well-being is assessed by less obtrusive methods, such as analysis of diaries and projective tests.

Contents

Many of these measures concern specific appraisals, such as satisfaction with one's sex life or perceived meaning of life. As in the case of life chances, these aspects cannot be meaningfully added to a whole because, first, satisfactions cannot be assessed exhaustively and, second, satisfactions 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 (fig. 4.8).

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 quite expensive. Another 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", which is part of the author's "World Database of Happiness" (Veenhoven, 2000a).

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 about happiness over a lifetime, or better, how long people live happily. Remember the above discussion of this criterion in the context of biology and system theory. At the individual level it is mostly difficult to assess how long and happily 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).

Limitations?

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; for details see Veenhoven (1996: 19-22, 1998) and Schyns (2003).

There are also qualms about comparability of average responses across cultures, and hence about the above-mentioned estimate of happy years of life. 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 not to carry any weight. Many of these checks are reported in Veenhoven (1993).

In this case there is no problem of summation; the answer to the question about appreciation of life as a whole suffices.

4. CAN QUALITY OF LIFE BE MEASURED INCLUSIVELY?

As noted in the introduction, terms like *quality of life* and *well-being* were circulated to denote *overall* worth of life. Hence the introduction of these terms was followed by attempts to measure the goodness of life comprehensively. The meanings addressed by these inventories were considered in the second section of this chapter. All assess overall quality of life by summing different merits, and in these summations the qualities discerned are merged. This adding of apples and pears yields a great variety of fruit salads, each with its special flavour and devotees. Unfortunately, this trade makes little sense.

4.1 Why cross-quadrant sum scores make no sense

First, three of the four separate qualities in the present scheme cannot be measured comprehensively. The author has argued that exhaustive assessment is not possible in the cases of liveability, life-ability and utility of life. Only happiness can be measured completely, because it is an overall judgement in itself. Where most of the components are incomplete, the sum cannot be complete either. Hence, sum scores are always selective, and therefore say more about *a* good life than about *the* good life.

Second, one cannot meaningfully add *chances* and *outcomes*. A happy and productive life is no better when lived in a perfect environment by a well-endowed person than when realized in difficult circumstances by someone handicapped.

Third, sum scores fail to appreciate the functional relationships between the qualities of life discerned. The value of environmental opportunities depends on personal capacities. An orchestra may be well equipped with violins, but if its members are horn players the musical performance will still be poor. Likewise, the worth of life-abilities depends on the environmental challenges for which they are needed. It is their fit that counts, rather than the mere amounts.

These contingencies are acknowledged in some concepts. For instance, Gerson (1976) defines quality of life as harmony of self-interest and *transcendent* utility. Yet this is easier said than measured. First, such harmony can hardly be quantified; for instance, the fit of individual and environmental potentialities cannot be observed as such, and at best we can infer fit from resulting enjoyment of life. Second, there is mostly not one best fit but several fitting configurations; for example, collectivist and individualistic arrangements can be equally harmonious but still represent quite different qualities.

The above problems could partly be met if one restricted oneself to the few conditions and capabilities for which the mutual fit can be estimated, for instance if we focus on sheer material subsistence. This is close to the basic needs approach, which is said to have formed the basis of the HDI (UNDP, 1990). Yet the HDI does not really solve the problem either.

4.2 Why there is most in happiness

When human capacities fit environmental demands, there is a good chance that human needs are gratified. Only bad luck or willful deprivation can block that outcome. Gratification of basic needs will manifest in a stream of pleasant experiences. Biologically this is a signal that we are in the right pond. In human consciousness this manifests in good mood, and subsequently in satisfaction with life as a whole.

So, happiness is both a merit in itself and indicative of good life chances. Subjective happiness implies two things: first, the minimal conditions for humans thriving are apparently met and, second, the fit between opportunities and capacities must be sufficient. Hence happiness says more about the quality of life chances that the sum scores do.

This means that at least three of the four qualities of life can be meaningfully summarized by the degree and duration of happiness. This is how the good life is characterized in the closing sentence of many fairy-tales by stating that "they lived long and happily".

4.3 Why happiness is not all

The proposed fourfold matrix visualizes the main limitation of this view, ignoring the utility quadrant. As noted above, a life can be happy but not useful or useful but not happy. Though these qualities often go together, they do not necessarily do so.

5. DISCUSSION

5.1 Use of this taxonomy

This exercise started with a discussion of the confusion surrounding words for *the good life*. As a remedy a fourfold matrix classification of the qualities of life was proposed. This taxonomy was used to clarify the substantive meanings denoted by current words and measures. This worked, though it was often not possible to place current notions in one particular quadrant. One can see this as a weakness (the scheme does not fit current concepts) or as strength (it denotes new meanings).

Now there are more classifications of quality of life, which are also used to structure this complex field. The second section reviewed a few. Is this one any better? It would be too much to review all the alternative classifications. Let it suffice to note that the major distinctions in the field are between *objective* and *subjective* qualities and along disciplinary kinds, such as economic, social and psychological well-being. A great advantage of the proposed fourfold matrix is that it makes more sense theoretically. The distinction between *chances* and *results* positions the merits in a functional perspective; the distinction between *liveability* and *life-ability* brings the contingencies to mind. As such, this taxonomy helps us to see that overall quality of life cannot be seen as summed merits, but must rather be conceived as merit configurations.

5.2 Elusive utilities

In this taxonomy the utility quadrant is the most problematic. The criteria are quite

diverse and elusive. One can see use in anything. Contrary to happiness there is no link with demands of human nature. The matter in fact cannot be measured?

In an earlier paper on this subject the author therefore left the category out: this left a simpler three-step scheme of liveability, life-ability and life appreciation (Veenhoven, 2001). This is in line with the utilitarian idea that the ultimate value is in the greatest happiness of the greatest number. Bentham will nod in his glass case.

Though clear-cut, that three-step scheme misses an important class of qualities: the values that override sheer functionality and enjoyment. It is not possible to weave these meanings in as contributions to the happiness of other people, because many of them have no effect on happiness. The best we can do is acknowledge the existence of these many qualities, and mark the morass on our map. Without forewarning we get stuck in it over and over again.

5.3 Significance of happiness

The author concluded that the most comprehensive measure for quality of life is how long and happily a person lives. Though happiness was not proclaimed as the only quality criterion, it was presented as the best available summary indicator. Note that this is not a statement of belief, but a conclusion based on assumptions about the nature of happiness.

Subjective appreciation of life is not all, because happiness does not guarantee that other possible values are met. That latter position must be nuanced in two ways: both in favour and against. The favourable nuance is that happiness and utility do go together quite often. Both outcomes draw on the same opportunities. Useful living also requires tolerable environmental conditions and fair individual capabilities, in many cases similar to happiness. Further, objective utility is at least partly reflected in subjective awareness, and as such is part of the appraisal of life as a whole. In contrast, subjective enjoyment of life is not always appropriate in the given conditions. Though happiness works as a compass, it is not always an infallible tool for orientation: happiness sometimes results from cognitive distortion or chemical intoxication. Still, this is the exception rather than the rule, and in the long run dysfunctional happiness will destroy itself. So this problem applies more to short-term happiness than to happy life years.

5.4 Guide for research

The taxonomy does more than just map different qualities of life. It can also be used to help explore their interrelations. The first step is to distinguish qualities of life as different phenomena; the next steps will be to chart causal effects. As such the scheme suggests interesting research lines. One thing we can determine is those conditions for happiness that also promise desirable external effects. Since there are probably many ways to happiness, we can then select the most "useful" one.

6. CONCLUSION

One cannot meaningfully speak about *quality of life* at large. It makes more sense to distinguish four qualities: liveability of the environment, life-ability of the person, utility of life for the environment and appreciation of life by the person. These qualities cannot be added, hence sum scores make little sense. The best available summary indicator is how long and happily a person lives.

Figure 4.1
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	Appreciation of life

Figure 4.2

Fit with Brock's classification

	<i>Outer quality</i>	<i>Inner quality</i>
<i>Chances</i>	Objective quality Life meets normative ideals	
<i>Results</i>		Subjective quality life meets preferences life is enjoyed

Figure 4.3

Fit with McCall's classification

	<i>Outer quality</i>	<i>Inner quality</i>
<i>Chances</i>	Conditions for happiness <ul style="list-style-type: none"> • General happiness requisites • Idiosyncratic happiness requisites 	
<i>Results</i>		Happiness

Figure 4.4
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

Figure 4.5
Meanings measured by Cummins' 'Comprehensive quality of life scale'

	<i>Outer quality</i>	<i>Inner quality</i>
<i>Life-chances</i>	Income, possessions Social contacts Social position (Safety) Opportunities	Health Productivity Autonomy
<i>Life results</i>	(Productivity) (Social responsibility)	<i>Satisfaction with:</i> Material life Social contacts Social position Safety Freedom

Figure 4.6**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>	Irreplaceable (b)	Doing interesting things (b) Life-satisfaction (b)

Note: (h) = having, (l) = loving, (b) = being

Figure 4.7
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

Figure 4.8
Inclusive 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

REFERENCES

- Allardt, E. (1976)
"Dimensions of Welfare in a Comparative Scandinavian Study",
Acta Sociologica 19: 227-239.
- Andrews, F. and S. Withey (1976)
Social Indicators of Well-being: American Perceptions of Quality of Life,
New York: Plenum Press.
- Bentham, J. (1789)
"An Introduction into the Principles of Morals and Legislation",
reprinted in John Bowring, ed. (2002) *The Works of Jeremy Bentham*, Chicago;
University of Chicago Press.
- Bernheim, J. L. and M. Buyse (1983)
"The Anamnestic Comparative Self-Assessment for Measuring Subjective Quality of Life for Cancer Patients",
Journal of Psychosocial Oncology 1: 25-38.
- Brock, D. W. (1993)
Life and Death: Philosophical Essays in Biomedical Ethics,
New York: Cambridge University Press.
- Chamberlain, K. and S. Zika (1988)
"Measuring Meaning in Life, Examination of Three Scales",
Journal of Personal and Individual Differences 9: 589-596.
- Cummins, R. A. (1993)
Comprehensive Quality of Life Scale for Adults.(ComQol-A4),
4th edn, Melbourne: Deakin University, School of Psychology.
- Estes, R. (1984)
The Social Progress of Nations,
New York: Praeger,
- Gerson, E. M. (1976)
"On Quality of Life",
American Sociological Review 41: 793-806.
- Jahoda, M. (1958)
Current Concepts of Positive Mental Health,
New York: Basic Books.
- Korczak, D., ed. (1995)
Lebensqualität Alias,
Wiesbaden: Westdeutscher Verlag.

- Kunz, M. and W. Siefer (1995)
"Wo Sie am besten leben FOCUS",
in D. Korczak, ed., *Lebensqualität Atlas*, Wiesbaden: Westdeutscher Verlag.
- Lane, R. E. (1994)
"Quality of Life and Quality of Persons. A New Role for Government?",
Political Theory 22(2): 219-252.
- Mayer, J. D. and P. Salovey (1993)
"The Intelligence of Emotional Intelligence",
Intelligence 17(4): 433-442.
- McCall, S. (1975)
"Quality of Life",
Social Indicators Research 2: 229-249.
- Michalos, A. (1985)
"Multiple Discrepancy Theory (MDT)",
Social Indicators Research 16: 347-413.
- Mill, J. S. ([1863] 1990)
Utilitarianism, 20th impression.
Glasgow: Fontana Press.
- Musschenga, A. W. (1994)
"Quality of Life of Handicapped People",
in L. Nordenfelt, ed., *Concepts and Measurement of Quality of Life in Health Care*,
Dordrecht: Kluwer Academic, pp. 181-198.
- Naroll, R. (1983)
The Moral Order. An Introduction to the Human Situation.
Beverly Hills: Sage.
- Noll, H.-H. (1999)
"Konzepte der Wohlfahrtsentwicklung: Lebensqualität und 'neue' Wohlfahrtskonzepte".
Euro-reporting Paper No. 3, ZUMA, Mannheim.
- Nordenfelt, L. (1989)
"Quality of Life and Happiness",
in S. Bjork and J. Vang, eds, *Assessing Quality of Life, Health Service Studies No. 1*,
Stockholm: Sam-hall Klintland.
- Ouellette-Kuntz, H. (1990)
"A Pilot Study in the Use of the Quality of Life Interview Schedule".
Social Indicators Research 23: 283-298.
- Sandoe, P. (1999)
"Quality of Life, Three Competing Views",
Ethical Theory and Moral Practice 2(1): 11-23.

- Schyns, P. (2003)
Income and Life Satisfaction, A Cross-National and Longitudinal Study,
 Delft: Eburon,
- Sen, A. (1992)
 "Capability and Well-Being",
 in A. Sen and M. Nussbaum. eds, *The Quality of Life*, Oxford: Clarendon Press, pp. 30-53.
- Spilker, B., ed. (1996)
Quality of Life and Pharmaco-economics in Clinical Trials,
 Philadelphia, Penns.: Leppincott-Raven Publishers.
- Spitzer, W. O., A, J. Dobson. J. Hall, E. Chesterman, J. Levi and R. Shepherd (1981)
 "Measuring the Quality of Life of Cancer Patients",
 Journal of Chronical Disease 34(12): 585-597.
- Veenhoven, R. (1984)
Conditions of happiness
 Kluwer, Dordrecht, Netherlands
- Veenhoven, R. (1993b)
 Happiness in Nations
- Veenhoven, R. (1996)
Happy life-expectancy
 Social Indicators Research, vol.39, pp. 1-58
- Veenhoven, R. (1997c)
Progres dans la comprehension du bonheur
 Revue Quebecoise de Psychologie, vol 18, pp. 29-74
 Available in English 'Advances in the understanding of happiness'
- Veenhoven, R. (2000c)
The Four Qualities of Life: Ordering Concepts and Measures of the Good Life.
 Journal of Happiness Studies, 1-1,1-39.
- Veenhoven, R. (2000a)
Freedom and happiness: a comparative study in 44 nations in the early 1990's
 In: Diener, E. & Suh, E.M. (Eds.) 'Culture and subjective wellbeing', MIT press, Cambridge, MA
 USA, 2000, ISBN 0 262 04182 0, pp. 257-288
- Veenhoven, R. (2000b)
Well-being in the welfare state: Level not higher, distribution not more equitable
 Journal of Comparative Policy Analysis, 2000, vol.2, pp 91-125
- Veenhoven, R. (2001)

So
 Social Indicators Research 2: 229-249.

