

World Database of Happiness

HAPPINESS IN NATIONS

Subjective appreciation of life in 56 nations 1946-1992

by

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chapter 1

QUEST FOR THE GOOD SOCIETY

- 1.1 Deductive approach
 - 1.2 Inductive approach
 - 1.3 Summary
-

Society has long been seen as an eternal moral order, imposed by Nature or God. That view did not encourage people to reach out for social change, but rather pressed for adjustment to existing social organization. Longings for a better life were typically projected in After-life-Paradise. In the wake of modernity, society came to be seen as a system of negotiated arrangements that can be changed in principle. That view implied the possibility of a Paradise-on-Earth. Since this idea took hold, a lot of thought has been given to possible improvements in society. The last few centuries have witnessed an ever increasing stream of suggestions for social reform; piece-meal revisions as well as all-embracing blueprints for a radically New Society. Much of that thought has now crystallized in current political ideologies and practices.

Early thought about the Good Society was very much pre-occupied with the expectation that some Ideal Society can be constructed, which puts an end to all human suffering. This idea was at the basis of several 'Utopic' society-designs, some of which were put into practice in new settlements (communes) or in revolutionary reform. Disappointing results made clear that no society can provide Paradise-on-Earth. It is now generally acknowledged that any social arrangement inevitably involves weak and strong points and can therefore not protect against all human suffering. Therefore, the quest for the Ideal Society has diverted into a search for the Optimal Society, that is, a societal arrangement that provides the best mix of desired results. In that context, it is now also accepted that there is not one best possible society. In principle at least, the same optimal level can be reached by different forms of social organization. It is also acknowledged that the effectiveness of social organization is contingent to its environment and hence that no society is optimal for ever. So the focus is now on *Optimal Societies*.

Discussions about the Good Society have long been dominated by Social Philosophers. The emphasis of these debates was on what is to be considered 'good', that is, what values should be embodied in social organization. Several core values have been proposed: 'religious devotion' by early Christian philosophers, 'political freedom' by liberals and 'social equality' by socialists. Utilitarian social philosophers stressed 'happiness' as the ultimate criterion.

This emphasis on matters of desirability is typically accompanied by a neglect of reality constraints. Philosophers speculate rather than check. They have mostly only a dim understanding of the actual social and psychological effects of their moral medicines. As a result this rich intellectual tradition has brought us little closer to the identification of optimal societies. Social Philosophy did a good job in articulating the differences in view, but failed in the subsequent selection of alternatives by neglecting their applicability.

1.1 DEDUCTIVE APPROACH

The modern social sciences are also concerned with the question of the Good Society. Early sociologists such as Comte and Spencer hoped that 'scientific' (rather than mere speculative) social research would discover social 'laws', and that this knowledge would provide the basis for a deductive construction of optimal systems of social organization. That hope has only been partly realized as yet. The Social Sciences certainly did achieve a better understanding of man and society. As such, they allow more educated guesses about compatibility of various end-goals in social policy. Still, the knowledge is largely tentative and imprecise. There is some insight into the functional requisites for psychological and social functioning, but no established body of theory. Thus, there is little basis for a deductive design of better societies. Deductive application of present day social scientific knowledge allows at best a more reasoned evaluation of speculative proposals for social reform.

1.2 INDUCTIVE APPROACH

Still, the modern Social Sciences can contribute to the matter empirically. Modern measurement techniques enable us to make a less subjective and more precise assessment of society performance than Social Philosophers ever could. These techniques open the way for an inductive exploration of optimal patterns of social organization. We can now establish *that* some patterns work better than others, even though we do not quite understand *why*.

The inductive search for optimal societies involves the following five steps: Firstly, performance criteria must be chosen. This step involves the choice of one or more value priorities. Secondly,

these criteria must be operationalized, that is, translated into measurable quantities. Thirdly, the resulting measures must be applied to a set of societies; preferably a large set of societies, within which subsets of societies in comparable conditions can be discerned. Fourthly, some sort of performance-rank order of societies must be read off. The best score in that rank order denotes a result that is apparently possible in the given conditions. Though that best realized result is not necessarily the best possible one, it denotes at least an attainable performance level. The fifth and last step is then to identify the characteristics of societies that come closest to that level. That analysis can show that some types of society perform better than others, or that different systems yield more or less similar results.

These five steps are discussed in more detail in the following parts of this book.

Step one is the subject of chapter 2 of this introductory part. This chapter briefly considers the various criteria for the evaluation of human societies and chooses to focus on the criterion of 'livability'.

Step two is dealt with in the chapters 3, 4 and 5. Chapter 3 considers the possible indicators of livability and opts for estimating livability of societies by the happiness of its inhabitants. Next, chapter 4 selects acceptable measures of happiness, mostly survey questions. Chapter 5 then checks the validity of average happiness as an indicator of livability.

Step three is the main subject of this book; the application of this performance criterion to a large set of societies. The sources of data about happiness in nations are mentioned in chapter 6 of this introductory part. The comparability of the data is discussed in chapter 7. Next part II of this book presents the available data of general population surveys in nations. In addition part III presents some of cross-national happiness studies among specific social categories. Part IV summarizes the data by country.

The steps four and five are only briefly considered in this book. The purpose of this reference work is to prepare for these steps, rather than taking them. Still, chapter 8 notes that there are clear differences in average happiness between nations (step 4) and identifies some societal characteristics that seem conducive to happiness (step 5).

1.3 SUMMARY

Utopic dreams about 'The Ideal Society' have led into a search for 'Optimal Societies'. The present state of Social Science does not allow the deductive identification of optimal societies, but we can approach the matter inductively. Inductive identification of optimal societies involves five steps: 1) choice of performance criteria, 2) operationalisation of these, 3) application to a set of societies, 4) establishment of a performance rank order, and 5) finding out why some societies perform better than others. This book considers the usefulness of average happiness as a performance criterion. The focus of this book is on step 3.

chapter 2

CRITERIA FOR THE EVALUATION OF HUMAN SOCIETIES

- 2.1 Stability
 - 2.2 Productivity
 - 2.3 Ideal-expression
 - 2.4 Livability
 - 2.5 Summary
-

As noted in chapter 1, there is a long standing discussion on the criteria for 'goodness' of human societies. Let me simplify that complicated discussion somewhat by introducing the analogy of evaluating the quality of houses. Both societies and houses are things people live in. The quality of a house is typically assessed by means of multiple criteria. Some of these also apply to societies.

In the first place a house must be constructionally 'solid'. We do not want a house that is about to collapse, though we can live with the idea that no building exists forever. Constructional solidity of houses is analogous to social *stability* of societies. Social instability is generally deemed undesirable. It accepted at best temporary, if necessary for transition to a new stable order.

A second evident criterion for the evaluation of houses is its 'facilities'. A good house provides not only basic shelter against rain and wind, but also luxury matters such as spacious rooms, running water and central heating. Facilities of houses is analogous to the *productivity* of societies. Societies that provide their members with many goods and services of good quality are typically considered better than societies that provide poor provisions.

Houses are also judged by 'aesthetically' and 'symbolic' qualities. Everybody prefers a nice house to a dull one. Tastes differ however: one prefers what another would reject. Likewise, houses differ in the degree to which they give expression to a preferred lifestyle: a primitive country cottage may link up better with a withdrawn nature-oriented lifestyle than a prestigious modern mansion in town. Here again tastes are different and dependent on cultural context. Esthetical and symbolic qualities of houses are analogous to what I will call below *ideal-expression* of societies. It is generally agreed that social organization must in some way emphasize central values, though there is typically disagreement about which values and how these should be emphasized.

Last but not least, a house must be 'habitable', that is, it must fit human habitation needs, which involve for example shelter, comfort and privacy. That quality is not automatically implied in the above criteria: a glass-house may be solid, well-equipped and very beautiful, but fails to provide

privacy and is therefore unfit for human dwelling. Habitability of houses is analogous to *livability* of societies. No society can be called 'good' if humans cannot flourish in it.

Let's now consider these criteria in more detail:

2.1 STABILITY

Social-Darwinism has brought the stability criterion to the attention. The success of societies is seen as analogous to the success of species. Success is then continuation through time, spread (conquest) over a great and varied territory, reproduction and timely adjustment to changing environment. This criterion figures (often implicitly) in historical accounts of the rise and decline of civilizations. Surviving ones are seen as the best. This view invites a specification of characteristics that contribute to system survival, such as concentration of political power and a mobilizing belief system.

There is clearly some sense in this criterion. It is unwise to advocate a society that is doomed to perish. Yet survival of the social system may be at the cost of the ecological environment and may involve poor living for its members. Societal stability may also involve stagnation or even degeneration. Not seldom it results of severe oppression by a ruling class. So this criterion cannot be the only one, but at best a preliminary condition.

2.2 PRODUCTIVITY

Currently the success of nations is typically measured by the amount of goods and services they produce. Though mostly used for market products, the criterion is also extended to non-market services, such as family-support for the aged on the basis of inter-generational reciprocity. Society is seen as a social machinery for the production of goods for consumption, and evaluated by the quantity, quality and variety of its products. In this perspective one can also consider the product-innovations that societies produce over a long period: not only technical inventions of new goods, but also cultural innovations in arts and ideas, as well as new forms of social organization. The productivity of societies is obviously linked to its survival chances, but it is not quite the same.

It is commonly recognized that every society must produce at least a minimum of goods, services and ideas. If productivity drops below some minimum level, its members pine away or desert. On the other hand, it is also agreed that productivity may rise at the expense of the environment and that the social costs of high production may surpass the rewards. Another evident objection is that products can be superfluous or even harmful. Through the ages ascetics have pleaded for a more sober society. In the 1970's, this view manifested in the zero-growth movement, which debauched in the present day green-movement. So productivity cannot serve as the core criterion for livability either. Only a minimal level of it is required.

2.3 IDEAL-EXPRESSION

Another class of criteria is in the degree to which societies realize or manifest certain values. Early writings on the Good Society emphasize individual lifestyle values such as 'bravery', 'modesty' and 'religious devotion'. In this view, a society is better the more it emphasizes such values and the more its members actually live accordingly. Present day discussion focuses more on the ideal social organization. For example, nations are judged by the degree to which they provide 'political freedom', respect 'civil rights' and realize 'social equality'.

In this class there are as many criteria as there are political ideologies. Though innumerable in principle, the actual variation in values endorsed is limited. Present day world-society witnesses a growing ideological consensus around Humanist values (Naroll 1984:ch.2). There is in fact a strong movement to canonize such values as 'Universal Human Rights'.

Still, there are a lot of problems in this approach: problems of degree (f.e. how much freedom is desirable) and problems of compatibility (f.e. what to choose if freedom interferes with equality). It is also unclear to what extent these matters are to be considered as end-values, which need no further justification, or as instrumental values, that depend in last resort on their contribution to a higher level criterion. Lastly, the use of Humanist values for the evaluation of societies involves inevitably an arbitrary and somewhat ethno-centric choice.

2.4 LIVABILITY

Last but not least, the criterion of 'habitability' of societies. Societies are man made mutual arrangements for living. Societies in which people enjoy a good life are to be judged better than societies where living is poor.

The livability of a society is *the degree to which its provisions and requirements fit with the needs and capacities of its members*. For example: a society is not livable if it does not provide good institutional arrangements for 'safety': f.e. if it lacks a working legal system. A society is also unlivable if it requires behaviors of its members for tasks they cannot perform well: i.e. if a society requires 'autonomy', while its socialization practices produce dependent persons. In such societies people feel chronically anxious and incapable, which is clearly not living 'well'.

Human needs and capacities are to a great extent given by nature. Socialization typically modifies and cultivates parts of our innate possibilities. There are thus limits to human adaptability, which societies cannot ignore. Where bio-physiological needs are concerned this is rather evident. Any society must provide 'food' and 'shelter'. The existence of bio-psychological

needs is less obvious, but no less true. Societies must also provide a sense of 'security', 'identity' and 'meaning'.

To some extent societies can mould their members to their conditions. A society that provides little security can socialize to psychological hardiness and therefore be still reasonably livable for its members. Such compensation through socialization is not an automatic however; unsafe societies tend to breed vulnerable people.

Social evolution does not guarantee that all societies are highly livable. Extremely unlivable societies probably tend to extinction; either because their members die out, or because they desert. However, societies that provide only poor livability have not always less survival chances. Low livability can instigate wars of conquest, or mobilize economic effort. Badly livable societies can therefore become dominant.

The criterion of livability overlaps to some extent with the earlier mentioned criteria of goodness of societies. Livability of a society requires at least some continuity of the system, a minimum of productivity and some congruence of ideal and reality. Yet, a society can be unlivable in spite of high performance on these criteria. Repressive societies are typically quite stable, but not very livable. Highly productive societies can wear their members out in the propagation of the wrong things. Realization of highly tuned social ideals may be asking too much of human adaptability.

As yet, the criterion of livability is not very prominent in the discussion on the Good Society. One of the reasons for its relative neglect is probably that livability was long not sufficiently measurable to allow the assessment of differences between societies and for monitoring change through time. This situation has changed however; during the last decades several indicators of livability have been developed, mostly referred to as indices for 'quality-of-life'. We can now fairly well distinguish between more and less livable societies, and assess progress and decline in that respect. It is time to exploit these new opportunities.

For that reason this book focuses on the livability criterion. In that context the next chapter will consider the possible measures of societal livability.

2.5 SUMMARY

Some common criteria for the evaluation of human societies are: 1) their stability over time, 2) their productivity in goods and services, 3) the degree to which they realize particular ideals, and 4) their livability. This book focuses on the latter criterion. Livability is defined as the degree to which the provisions and requirements of a society fit with its members needs and capacities.

chapter 3

INDICATORS OF LIVABILITY OF SOCIETIES

- 3.1 Estimating by livability input: assumed conditions for good living
 - 3.2 Estimating by livability output: apparent good living as such
 - 3.2.1 Health
 - 3.2.2 Satisfaction
 - 3.3 Summary
-

Livability was defined as the *fit* between provisions and requirements of a society with needs and capacities of its citizens. That 'fit' cannot be observed as such: the degree to which it exists must be derived from observations of other things. There are two ways to estimate livability.

One way is to assess the presence of preconditions deemed likely to produce a fit. This involves assumptions about fit-likeness of living conditions. The focus in this approach is on societal *input*.

The other way is to observe how people actually flourish in a society, and attribute good functioning to good fit. The focus is than on societal *output*.

An analogy may illustrate the matter: the case of 'fertility' of the soil. If we want to know whether some piece of land is well suited for the growing of grain ('livable for grain'), the first way is analyzing the input it provides. We then consider the structure of the soil, its percentage of moisture, the minerals it contains, etc. Because we know fairly well what grain needs and to what conditions it can adapt, we can then reasonably well estimate the fit. That is: predict how well grain will grow. The second way is just to try and consider the output. That is: asses the degree to which grain flourishes on this terrain afterwards. We then look at the results; the quantity and quality of the grain harvested.

Through the ages fertility of land has been established by finding through experience (output). Only fairly recently have we gathered sufficient knowledge on a limited number of plants to specify their necessary living conditions in advance (input).

The living conditions of grain can now be specified reasonably well. Needs and capacities of that species are rather clear cut and have been discovered by controlled experimentation. The necessary living conditions for humans can less easily be specified. Not only is the human organism more complicated and many-sided than grain is, but also are humans much more adaptable. In fact, a major biological specialization of the human species is its unspecialism, combined with a capacity

for learning. Therefore, the possible variation in livable societies for humans is greater than the possible variation in fruitful soils for grain. Controlled experimentation is hardly possible with humans and human societies. Hence it is also more difficult to discover basic human needs and capacities.

Let us keep these problems in mind and now consider current measures of livability of human societies.

3.1 ESTIMATING LIVABILITY BY INPUT:

Assumed conditions for a good life

Current attempts to estimate the livability of human societies start from the assumption that some living conditions fit better with human needs and capacities than others. It is for instance supposed that economic conditions of material affluence fit better than poverty. Other conditions deemed likely to fit are 'political stability', 'social equality' and 'cultural civilization'. The more such conditions a society provides, the more livable it is presumed to be.

Investigators in this approach measure the success of societies (typically nations) in these respects by means of social statistics. For example, 'economic affluence' is measured by GNP per head or by average consumption, 'political stability' by the frequency of revolutionary activities and 'cultural civilization' by literacy or school enrolment. Such indicators are typically combined in an overall index. The sum-score on that index then denotes the general livability of the nation. An example of this approach is Estes' (1984) 'Index of Social Progress'. See [scheme 3.1](#).

There are at least two problems with this approach: each of them quite serious.

The first problem is that the assumed fit is highly questionable in most cases. Consider the example of economic affluence: Does a rich society provide a better fit with individual needs and capacities than a not so rich society? Though people typically 'want' to improve their material standard of living, it is doubtful that they really 'need' so. It is also uncertain whether a rich society challenges human capacities more optimally than a not so rich one. In fact, the human species has developed in material conditions that would be judged as poor by present day standards.

The second problem in this approach is the assumption that more of a condition denotes better livability. Consider the case of social stability. Some minimum stability is certainly required, too much change may frustrate needs for safety and overcharge adaptive capacities. However, a society without any change is not likely to fit either: it may frustrate the need for novelty and may leave adaptive capacities under-utilized.

In fact this approach does not inform us about the livability of nations, but rather about the degree to which nations realize current ideals. The point of departure is not human needs and capacities, but the political agenda. As such this approach is of little help in the search for optimal

social organization. It typically tells us how far we have proceeded on the way we have chosen, but not whether that is the right way. In other words: this approach measures *success* in current social policy, but not the *sense* of it in terms of its contribution to livability.

An evident way to avoid these problems is to depart from a well-established theory about human needs and capacities and to specify the social conditions that are required to fit with these. This is called the *basic need approach*. Though better in principle, it has brought us little further.

A first problem on this track is that there is no well-established theory about human needs and capacities. There is much speculation on this matter, some of which is rather plausible, but little empirical proof. Methodologically, it is extremely difficult to demonstrate what people 'really' need and can.

The currently most used theory is Maslow's (1964) need-hierarchy. According to this theory the most pressing need in human life is to overcome some basic deficiencies: first organic deficiencies such as hunger, and next socio-psychological needs like safety, belonging and esteem. Beyond these 'deficiency needs', 'growth needs' would prevail. That means that people need meaningful challenges that fit their capacities and involve ongoing development.

At the level of deficiency needs this theory allows some specification of necessary living conditions. The gratification of organic needs requires that there is a production system that provides 'food' and 'shelter'. Required minimum levels can be fairly well specified in this case. Things become more difficult where the socio-psychological needs are concerned. There is much variation in the way societies provide 'safety', 'belongingness' and 'esteem', and it is difficult to define minima or compare performance. What is for instance the minimum required degree of belongingness? Are these needs better gratified in the traditional stem-family than in the modern nuclear-family? Things become even more complicated where 'growth needs' are concerned, which concern the use and development of capacities. These needs are too varied to allow the specification of satisfiers. At best one can say that gratification of such needs requires a considerable degree of 'freedom' and 'variety' in society. Again it is hardly possible to indicate minimum and maximum levels.

By lack of a theory from which we can deduct necessary living conditions, we must therefore resort to the other approach and assess inductively what societal conditions appear to be livable.

3.2 ESTIMATING LIVABILITY BY OUTPUT:

Apparent good living as such

The flourishing of plants or animals in a given ecological environment is usually measured by their functioning as apparent in growth, adequacy of behavior and absence of disease. Successful procreation is also seen as a sign of good functioning. Can the flourishing of humans in a social

environment be measured by the same criteria? To some extent yes, but the flourishing of humans involves more than biological functioning alone. Unlike plants and animals, humans can reflect on themselves and their situation. The fit between their needs and capacities with the provisions and requirements of society is therefore reflected in their appraisals as well.

Below we will consider these two approaches in more detail. First the indicator of good biological functioning (health) in section 3.2.1 and next appraisals of life (satisfaction) in section 3.2.2. Next to the substantive qualities of these indicators we will also consider the availability of data. As the aim is to compare societies, cross national data are needed.

3.2.1 Health

As in the case of plants and animals, the flourishing of humans can be judged by their bio-physiological functioning; in other words by their 'health'. We cannot say that somebody lives well if s/he is weak, impaired or ill and certainly not if s/he is dead. The concept of health covers biological functioning at large. Specific health concepts concern specific aspects of human functioning.

Physical health

The analogy with flourishing of plants applies best where mere bio-physiological functioning is concerned, also called 'physical health'. Physical health of organisms can be defined in two ways: firstly by absence of disease or impairment, secondly by signs of good functioning, such as energy or resilience. The former aspect of bio-physiological functioning is referred to as 'negative health', the latter as 'positive health'. The less negative and the more positive the physical health of humans is in a society, the more livable that society apparently is.

Negative health can be measured by the incidence and severity of impairments and disease. That sounds easier than it is. Medical statistics are often limited to incidence and do not inform us about severity. Moreover, medical statistics typically concern 'specific' health defects and mostly allow no view on the 'overall' health situation in a country. Some attempts have been made to characterize overall health in nations, but unfortunately these are as yet not sufficiently standardized to allow international comparison.

Positive physical health can be measured by performance tests and by subjective reports about feelings of health. The latter indicators typically concern overall health. In several western nations periodical health surveys monitor health-feelings. Unfortunately, the data are still too scarce and diverse to allow meaningful international comparison.

Life-expectancy

The flourishing of humans in a society can also be measured by their longevity; the better the livability of a society, the longer the life-expectancy of its members must be. This indicator is certainly quite appropriate where success in providing the biological minimum is concerned. However, it is not sure that this indicator also reflects variations in the extent to which societies are successful in meeting the social and psychological needs of their members. A society may succeed in keeping its citizens alive for a long time without offering a good life: e.g. by investing heavily in medical technology or by imposing a taboo on suicide and euthanasia. Another complication is that longevity may also depend on race and the ecological environment. The validity of this indicator is thus limited.

The quality of data on longevity is quite good. Most present day nations have fairly reliable mortality statistics. These statistics show considerable differences between present day nation states. Life-expectancy is currently lowest in Upper Volta (about 30) and highest in Japan (77.2). Mortality statistics also show progress and decline in livability: for instance a drop in life-expectancy in the former second world (communist) countries in the 1970's, and a rise in first world nations (WHO, 1986).

Healthy life-expectancy

The physical health of people in a society can also be measured by the average number of years they live free from chronic illnesses. This combined measure corrects one of the above mentioned limitations of mere life-expectancy. Healthy life-expectancy has been measured in different ways: see Katz et al (1983) and Sullivan (1986). As yet, there is hardly any comparable nation data on this matter.

Mental health

Instead of focusing on 'bio-physiological' functioning, one can also consider the adequacy of 'socio-psychological' functioning. This is what commonly is referred to as 'mental health'. The reasoning is that the better a society fits with human needs and possibilities, the less it drives its members mad.

There is nothing wrong with this idea, but there are great problems in its operationalization. It is not easy to establish who is mentally 'ill' or not. Cross cultural comparison is hampered by differences in manifestations of psychological disturbance, as well as in definition and registration. This limits the use of this indicator to countries which are culturally very similar.

Comparable national data on this matter are scarce, and limited in fact to the western world. The data that are available concern 'negative' mental health: that is incidence of psychological disturbances. Like in the case of physical health, these do not reflect 'overall' mental health, but the incidence of specific syndromes such as depression, anxiety and stress. A good review of data and their limitations can be found in Murphy (1984).

As in the case of physical health, the best indicators of overall mental health in a given country come from survey studies. Most health surveys inquire about psychological complaints and compute sum scores on the basis of these. Again, there is as yet too little uniformity in the data for meaningful comparison between countries.

3.2.2 Satisfaction

Unlike plants and animals, humans are capable of reflecting on themselves and their situation. Therefore, livability of human societies can also be measured by the degree to which its inhabitants deem life worthwhile.

In this context it is worth distinguishing between judgments about 'society' and judgments about ones 'life in that society'. A society that is judged positively by its citizens is not necessarily a very livable one. The judgement can concern aspects that are very prominent in public discourse, but have little relevance for the actual enjoyment of life. Also, basically dissatisfied people can still be positive about their society, because they are unaware of its shortcomings and attribute their misery to other matters. The degree to which people flourish in a society can thus best be measured by how they evaluate their own life, in other words by their *personal satisfaction*.

If we focus on personal satisfaction, there is still another distinction that must be considered. Personal satisfaction judgments can concern 'aspects-of-life', or ones 'life-as-a-whole'. Satisfaction with specific aspects of life such as 'work', 'marriage' or 'governments' says little about the general livability of a society. Most citizens may be satisfied with their work, but still be unhappy because their society offers little more. Also they can be satisfied with most aspects of life, but nevertheless judge their life-as-a-whole negatively; for instance because they miss something essential in it, i.e. 'freedom'. Still another complication is that aspects of life are not equally important in all societies at all times. 'Work' for instance is less central in most third world countries than in the homelands of the Protestant Ethic. For these reasons we will focus on '*overall*' *personal satisfaction*.

The degree of overall personal satisfaction of members of a society can be assessed in different ways: by the degree of 'alienation', by the incidence of 'suicide' and by the level of 'happiness'.

Alienation

In the sociological literature the concept of alienation is commonly mentioned in this context. Alienation is seen as something that results from a lack of fit between ways of life provided by a society and human potentials. That condition is believed to manifest in individual feelings of powerlessness and meaninglessness. There are many variations in this theme, some of which come close to conceptions of mental health.

The incidence of subjective alienation in a society can be measured by means of surveys. Several questionnaires have been developed for that purpose. The most currently used is the Seeman Alienation Scale (Seeman, 1975). A major limitation of all these measures is that they do

not involve a general judgement of life, but rather describe satisfaction in a cluster of life-aspects. Therefore, it is better not to use them for assessing overall livability in nations.

In spite of much theorizing about alienation and society, there are hardly any comparative data. Even if we might want to judge livability of nations by the alienation of its citizens, we simply cannot.

Suicide

Personal dissatisfaction can also be measured by behavioral manifestations of despair. Various behaviors have been considered in that perspective: mostly deviant behaviors such as use of drugs, aggression and excessive risk-taking, but also non-offensive behaviors such as religious retreat. The problem with all these phenomena is that they are at best partly linked to livability of society, and probably not equally much in all societies at all times.

Still, there is little doubt that suicide mostly signifies great personal despair. Hence suicide rates are often used as an indicator of livability of societies. This tradition dates back to Durkheim (1897), who observed more suicide in religiously heterogeneous communities than in religiously homogenous ones. In this line, the continuous rise of suicide in western societies in the 20th century has been interpreted as showing that modernization of society has reduced its livability.

There is probably some truth in the idea that low livability gives itself away in high suicide rates. Yet it is also clear that the incidence of suicide depends on many other things as well. In societies such as traditional Japan, suicide is a moral obligation in some situations. In present day western society, suicide rates rise because it is no longer taboo and because medical technology postpones natural death. As in the case of other despair behaviors, such effects are not equally great at all times in all societies.

Still, suicide is currently used as an indicator of livability of nations. This is probably due to the fact that it is well documented. In most countries this cause of death is registered systematically since long. Though the accuracy of registration varies somewhat between countries and through time, the data seem fairly well comparable. For a review on differences in suicide rates in countries see WHO (1987). These data show sizable differences. Around 1980 mortality by suicide was greatest in Hungary (± 460 per million) and lowest in the Philippines (± 9 per million).

Happiness

Personal overall satisfaction can better be measured directly by asking people how they feel about their life. This is currently done in survey research on 'happiness' or 'life-satisfaction'. In the 1950's questions on such matters figured in the margin of studies on adjustment and health. Since the 1970's, happiness serves as a core variable in representative 'Quality-of-Life' surveys in many developed nations. In that latter context happiness is often used as an indicator of livability. The happier the inhabitants are on average, the more livable the nation or region is presumed to be.

A basic assumption in these studies is that a good fit between societal provisions/demands and individual needs/capacities results in a high appreciation of life by individuals. Bad fit is seen to give rise to deprivation and frustration, and thereby to a negative evaluation of life-as-a-whole. This view is quite plausible, but not established beyond doubt. Cultural relativists object that enjoyment of life in a society is a matter of prevailing outlook-on-life, rather than real quality-of-life. Likewise, skeptical psychologists argue that happiness is a cognitive matter that depends on aspirations and expectations, and is essentially unrelated to real quality of life. In chapter 5 we will consider these objections in more detail.

The happiness of members of a society can be measured by surveys. Survey data on happiness are available for most present day nations and on some major cities around the world. There are also surveys on ethnic groups within nations; such as on African-Americans or Hispanic-Americans in the USA, or on typical sub-cultures such as the Kibbutzim in Israel. The data are less abundant than in the case of life-expectancy and suicide; the number of societies covered is smaller and the time-series are shorter. Still, the number of observations on happiness grows every year and their number is now sufficiently great for a fruitful analysis.

As with life-expectancy and suicide-rates, there are consistent differences in average happiness between countries. Happiness differentiates even better than the other indicators. This is consistent with the above mentioned observation that the former two indicators estimate livability rather incompletely. However, there is doubt about the validity of survey-assessed happiness. Methodologists have questioned whether answers to simple survey questions adequately measure how people really feel about their life. Moreover there is hesitation about the comparability of happiness between nations.

3.3 SUMMARY

The livability of human societies can be estimated in two ways: The first way is to assess the presence of living conditions deemed likely to provide a fit with citizens needs and capacities. Clues for presence of such conditions are referred to as 'input' indicators. The second way is to assess the degree to which citizens flourish in a society, assuming that good flourishing results from a good fit. Manifestations of good flourishing are health and satisfaction. They are referred to as 'output' indicators of livability.

The focus of this book is on output indicators, in particular on satisfaction. Unlike health, satisfaction has hardly been compared cross-nationally as yet. This book presents data on satisfaction with life-as-a-whole, also called 'happiness'.

chapter 4

MEASURES OF HAPPINESS

- 4.1 Concept of happiness
 - 4.1.1 Definition of happiness
 - 4.1.2 Variants of happiness
 - 4.1.3 Adjacent concepts not covered
 - 4.1.4 Focus on present happiness
 - 4.2 Measures of happiness
 - 4.2.1 Validity of self reports
 - 4.2.2 Acceptable indicators
 - 4.2.3 Rejected indicators
 - 4.3 Aggregation to nation level
 - 4.4 Summary
-

As we have seen, happiness is one of the possible indicators of livability. The happier the societies' members are on average, the more livable that society apparently is. The previous chapter mentioned five advantages of this indicator: 1) Happiness is an 'output' measure. Output indicators are needed to identify the crucial 'inputs' (living conditions) that characterize optimal societies. 2) Happiness is the broadest output measure available. Unlike health indicators it does not limit to mere bio-physiological functioning. Unlike suicide it is not limited to extreme despair. 3) Happiness can be measured rather easily. 4) There is quite a lot of data on average happiness in present day modern societies. 5) These data differentiate well between nations.

These considerations invite us to do what the Utilitarians already pleaded for: to use happiness as a guide in the search for a better society.

For that purpose we must specify in more detail what happiness is, and how it can be measured. These questions will be considered respectively in section 4.1 and 4.2 of this chapter.

4.1 CONCEPT OF HAPPINESS

This book does not cover everything ever associated with the term happiness. The focus is on the individual appreciation of life-as-a-whole. In section 4.1.1 this concept is defined. Section 4.1.2 delineates some variants within this concept. The section 4.1.3 and 4.1.4 noted some differences with adjacent concepts. This matter is discussed in more detail in Veenhoven 1984 chapter 2.

4.1.1 Definition of happiness

Overall happiness is *the degree to which an individual judges the overall quality of his own life as-a-whole favorably*. In other words: how much one likes the life one leads. The key terms in this definition may be elucidated as follows:

Degree: The word 'happiness' is not used to denote an optimal appreciation of life. It refers to a degree: Like the concepts of 'length' or 'weight', it denotes more or less of something. When we say a person is happy, we mean that he or she judges his or her life favorably rather than unfavorably.

Individual: The term happiness is used to describe the state of an individual person only; it does not apply to collectivities. Thus, a nation cannot be said to be happy. At best, most of its citizens consider themselves happy.

Happiness denotes a subjective appreciation of life by an individual. So there is no given 'objective' standard for happiness. A person who thinks he is happy, really is happy.

Judges: The word 'happiness' is used where somebody has made an overall judgment about the quality of his or her life. This implies an intellectual activity. Making an overall judgment implies assessing past experiences and estimating future experiences. Both require a marshalling of facts into a convenient number of cognitive categories. It also demands an evaluation of priorities and relative values. Thus, happiness is not a simple sum of pleasures, but rather a cognitive construction which the individual puts together from his various experiences.

One consequence of this conceptualization is that the word 'happiness' can not be used for those who did not make up their mind. One cannot say whether a person is happy or not, if that person is intellectually unable to construct an overall judgment. Thus, the concept cannot be used for animals, little children or retarded people. Nor is the concept applicable to people who did not reflect on the quality of their life or could not decide on a conclusion.

Overall: The evaluation of life aimed at is an overall judgment. It embodies all criteria for appreciation which figure in the mind. Ancient hedonists used to equate happiness with sensory pleasures only. However, there are more modes of appreciation. Apart from the sensory system,

cognition and affect enable man to appraise life as well. Thus, evaluations also involve cognitive appraisals, based on aspirations, expectations and values. The evaluation also draws on affective conditions, such as moods and emotions.

The word 'happiness' refers to a judgment which integrates all the appreciation criteria used. Thus, the idea that one has all one ever desired does not necessarily make a person happy. Despite all earthly endowments such a person may feel pain or be depressed. Similarly, the appraisal that one's life as 'exciting' does not necessarily mark oneself as happy either; life may be too exciting to be enjoyable.

Life-as-a-whole: We do not use the word 'happiness' to characterize satisfaction with specific aspects of life, such as marriage or work. 'Happiness' refers to satisfaction with life-as-a-whole. It covers past, present and anticipated experiences. This does not mean that all things ever experienced are given equal weight in the evaluation. As stated above, evaluation involves a sifting and ordering. In this process some aspects may be emphasized and others ignored. Past life-experiences for example, seldom enter into the evaluation process in their original phenomenological Gestalt. What is taken into consideration is mostly a shallow representation of what one tasted previously.

Own life: The term 'happiness' concerns the evaluation of one's own life; not of life in general. A pessimistic 'Weltanschauung' does not necessarily characterize someone as 'unhappy'.

Favorably: Evaluation always embody appreciation; a conclusion as to whether one likes something or not. The term 'happiness' refers only to judgments concerning this aspect. Happiness judgments concern the dimension extending from appreciation to depreciation; from like to dislike. All humans are capable of appraisals of this kind, (though not all humans can generalize all appraisals into a judgement of life-as-a-whole).

The criterion of 'favorableness' is very close to what is called 'pleasantness'. However, it is not quite the same. The term 'favorableness' concerns the appreciation involved in all evaluations. On the other hand the term 'pleasantness' refers exclusively to direct affective experience. As such it is more characteristic of the affective component of happiness (to be discussed below) than of overall happiness itself.

4.1.2 Variants of happiness

When evaluating the favorableness of life, we tend to use two more or less distinct sources of information: our affects and their thoughts. One can decide that one feels fine most of the time and one can also judge that life seems to meet ones (conscious) demands. These appraisals do not necessarily coincide. We may feel fine generally, but nevertheless be aware that we failed to realize our aspirations. Or one may have surpassed ones aspirations, but nevertheless feel miserable. Using

the word 'happiness' in both these cases would result in three different kind of happiness; the overall judgment as described above and these two specific appraisals. Therefore three terms are used: 1) 'overall happiness', 2) 'hedonic level of affect' and 3) 'contentment'.

Overall happiness is the concept defined above. It is a general judgment of life. The term 'overall' is used to emphasize the difference with the narrower 'components' of happiness below. It is assumed that these components figure as subtotals in estimation of the overall quality of ones life.

Hedonic level of affect is the degree to which various affects that someone experiences are pleasant in character. Hedonic level of affect is not the same as 'mood'. We experience different kinds of mood: elated moods, calm moods, restless moods, moody moods, etc. Each of these moods is characterized by a special mixture of affectional experience, one of which is 'hedonic tone' or 'pleasantness'. The concept of hedonic level concerns only the pleasantness experienced in affects; that is: the pleasantness in feelings, in emotions, as well as in moods. So a high hedonic level may be based on strong but passing emotions of love, as well as on moods of steady calmness.

A person's average hedonic level of affect can be assessed over different periods of time: an hour, a week, a year, as well as over a lifetime. The focus here is on 'characteristic' hedonic level. That is so to say: the average over a long timespan such as a month or a year. The concept does not presume subjective awareness of that average level.

Contentment is the degree to which an individual perceives his aspirations to be met. The concept presupposes that the individual has developed some conscious wants and has formed an idea about their realization. The factual correctness of this idea is not at stake. The concept concerns the individual's subjective perception.

When we assesses the degree to which our wants are being met, we may look both backwards and forwards. We may assess what life brought up to now and may estimate what it is likely to yield in the future. The concept concerns the case where someone combines both the past and the future in an assessment.

4.1.3 Adjacent concepts not covered

Happiness, as defined here, is not the same as what is commonly understood as *mental health*, *adjustment* and *successful living*. The core of these concepts is performance on some 'objective' standard of appropriateness, rather than the 'subjective' appreciation of life. For the same reason happiness is not quite the opposite of *depression*. Though depressed people are generally unhappy, the unhappy are not necessarily depressive. The concept of depression presumes some mental defect. The concept of unhappiness does not.

Happiness is also different from *aspect evaluations* of life. The appreciation of life in specific *domains*, such as 'job' or 'marriage', is not the same as the enjoyment of 'life-as-a-whole'. One can have a perfect job and a good marriage, but still be unhappy, because one has a heart condition. Likewise, a positive evaluation of life on specific *criteria* such as 'social success' or 'variation', does not necessarily coincide with a high 'overall' evaluation of life. There are numerous examples of entertainers who have 'made it' in the exciting world of show business, but who are nevertheless profoundly unhappy. Though the matters are obviously related statistically, they are too different to measure the one by the other.

4.1.4 Focus on 'present' happiness

Evaluations of one's life may concern different periods of life: earlier life, current life and (expected) future life. This book is restricted to evaluations of 'present' life. These evaluations are probably colored by reminiscences of past happiness and hopes for the future. Yet they are not the same; one can be satisfied with present life in spite (or even because of) earlier misery. Likewise, one can be unhappy now, but optimistic about the future.

4.2 MEASURES OF HAPPINESS

Can happiness -as defined above- be measured? Since happiness polls came to be used in the 1960's, a methodological debate started. The following issues figured in that discussion: 1) Can happiness be measured 'objectively' or only 'subjectively' by questioning? 2) If questioning is the only way to assess how people judge life, do interviews tap an existing state of mind or do they merely invite a guess? 3) If people do indeed have an idea about their enjoyment of life, do their responses to questions reflect that idea adequately? These questions have instigated a great deal of empirical research and can now be fairly well answered. (Research reviewed in Veenhoven, 1984, chapter 2.)

'Measurement' was long understood as 'objective', 'external' assessment, analogous to the measurement of blood-pressure by a doctor. It is now clear that life- satisfaction cannot be measured that way. Steady physiological concomitants have not been discovered and it is doubtful that they ever will be. Neither has any overt behavior been found to be linked reliably to inner enjoyment of life. Like all attitudes, happiness is reflected only partly in overt behavior. Though 'active', 'outgoing' and 'friendly' behavior is more frequent among the happy, it is observed among unhappy persons as well. Also, unconscious body language does not reliably indicate inner appreciation of life. Consequently, ratings of someone's happiness by his peers or teachers are only weakly related to self-reports. The case of suicide was long considered to be an exception. This kind of behavior was thought to indicate extreme unhappiness. However, the abundant research in that field has made it clear that dissatisfaction with life is at best one of the motives for suicide. Because there is a

great cultural and personal variation in one's capacity to cope with unhappiness, suicidal behavior is only loosely related to degree of unhappiness.

Inference from overt behavior being impossible, we must make do with questioning; either directly or indirectly, in a personal interview or by an anonymous questionnaire.

4.2.1 Validity of self reported happiness

Several doubts are raised about the quality of responses to survey questions about happiness, in particular to the validity of single items on overall happiness.

One of the doubts is that most people would have no opinion about their appreciation of life. Answers to questions on that subject would therefore reflect other things: in particular prevailing norms of self-presentation. However, people appear quite aware of their enjoyment of life. Eight out of ten Americans think of it once a week or more. Consequently, responses on happiness items tend to be prompt. Non-responses are not the rule.

It is also objected that people claim themselves to be happier than, deep in their heart, they know they are. Both ego-defense and social desirability bias are said to be involved. This distortion would give itself away in several often observed phenomena: in the over-representation of 'very happy' people, in the fact that most people perceive themselves as happier than average and in the discovery that psychosomatic complaints are not uncommon among persons who characterize themselves as happy. Yet, these facts provide no proof of desirability distortion. There are good reasons why most people could honestly imagine themselves happier than average. Presence of psychosomatic complaints does not necessarily exclude a positive appreciation of life either. The proof of the pudding is a demonstration of distortion itself. Several clinical studies have tried to show this, but failed to find evidence for a general overstatement of happiness.

Although there is no proof of systematic desirability distortion, there is evidence that responses to questions on happiness are liable to various situational influences, such as the site of the interview, the interviewer, the weather, one's mood, etc. These differences can be considered as essentially random error. More systematic measurement error is involved as well. Responses are influenced by the precise wording of the questions, answer formats, sequence of questions and context of the interview. These effects can cause problems when scores on different measures of happiness are compared. In chapter 7 we will consider this matter in detail.

4.2.2 Acceptable indicators

Having established that happiness can be measured in principle, we can now proceed to consider the specific methods of assessing it. We then meet with a great variety of questions and interrogation techniques. During the last decades more than a hundred methods have been proposed; some of them presented under impressive names such as 'Life Satisfaction Index', 'General Satisfaction Score' or 'Happiness Scale'. Many of these methods labor under rather obvious defects.

Most methods depend on questioning. Hence the most current defect is that questions are inappropriate. Several ask in fact about subtly different things than about 'happiness' as defined here. Close reading shows that many items in so-called 'happiness scales' refer to things like 'optimism', 'frustration tolerance' and 'social adjustment'. Investigators who use such questionnaires typically fail to define happiness formally.

Another current defect is that methods are not sufficiently specific. Some 'expert-ratings' for example, are unclear about what the expert regards as happiness. Similarly, methods based on 'content analysis' sometimes lack clear instructions for interpretation. Again, this is often a result of slovenly conceptualization. Sometimes even more basic defects appear: for example when happiness is assessed on the basis of estimates by peer who do not know the individual's private thoughts and therefore base their estimate on his overt behavior and his living conditions.

Elsewhere I have screened all the current measures for applicability to the concepts defined in section 4.1. The following indicators were deemed acceptable (Veenhoven 1984:chapter 4).

Indicators of overall happiness

Overall happiness can be assessed by direct questioning only. It cannot be measured indirectly by questions that tap essentially different matters supposed to be related to happiness (see section 4.2.3). Direct questions on overall happiness can use various key terms. One of the appropriate words is 'happiness', provided that the context of the question makes clear that happiness-in-life is concerned, rather than happiness-of-the-moment. Another acceptable term is 'satisfaction-with-life'. Questions can be framed in different ways: in closed questions, in open-ended questions and in focused interviews. In the latter two cases, clear instructions for content-analysis of responses are required.

Overall happiness cannot be assessed by peer-ratings, because peers do not know precisely what the subject has on his mind and rather imagine how they themselves would feel if they were in his shoes.

A classification of accepted indicators of overall happiness is presented in [scheme 4.2.2](#), left column (code HAP).

Indicators of hedonic level

Hedonic level of affect can be assessed in three ways: by direct questioning, by projective tests and by ratings on the basis of non-verbal behavior. Again the method of direct questioning is to be preferred, in particular when the individual is asked several times during a certain period how pleasant he feels at that given time (time sampling). Though generally less dependable, indirect methods can sometimes suffice. Some projective tests at least seem to be reasonably valid. Ratings by others on the basis of non-verbal behavior are also acceptable, provided that rating instructions are sufficiently specific. Unlike cognitive judgments, affective conditions may manifest fairly reliably in non-verbal behavior.

A classification of accepted indicators of hedonic level is presented in [scheme 4.2.2](#), column 2 (code AFF).

Indicators of contentment

Contentment can be measured by means of direct questions only. Like overall happiness, it cannot validly be assessed by indirect questioning or by peer-ratings. Direct questions must again be specific. In this case that means that the question must clearly focus on realization of wants in a lifeperspective. Such questions are probably best understood when preceded by an enumeration of one's major aspirations. Questions can again be framed in various formats.

A classification of acceptable indicators of contentment is presented in column 3 of [scheme 4.2.2](#), (code CON).

Mixed indicators

Finally, there are several acceptable indicators that cover two or more of these happiness variants. The majority of these consist of single direct questions which by wording or answer format refer to both overall happiness and hedonic level. As long as they do not labor specific deficits, these questions are accepted.

Some indicators work with multiple questions. Characteristically these questions cover both overall happiness and one or both of the discerned components. When all separate items meet the demands outlined above, such composite indicators are accepted.

A last method to be mentioned in this context is the focused interview of which the 'depth interview' is a variant. Such interrogations tend to cover all three happiness variants. A lack of clear reports on the themes of enquiry and on rating procedures mostly makes it difficult to assess their validity.

A classification of these mixed indicators is presented in column 4 of [scheme 4.2.2](#) (code MIX).

4.2.3 Rejected indicators

Several currently used indicators of subjective well-being appear not to fit the concept of happiness as defined here. Findings yielded by such indicators are not included in this book. For illustration the following rejected indicators are mentioned:

Scales involving non-happiness items

Many currently used indicators consist of lists of questions, part of which refer to happiness as such, and part to related concepts, that are nevertheless essentially distinct matters. Many scales in gerontological research for example, mix questions about happiness with items on 'social participation', 'future orientation' and 'health' i.e. Neugarten's (1961) LSI-A, and Lawton's (1975)

PGMC. Likewise, current scales in community mental health add items on 'nervousness', 'vigor' and 'emotional stability' i.e. Dupuis' (1984) GWB. Such indicators are rejected, because it is not at all sure that high social participation, future orientation and vigor always mark a high appreciation of life. There are always socially active, future orientated and vigorous people who are profoundly dissatisfied with their life. Scores on indicators of this kind cause contamination in correlational analysis: f.e. when vigor is an item in a happiness index, scores on this index correlate with vigorous behaviors. For the purpose of comparison through time and between nations, such scores are problematic as well, because concomitants of happiness are typically not the same in all countries at all times.

Summed life-aspect satisfactions

Another currently used method is first asking separate questions about satisfaction with various domains of life such as 'work', 'marriage' and 'leisure', and next combining the responses in a sum-score. This method has several drawbacks. Firstly, it does not adequately reflect the individuals 'overall evaluation'. Such sum-scores tap selected aspects of life only, and it is the investigator who awards weights, rather than the subject. Secondly, not all aspect-satisfactions apply equally well to everybody; how about marriage-satisfaction of the unmarried and the job-satisfaction of the unemployed? Thirdly, the significance of life-aspects such as 'work' and 'marriage' is not the same across time, culture and social categories. Comparisons is therefore often not possible with such indicators.

These objections apply not only to sum-scores of domain-satisfactions, such as the satisfaction-sum of Andrews & Withey (1976). They also apply to 'semantic-differential scales', which involve the ratings of ones life on various evaluational criteria, such as 'boring/interesting', 'lonely/friendly' and 'hard/easy'. Such a semantic differential scale is part of the much used 'Index of Wellbeing' by Campbell et al. (1976). That index is therefore not acceptable.

Comparison with others and the past

Several investigators have asked their subjects how happy they think they are compared to others, rather than how they feel themselves. Such items are rejected. Even if one is happier than one's neighbor, one can still be unhappy. For the same reason the item 'I have been happier than I am now' is deemed unacceptable. Being less happy than before does not imply that one is unhappy.

Comparison with other ways of life

Some investigators derive happiness from responses about questions on appreciation of alternative ways of life. For instance: one of the items in Diener's (1985) 'Satisfaction With Life Scale' (SWLS) is 'If I could live my life over, I would change nothing'. This item is also rejected, and thereby the entire scale. Someone can be quite happy, but still opt to try another way if he could live his life over. There are clearly more roads to happiness and most people know that.

4.3 AGGREGATION TO SOCIETAL LEVEL

This book is not on the happiness *of* nations, but on happiness *in* nations. As noted in section 4.1.1, a nation cannot be happy or unhappy. Unlike an individual, a collectivity cannot 'evaluate' and has no 'life'. However, a nation can be more or less livable, which is likely to manifest in the happiness of its citizens.

In this context, the focus is not on the happiness of specific individuals, but on the happiness of the general population. That requires that individual level observations are 'aggregated' to the societal level. Aggregation involves at least the gathering of individual level observations in some frequency distribution. One can, for instance, characterize the level of happiness in a country by the proportion of citizens that avow themselves 'very happy'. A step further is to compute a central tendency statistic, such as the mode, the median or the mean. The 'mean' or 'average' is the most commonly used statistic in this case. Next to the level of happiness in a population one can also consider its dispersion, in other words, the inequality in happiness in that population. For that purpose one can compute the standard deviation.

The choice of the most appropriate statistic depends on the object of analysis. Therefore, the tables in this book present the full frequency distributions when possible. Next to frequencies all tables report means. Though this involves the assumption of metric quality of ordinal level data, this is the most comprehensive central tendency statistic. For reasons of room, the tables on 10-step and 11-step items do not report the full frequency distribution. In these cases the standard deviations are also reported.

4.4 SUMMARY

Happiness is defined as the degree to which an individual judges the overall quality of his life-as-a-whole favorably. Within this concept two 'components' of happiness are distinguished: *hedonic level of affect* (the degree to which pleasant affect dominates) and *contentment* (perceived realization of wants). These components represent respectively 'affective' and 'cognitive' appraisals of life and are seen to figure as subtotals in the overall evaluation of life, called *overall happiness*.

Happiness as defined here can be measured by means of questioning, and hedonic level also by observations of non-verbal behavior. Though happiness is measurable in principle, not all the questionnaires and observation schedules used for its measurement are deemed acceptable. Many measures tap in fact broader phenomena than defined here. These measures are left out in this review of survey research on happiness in nations. All the data reported here are based on indicators that successfully passed a test for face-validity.

This book reports data on happiness in nations. It provides information about average level and dispersion of happiness.

chapter 5

VALIDITY OF HAPPINESS AS INDICATOR OF LIVABILITY

global validity tests

- 5.1 Some global validity tests
 - 5.1.1 Congruent validity tests
 - 5.1.1.1 *Less mental distress in happier nations?*
 - 5.1.1.2 *Less suicide in happier nations?*
 - 5.1.1.3 *Longer life-expectancy in happier nations?*
 - 5.1.2 Concurrent validity test: *Better living conditions in happier nations?*
 - 5.2 Some specific validity tests
 - 5.2.1 Tests for cultural bias in measurement of happiness
 - 5.2.1.1 *Differences a matter of language?*
 - 5.2.1.2 *Differences a matter of desirability bias?*
 - 5.2.1.3 *Differences due to response style?*
 - 5.2.1.4 *Differences a matter of familiarity with the concept?*
 - 5.2.2 Tests for cultural influence in appraisal of life
 - 5.2.2.1 *Unhappy countries characterized by cynicism?*
 - 5.2.2.2 *Migrants happiness more similar to country-of-origin than to country-of-settlement?*
 - 5.2.2.3 *East Germans equally happy as West Germans?*
 - 5.2.2.4 *Cultural patterns in happiness that cannot be explained by quality of living conditions?*
 - 5.3 Summary
-

Even if we can validly measure happiness, it is still questionable whether high average happiness of individuals signifies a good livable society. Happiness may say more about how people look at their life, than about the actual quality of their life. Also, happiness may depend more on what people want, than on what society provides. If so, people can be happy in a bad society and unhappy in a good one.

This is certainly possible, but is it plausible? Whether the average happiness of individuals is a good indicator of societal livability cannot be established by reasoning alone. The theoretical debate between Utilitarians and their opponents remained inconclusive at this point. Therefore we must rely on empirical validity testing.

There are two ways to establish the validity of survey assessed happiness for measuring livability of nations. One is to consider whether the outcomes seem sound. That is: whether they correspond with other known indicators of the matter. This is called *global* validity testing.

Some global validity tests are reported below in [section 5.1](#). One can also try to check specific objections that have been raised against the use of happiness for this purpose. That can be called *specific* validity testing. Some tests of that kind are reported in [section 5.2](#).

The validity tests reported in the following paragraphs use the survey data on average happiness in nations as reported in Part II of this book.

5.1 SOME GLOBAL VALIDITY-TESTS

The global validity of happiness as a measure of livability can be assessed by comparing its correspondence with other indicators of livability. This is called 'external' validity testing. There are two ways of external global validity testing.

A first way of external validity testing is assessing correspondence with other indicators in the same class. This is called *congruent* validity. As noted in [chapter 3](#), happiness is one of the output indicators of livability; it infers the fit of societal provisions/demands with its members needs/capacities from the degree to which people 'flourish' in it. Other indicators of human flourishing mentioned were: 'physical health', 'mental health', 'alienation' and 'suicide'. In [section 5.1.1](#) we will establish the correspondence with these indicators.

The second way of external validity testing is to assess correspondence with indicators of another kind. This is called *concurrent* validity. Here we use the other kind of indicators of livability, referred to as 'input' indicators. If happiness is a good indicator of livability, it must be highest in the countries that provides the best input; in other words the most highly regarded living conditions. At least it must be low in countries that fail to guarantee the biological minimum. Whether or not that is the case considered in [section 5.1.2](#).

5.1.1 Congruent validity tests: correspondence with other indicators of human flourishing

As we have seen, happiness is only one of the indicators of the degree to which people flourish in a society. Other indicators are average 'length of life', 'mental health', 'suicide', and other subjective appraisals, such as 'alienation'. We can use these other indicators in a test of congruent validity. As we have no cross-national data on 'alienation', the analysis is restricted to 'mental health', 'suicide' and 'longevity'.

5.1.1.1 *Less mental distress in happier nations?*

If happiness is a relevant indicator of livability of society, we can expect a negative correlation between average happiness in nations and incidence of mental disturbance. A positive correlation would be fatal to the validity hypothesis.

Data: As noted in [section 3.2.1](#), comparison of mental disturbance across borders is beset with methodological problems. In order to escape some of these problems we limit to industrialized nations and use a multiple index of mental distress. This index is the 'Anxiety Score' which Lynn (1971,1982) computed for several nations. This score is based on behavioral manifestation of mental distress. It involves consumption of stress related stimulants (coffee, tobacco, alcohol and high caloric food), risky behavior (accidents, murder, crime), mental disorganization (hospitalization for psychosis), deviant behavior (divorce, illegitimate birth) and despair behavior (suicide). The nation scores on this behavioral index appear to be related to anxiety, extroversion and neuroticism as observed in comparative survey studies. Lynn analyzed trends in this distress index between 1935 and 1970. He observed a peak at World War II and noted a greater drop in the nations that had escaped defeat or occupation (Lynn, 1988:239).

By themselves the constituents of this index are debatable as an indicator of mental distress; the incidence of alcoholism for instance depends on cultural habits and social control too. For lack of a better alternative we will go with this indicator and assume that the weakness of its constituents more or less outweigh each other. The data are presented in [scheme 5.1.1.1](#). Note that the data concern slightly different periods: distress 1970 and happiness 1980. This may suppress the correlation.

Result: The prediction is confirmed. A clear negative relation emerges. The less symptoms of anxiety in the country, the happier its citizens avow themselves. The correlation is $-.76$ ($p < .01$).

5.1.1.2 *Less suicide in happier nations?*

If average happiness is a good indicator of the livability of countries, we can also expect a negative correlation with suicide rates, provided that suicide is a good indicator of livability itself.

Data: Suicide rates for countries in the 1980's were found in the World Health Organization Statistics (WHO 1987). The combined data on happiness and suicide are presented in the scattergram in [scheme 5.1.1.2](#).

Result: The prediction is not confirmed. There is no relationship between national levels of happiness and incidence of suicide in nations: $r = +.03$ (ns).

This result is of course not an argument for the validity of happiness as an indicator of livability of a society, but it is no decisive argument against either. As already noted in [section 3.2.2](#), there are serious doubts about the validity of suicide rates for that purpose. Suicide can be high in well livable societies, for instance when it is an accepted way out for incurable illness. A higher suicide rate can also result from greater freedom and individualism, which are beneficial to the great majority of the population, but may push a fraction of problematic citizens over the edge. In this context it is worth noting that suicide is typically high in the rich individualistic nations and low in collectivistic and mostly poor nations.

5.1.1.3 *Longer life-expectancy in happier nations?*

If happiness is a relevant indicator of livability of society, we can expect that in the happiest countries people live longest; in other words that there is a positive correlation between average happiness in the country and life-expectancy.

Data: Data on life expectancy in countries were found in the UN (1982) National Account Statistics. These data are crossed with happiness in the a scattergram in [scheme 5.1.1.3](#).

Results: The predicted positive correlation emerges: $r = +.53$ ($p < .05$). The correlation is clearly produced by the poor countries. In the rich world there is little correspondence between happiness and longevity. This underscores the earlier observation in paragraph 3.2.1, that the relevance of longevity as an indicator of the livability of society is limited to gratification of basic material needs.

In summary

There is a clear correspondence between average happiness in nations and performance on two other output indicators of livability: life-expectancy and mental distress. Together these factors

explain 37% of the variance in happiness. However, happiness is unrelated to prevalence of suicide. These results do not expose happiness as an invalid measure for livability of nations.

5.1.2 Concurrent validity test: *Better living conditions in happier nations?*

Concurrent validity testing is assessing correspondence with indicators of an other kind. In this case such other indicators are the 'input indicators' of livability discussed in [section 3.1](#). If average happiness is a good (output) indicator of livability, it must be higher in countries that score high on input indicators than in countries that score low on these. There is of course something contradictory in such a test. We have criticized current input indicators and propose the output indicator of happiness as an alternative. Now we are about to validate our favored indicator by the rejected one. Still, it is worth knowing whether these indicators correspond or not. Though current input indicators of livability are certainly not ideal, they are not without any sense. So there must at least be some correspondence. If we don't find any relationship, there is clearly something wrong with one or both indicators. If however we find a strong statistical relationship, we can be fairly sure that both indicators do reflect livability.

Our validity test will concern the following field of societal input: 1) The *material comfort* the economy provides, assuming for the moment that one cannot have too much of this. 2) The *social equality* in the country, assuming that inequality is mostly detrimental to the general human needs for self-respect. 3) The *freedom* society provides, assuming that freedom facilitates the choice of lifestyles that fit with needs and capacities 4) Access to *knowledge*, assuming that humans have an unsatiable need for understanding.

Prediction: The better a country provides its citizens with material comfort, social equality, freedom and access to knowledge, the happier its citizens are on average.

Data: The most basic indicator of *material comfort* is the degree to which 'nutrition' suffices in a country. For that purpose we used daily calorie supply per capita as a percentage of requirement. Data were drawn from the World Development Report (1984:264/5). A broader indicator of the material comfort the country provides is the 'real income' per head. 'Real' income means that non-marked good and services are taken into account as well and that monetary differences are eliminated. Data were drawn from Summer and Heston (1988:125).

Social equality was measured by two indices: First 'income inequality' in countries was measured by Gini-coefficients. Data about income inequality around 1980 are available from UN Compendium of Income Distribution Statistics (UN 1985, summary table) and the World Development Report 1990 (UN 1990, table 30). Due to variation in definition and sampling, these data are not quite comparable however. When applied in this analysis they did not differentiate. (Though unrelated to *level* of happiness income-inequality appears to be related to

dispersion in happiness: see [section 8.5](#)). Therefore, two other indicators of social inequality were used: 'social security' and 'women's emancipation'. Social security is the degree to which the state guarantees its citizens a minimum level of living. By lack of comparable measures of that level as such, we took the proportion of government expenditures (minus defense) as a proxy. Data were drawn from IMF statistics (IMF, 1987) and Japanese Government statistics (Ministry of Finance, Japan, 1986). Next we considered the more newly recognized 'inequality between sexes'. Emancipation of women was measured by Estes' (1984:171;184/5) Index of Women Status, which involves educational participation of women and women's suffrage.

Freedom was measured by 'freedom of the press'. Data on that matter were found in Kurian (1979:362). These data concern the early 1970's. Because press-freedom is a fairly stable phenomenon, the country differences were assumed to be largely identical in 1980. We also considered the 'political democracy' in the country. For that purpose we took Estes' Index of Political Participation (Estes 1984:175-187). This index involves independence of the country, presence and functioning of a parliamentary system and limitation of the influence of the military.

Access to knowledge was measured by 'scope of education' in the country and 'attendance to mass media'. As an indicator of educational performance we took Estes' Education Index (Estes 1984:169;183/4). This index involves school-enrolment, expenses on education and literacy. As an indicator of access to information from mass media we took the summed scores of daily newspaper circulation and the number of radio's as found in Kurian (1979:347-359).

All these indicators of country performance were correlated with average happiness. The results of that analysis are presented in [scheme 5.1.2a](#). The relation can also be made visible by comparing the happiness of countries that provide similar living conditions. For that purpose [scheme 5.1.2b](#) presents the same data in a dendrogram.

Results: Correlations in [scheme 5.1.2a](#) clearly confirm the prediction: the better the living conditions the country provides, the happier its citizens are on average. Economic prosperity is one of the strongest predictors of happiness. Because freedom, equality and knowledge depend to some extent on economic prosperity, the correlations with these latter indicators can be spurious. The partial correlations in the middle column in [scheme 5.1.2a](#) show this is only partly so. The correlation of happiness with women's emancipation and education is largely independent of national income.

Together these national characteristics explain no less than 77% of the variance in happiness! This remarkably high value, could be produced by the exceptional case of India, which combines extremely poor living conditions with very low happiness. Therefore we repeated the analysis without India (N=21). The relation remains quite strong however: $R^2 = .63$.

This analysis was repeated with happiness data based on responses to questions about satisfaction-with-life (tables 1.2.2a + b + c). The results of that analysis are quite similar. $R^2 = .63$. All the correlations are slightly lower. (Data not shown).

The dendrogram on [scheme 5.1.2b](#) presents the result of a cluster analysis. Similarity with respect to living conditions is represented by tree-like configurations. The closer to the left of the picture, the more alike the countries (leaves) on the same branch are, with respect to material affluence, social equality, political freedom and access to knowledge. The dendrogram shows two main clusters of nations, which can be identified as what is commonly referred to as 'developed' versus 'underdeveloped' nations. Average happiness differs markedly between these clusters: happiness-in-life is respectively 7.4 and 6.4; and satisfaction-with-life 7.3 and 5.7. Within these two clusters there are further differentiations in living conditions, that can less well be identified. These finer differences do not correspond with variation in happiness.

In summary

There is a clear correspondence between average happiness in nations and the degree to which these nations provide material comfort, social equality, freedom and access to knowledge. In other words: happiness in nations corresponds with their level of 'development' or 'modernity'. Together these nation characteristics explain 77% of the variance in happiness. Thus, this 'output' indicator (happiness) yields similar estimates of livability as current 'input' indicators (wealth + equality + freedom + knowledge).

5.2 SOME SPECIFIC VALIDITY-TESTS

The global validity tests in [section 5.1](#) did not falsify the hypothesis that the livability of nations can be measured by average happiness of its citizens. In fact that disproves the various specific objections raised against the use of happiness for that purpose. Still, we can achieve more certainty if we also check these specific objections separately. Firstly, specific validity tests provide a check on the global tests. We cannot rule out the possibility that these tests are flawed in some way; for instance, that the high correlations with input indicators of livability are the spurious result of some racial or cultural factor. If happiness stands specific tests as well, such error is unlikely to be involved. Secondly, specific validity tests can inform us about possible sources of unexplained variance.

This section considers two main objections against the use of happiness as an indicator of livability of nations.

The first objection is that happiness ratings cannot be compared across borders, because measures work out differently from one country to another. This is the issue of *cultural bias in the measurement of happiness*. That matter will be considered in [section 5.2.1](#).

The second objection holds that average happiness in nations says more about the outlook-on-life in a country, than about the actual quality-of-life it provides. It is claimed that a

culture of pessimism can make people consider themselves unhappy, even though society is in fact quite livable. This is the issue of *cultural influence on the appraisal of life*. That objection will be investigated in [section 5.2.2](#).

Two limitations of this approach to specific validity testing must be mentioned in advance. The first limitation is that the tests involve attempts to verify the hypothesis that the differences in average happiness between nations are *largely* caused by the specific objection under review. The tests performed are not suited to demonstrate minor effects of that kind. The second limitation is that eliminating objections against a claim does not prove it true. In fact, one can never prove empirically that there are no white crows. So, even if all these specific objections against assessing livability by happiness are falsified, it is still possible that some objections we did not consider does apply.

5.2.1 Tests for cultural bias in measurement of happiness

The objection has been raised that the observed differences in average happiness between nations are the result of cultural bias in measurement. This objection implies that there are no real differences in happiness between nations, or other differences than the ones that appear in responses to survey questions. Several suggestions have been made about possible sources of measurement distortion. The first is that *translation* plays us false, since words like 'happiness' and 'satisfaction' have subtly different connotations in the various languages. Similar questions would therefore measure different matters. A second suggestion is that responses are systematically distorted by *desirability bias*. In countries where happiness ranks high as a value, people would be more inclined to overstate their appreciation of life. A third claim is that *response styles* distort the picture. It is suggested that in collectivist societies people tend to present themselves as 'average', which leads to lower happiness scores. Finally, a common suggestion is that happiness is a typical Western concept. *Unfamiliarity* with the concept in non-western cultures is seen to result in low ratings.

Below we will inspect these claims one by one. If one of them appears to be true, this means that the happiness indicators used here do not measure true happiness in nations validly. If so, they are also disqualified as an output indicator of livability.

5.2.1.1 Differences a matter of language?

The first claim is that the differences in reported happiness between countries result largely from variations in the meaning of key terms used in questions in different languages. Translations would be imprecise. Consequently seemingly identical questions would tap in fact different things.

Predictions: If this claim is true we can expect the following:

- a) The pattern of difference must vary with the keyword used. Countries that score high on a question that uses the word 'happiness' can rank low on questions that refer to 'satisfaction' with life, or score middle on a rating between 'best/worst' possible life.
- b) In bi-lingual countries, ratings of happiness must differ between linguistic categories. Ratings must in fact be more close to same-language populations abroad, than to different-language compatriots.
- c) Average happiness must be highly similar in nations where the same language is spoken, even if these nations differ considerably in other respects.

Data and method. The first prediction (a) can be checked by comparing the happiness rank orders of countries on different happiness questions. For this purpose the Gallup/Kettering world survey was used. This cross-national study involves three questions on happiness, that were posed in 11 mono-lingual nations. Questions and data are presented in [scheme 5.2.1.1a](#).

The second prediction (b) can be tested on two cases: Belgium and Canada. In Belgium two languages are spoken, French and Dutch. These linguistic categories can be identified in the data of the Eurobarometer surveys, which allow a specification of regions within the country. The scores can be compared with those of France and the Netherlands, which are also involved in the Eurobarometer survey. In Canada, French and English are spoken. Data on level of happiness in these categories are available from Blishen and Atkinson (1980). These scores can be compared with those of France and Britain from the Gallup/Kettering world survey (Gallup 1976). Results are presented in [scheme 5.2.1.1b](#).

The third prediction (c) can be checked by comparing English language nations (Britain, Australia, Canada, USA), French language regions (France, Wallonia, Quebec), Portuguese language nations (Portugal, Brazil), Spanish language nations (Spain, Mexico) and German language nations (former East Germany and West Germany). The latter three cases are most interesting, because the socio-economic differences between these countries are great. If people are nevertheless about equally happy in these nations, language is likely to color their responses. Unfortunately, the available data on the Latin-language pairs are not very well comparable, due to differences in wording of questions and time of investigation. The best available testcase is East- and West-Germany right after the reunification. The language in these nations is the same, but the living conditions quite different. Well comparable data are available from the Socio-Economic Panel Study (SOEP) and the German periodical Wohlfahrtssurvey. The data are not shown here. See table 1.2.2b in Part II.

Results: The first prediction is not supported by the data, and neither is the third. The second prediction meets at best partial support.

- a) [Scheme 5.2.1.1a](#) shows that the rank order of happiness is largely the same for all three questions. Though there are some minor differences, high positive rank order correlations emerge. Rank order correlations may over-emphasize slight differences between countries at

the same level of happiness. Therefore, we also computed product moment correlations (r). These are respectively +.88 (Best/Worst by Happy), +.89 (Happy by Satisfied) and +.99 (Best/Worst by Satisfied).

One could interpret these data as showing that the word 'happy' is less easily used in Germanic languages. Germany ranks relatively low on the happiness item. However, this is no general pattern in languages of German origin. The difference does not appear in the results of the World Value Studies in 1980 and 1990. In particular not when the Netherlands and Iceland are considered. (Data not shown here, see table 1.1.1b and 1.2.2a).

The data do not support the common idea that English language involves an easier use of the term 'happy'.

- b) **Scheme 5.2.1.1b** shows slight support for the prediction in the case of Belgium. French speaking Belgians report somewhat less happiness than their Dutch speaking compatriots. This difference is in the same direction as the (much greater) difference in average happiness between France and the Netherlands. The case of Canada is contrary to the prediction however. French Canadians report themselves slightly happier than English speaking Canadians, while average happiness in France is markedly lower than that of the English speaking nations. Inglehart (1977) reports similar results in the case of Switzerland. The Swiss of all tongues report relatively high levels of satisfaction with life. The scores rank far above the Germans, French and Italians, with whom the Swiss share their languages.
- c) Comparison of happiness in Portugal and Brazil shows greater happiness in the latter nation. Likewise happiness seems to be higher in Mexico than in same tongued Spain (table 1.1.1a). The case of East and West Germany shows similar sizable differences in average happiness in nations of the same language. In 1991 East Germans score 6.0 on an 11 step satisfaction-with-life scale, and West Germans 7.3 (table 1.2.2a). It is worth also taking a look on **scheme 5.2.2.4**, which presents the deviations in actual happiness in nations from the level explained by quality of living conditions. There is no consistent language effect in these deviations either.

5.2.1.2 Differences a matter of desirability bias?

The second claim to be tested is that part of the difference in self-reported happiness between countries results from differences in moral appreciation of happiness. In countries where happiness is regarded as morally desirable, people would be apt to over-report their satisfaction with life, both for reasons of ego-defense and social presentation. This claim is often raised to discount the high level of happiness in the USA (e.g. by Ostroot & Snyder 1985).

Predictions: If this claim is true, we can expect the following:

- a) In countries that rank hedonic values high in their value hierarchy, reported happiness must be higher than in countries that rank pleasure and satisfaction low. If this is not the case, there is probably no desirability distortion in the measurement of happiness. A positive result does not mark the distortion hypothesis true however. Pleasure acceptant countries can make inhabitants more happy.
- b) The distortion will manifest more pronouncedly in responses to questions about 'general happiness' than about 'feelings in the past few weeks'. Reports on last weeks' feelings are probably less vulnerable for desirability distortion, because it is less embarrassing to say to have felt down lately, than to admit one's life-as-a-whole is unsatisfactory. Past weeks' feelings are also more difficult to deny; defense-mechanisms have a better chance in the less palpable evaluation of life-as-a-whole. As a result happiness-appreciating countries will be recognizable by a relatively high divergence between reported happiness and affect level as measured by the Bradburn Affect Balance Scale.
- c) For the same reason there will be divergence between happiness and affect on the individual level as well. Desirability pressures produce uniformly high reports of happiness, whereas reports of affect remain closer to reality and are more variable. This must manifest itself in small correlations between reports of these happiness variants; in particularly in countries that cherish happiness, such as the USA.

Data and method: Test of the first prediction (a) requires that we measure 'hedonic value orientation' in countries. We constructed an indicator of that matter on the basis of survey data. The World Values Study involves many questions about value preferences. In an earlier analysis of these data Halman (1987) has distilled several value dimensions and has computed average scores on these dimensions for ten countries involved in his study. Some of these value dimensions are indicative of moral appreciation of pleasure and satisfaction. One of the dimensions is the tendency to approve of lust and pleasure as a guiding principle in matters of family, marriage, and sexuality. Halman refers to this dimension as 'egoism'. The second dimension concerns enjoyment and comfort in the realm of work ethics. Halman refers to it as the 'comfort/materialistic' dimension. We added both these factor scores and regarded the sum as a proxy of general *value hedonism* in the country. This indicator of moral hedonism is crossed with the level of happiness in the country. Data are presented in [scheme 5.2.1.2a](#).

Test of the second prediction (b) requires that we cross 'value-hedonism' with *over-report of happiness* as measured by the divergence between reports of 'general happiness' and 'past weeks affect'. For this purpose we can again use the data of World Value Study I. We computed divergences for the same ten countries by deducting the 0-10 Affect Balance Score (table 2.2a) from the 0-10 standardized happiness score. A positive divergence score means that general happiness was rated higher relatively. The data are presented in [scheme 5.2.1.2b](#)

The third prediction (c) can be tested in a meta-analysis of studies in nation samples that involved correlations between responses to questions about happiness in general and scores on the Affect Balance Scale. The available data are presented in [scheme 5.2.1.2c](#).

Results: All three predictions are defied by the data:

- a) As can be seen in [scheme 5.2.1.2a](#), happiness ratings are not higher in the countries where hedonic values are most endorsed: $r = +.00$ (ns).
- b) [Scheme 5.2.1.2b](#) shows that the divergence between average response to questions on 'general happiness' and 'past weeks affect' is unrelated to average moral appreciation of happiness: $r = -.02$ (ns). Contrary to the prediction, the countries where happiness is cherished most, do not stand out by a pattern of high happiness and low affect.
- c) Responses to the general happiness question and the Affect Balance Score are highly correlated at the individual level. Contrary to the prediction the correlation is not smaller in the 'suspiciously happy' United States. See [scheme 5.2.1.2c](#).

Clearly, there is no evidence for a cultural difference in desirability bias.

5.2.1.3 Differences due to response style?

The third claim holds that in collectivistic societies, such as Japan, people would tend to present themselves as 'average' citizens. Therefore, they would respond modestly and be apt to choose the midpoint of the response scale. This would lead to relatively low scores, because happiness is typically above neutral; the normal human condition being that one is more or less happy. By choosing the (neutral) midpoint of the scale, collectivistic people would in fact avow themselves less happy than they are (Iijima, 1982). In individualistic societies, people would rather define themselves in the difference with others, or orientate on internal cues.

Predictions: If this claim is true, we can expect the following:

- a) Average happiness must be lower in collectivistic countries than in individualistic ones.
- b) The dispersion of happiness in a country, as apparent in standard deviation, must be smaller in collectivistic countries than in individualistic ones
- c) Happiness must be closer to the midpoint of the scale in collectivistic countries than in individualistic ones.

Data and method: The first prediction (a) was again tested with data of World Values Study I. Collectivism/individualism of the country was once more measured by the pattern of responses to questions about value preferences. Acceptance of personal choice and rejection of tradition was taken as manifestation of *value-individualism*. Again we use value dimensions as identified and measured by Halman (1987). These are 'permissiveness' in moral and religious matters, 'permissiveness vs. traditional' orientation in marriage and family and the earlier used 'comfort' dimensions in work ethics. Scores on these dimensions per country were totaled. This score of

value-individualism per country was correlated with average happiness as assessed. The results are presented in scattergram in [scheme 5.2.1.3a](#).

The second prediction (b) was tested by means of the same data on value-individualism. Now country scores on that matter were crossed with the standard deviations of happiness (rather than with the means). The data are presented in the scattergram in [scheme 5.2.1.3b](#).

The last prediction (c) was tested with data of the Gallup/Kettering World Survey. The Best/Worst rating of present life used in this study has a clear midpoint. The percentage of scores in the middle categories in the various countries is presented in [scheme 5.2.1.3c](#). Unfortunately we have no measures of collectivism/individualism of the countries in this dataset, so we can only inspect whether there are any clear differences or not.

Results: Again the predictions are defied by the data:

- a) Contrary to prediction, there is a negative correlation between value-individualism and happiness. As can be seen in [scheme 5.2.1.3a](#) the correlation is -0.27 (ns). When happiness is measured by a question on satisfaction-with-life, the correlation is $+0.05$ (ns).
- b) Contrary to the prediction, we find no greater dispersion of happiness in individualistic countries. In fact there is a negative correlation. The correlation between value-individualism of the country and standard-deviation of happiness is -0.46 (ns). See [scheme 5.2.1.3b](#). When dispersion of happiness is measured by standard-deviations on the 10 step life satisfaction item $r = +0.06$ (ns).
- c) [Scheme 5.2.1.3c](#) shows that Iijima is right that the Japanese tend to choose the midpoint of the scale. Together 58% of the responses are in the categories 6, 5 and 4. Yet, that pattern does not seem to be a manifestation of particular Japanese collectivism. It also appears in Italy (52%), France (52%) and Mexico (51%). In fact, the middle categories are also frequently chosen in the Benelux (47%), Britain (44%) and Germany (41%).

5.2.1.4 Differences a matter of familiarity with the concept?

The last claim to be checked is that happiness is a typical Western concept. Because people in non-western societies would be less familiar with the concept, they would be more apt to avoid extreme responses and tend to rate themselves safely in between. This would lead to a relatively low average score, which would not fully reflect the real level of happiness in these countries.

Prediction: If unfamiliarity is indeed involved we can expect more 'don't know' and 'no answer' responses in non-western societies: particularly on questions which use the word 'happiness'.

Data and method: This prediction can be checked with data of earlier mentioned Gallup/Kettering World Survey of 1975. This study involved representative samples in 5 parts of the world and therefore allows a good distinction between the 'Western' and 'Non-Western' world. It also involved three happiness questions: 1) happiness-in-life, 2) satisfaction-with-life,

and 3) ranking of present life on an 11-step scale ranging from 'best possible' to 'worst possible'. Each of these rating scales involved a DK/NA response category. Data are presented in [scheme 5.2.1.4](#).

Results: Again the prediction is refuted by the data. [Scheme 5.2.1.4](#) shows that the non-response to questions about the appreciation of life is generally low, and not lower in Non-Western nations than in Western ones.

In summary

This section considered the objection that happiness cannot be compared across borders, as a result of inevitable cultural bias in its measurement. Four commonly mentioned claims of cultural measurement distortion were checked empirically: 1) language, 2) desirability distortion, 3) response style, and 4) familiarity with the concept. None of these distortions appeared to be involved. This suggests that the survey data on average happiness used here provide a good estimate of true happiness in these countries.

5.2.2 Tests for cultural influence on appraisal of life

Even if the observed nation-differences in average appreciation of life are real, it is still possible that these differences have little to do with variation in livability. The differences may be due to cultural variation in outlook on life. Citizens in one country may be less positive than citizens in a neighboring country and for that reason may consider themselves less happy, whereas their country is otherwise equally livable. Culture is here a source of 'substantive influence' on happiness rather than of 'bias in its measurement'.

In this vein, the observed differences in happiness can be explained by dissimilarity in prevailing outlook on life, which on its turn may root in cultural variation in basic values and beliefs. One of the proponents of this view is Inglehart (1990). Inglehart looks for explanations of the sizable differences in happiness between Western nations. He is reluctant to believe that life is really so much worse in the Mediterranean countries than in North-West Europe. He suggests that "these differences reflects the distinctive historical experience of the respective nationalities. Long periods of disappointed expectations give rise to cynical attitudes. These orientations may be transmitted from generation to generation through pre-adult socialization" (Inglehart 1990:30).

Four testable predictions can be derived from this theory: The first is that differences in happiness must be paralleled by differences in attitudinal cynicism. In the least happy countries people must be more cynical about everything. A second prediction is that the happiness of migrants will be more close to the level of happiness in their country-of-origin than to average

happiness in the country-of-settlement. A third prediction is that East Germany must be about equally happy as West-Germans, because they share the same German culture. Finally, a fourth prediction is that an optimistic outlook on life must manifest in a higher level of happiness than predicted by the quality of living conditions in the country. If so, there must be sizable deviations from the level predicted on that basis, and the pattern of deviation must be similar in nations that share a same cultural heritage.

The first three predictions check whether the differences in happiness can be 'largely' attributed to a shared outlook on life. The last considers whether outlook is likely to explain the differences that remain irrespective of real quality of life. Below, we will test these hypotheses one by one.

5.2.2.1 *Unhappy countries characterized by attitudinal cynicism?*

If individual responses to questions about satisfaction with life are largely geared by a shared tendency to see things either positively or negatively, we can expect sizable and consistent correlations between average happiness and characteristic attitudes in the country. In particular can we expect a sizable relation between average happiness and average 'trust' in man and society. If Inglehart is right, the unhappy Mediterranean countries -to which he attributes a cynical attitude- must appear the most distrusting. If not, he is apparently wrong.

Though absence of the predicted correlation implies falsification of the hypothesis, presence of it does not prove it true. Cynical attitudes may result from current shortcoming in society, rather than from disappointments in the past. Also, unhappiness can breed cynical attitudes, rather than the reverse.

Data: World Value Study I involved two measures of attitudinal cynicism. *Distrust in fellowman* was measured by a single direct question 'In general, do you think that most people can be trusted?' *Distrust in society* was measured by trust in institutions. Respondents rated their trust in ten institutions: the church, the army, the schools, the law, the press, unions, the police, parliament, civil servants and big business. Responses were added in a sum-score. These data are available for 13 nations: 11 West European nations, Canada and the USA. Distrust-scores were crossed with average happiness in these countries. The scattergrams are presented on [schemes 5.2.2.1a](#) and [5.2.2.1b](#).

Results: The prediction were confirmed in that average happiness tends to be low in countries where distrust in one's fellow man is most common $r = -.61$. Mistrust is indeed the rule in the Mediterranean countries to which Inglehart attributes inherited cynicism.

However, things pan out differently in the case of distrust in society. The distrust-in-institutions sum-score is not related to happiness. In fact, distrust in institution is more common

rather than less common in happy countries: $r = +.36$. Probably this is because these countries hold freedom and democracy more in respect.

This latter result clearly contradicts Ingleharts theory. The theory presumes that cynical attitudes result from earlier social disorganization and must therefore manifest in skepticism toward society in the first place. Moreover it claims that these disappointments have generalized towards a general negative outlook that colors the evaluation of private life as well. Such a general outlook must manifest itself in a *consistent* pattern of correlations, which is not the case. Hence, we can consider this hypothesis to be falsified.

5.2.2.2 Happiness of migrants more like average in country-of-origin than in country of settlement?

If the appraisal of life is largely determined by socialized outlook, we can expect that natives judge life differently than migrants. Though the former live in the society as society as the latter, they will evaluate it differently, because they look at life through differently cultured eyes. In this context, the following predictions can be made:

Predictions:

- a. Average happiness of migrants will be closer to the average level in their country-of-origin than to the average in the country-of-settlement.
- b. This is especially true for recent migrants. The difference is less pronounced the longer migrants are settled, and is therefore smaller in second generation than in the first.
- c. Among migrants of different origins in a country, the rank order of happiness is the same as the rank order of happiness among their respective countries-of-origin.

Data: Happiness among migrants has been assessed in two countries: in Australia and in Western Germany. In both countries two studies have been performed in the 1980's. All four these studies assessed happiness by means of questions on life-satisfaction rated on a graphic scale. Most scales range from 0 to 10, but one from 1 to 7, and one from 1 to 9. Scores on these latter scales were transformed linearly to range 0-10. The extremes of most scales are labeled as (very) 'dissatisfied' and (very) 'satisfied'. In some cases the labels 'Terrible' and 'Delighted' were used.

Data on average life-satisfaction in the country of origin were drawn from table 1.2.2 in part II of this book. Of two countries of origin we have no general population average in the 1980's. These countries are Turkey and Yugoslavia. In these cases estimates were made. The estimate of Yugoslavia was based on a representative survey in 1962 which yielded a score of 5.0 (table 1.3) and a 1967 survey among subjects aged 15 - 40 in Slovenia (See table D). Possibly average happiness had improved somewhat in the early 1980's, but it is unlikely that this will have

changed the rank order, the next happy country (Greece) scoring almost a full point higher. Estimating average happiness in Turkey is less well possible. Data about life-satisfaction as assessed in representative surveys are not available for this country. All we have is an average observed in a non-probability sample of students. As can be seen in table C1, Turkish students score lower than students in any other country under review here. If we assume that the population average is also below the lowest of these countries, average happiness must be below 5.0 in Turkey. The data and estimates are presented in [scheme 5.2.2.2](#).

Results: The first prediction (a) is clearly defied by the data. The happiness of migrants is typically closer to the average in the country-of-settlement, than to the average in the country-of-origin. In the case of Greeks the distance to average citizens in the country-of-settlement is about -0.3, whereas the difference to happiness in the country-of-origin is +1.4. In the case of Italy the ratio is -0.1 to +0.8, in the case of Spain -0.1 to +1.4 and in the case of Yugoslavia as much as -0.4 to +2.5. The ratio of Turkey is in the same order. It is worth noting that migrants from Mediterranean countries are typically happier in Australia and Germany than their relatives at home. All are first generation migrants, whose pre-adult socialization took place in the country of origin. Hence if they had been brought up with a gloomy outlook at all, they have apparently lost that cultural heritage quite quickly.

The most evident explanation of this pattern is obviously that the livability of the country determines the happiness of its inhabitants, irrespective of their cultural backgrounds. The fact that migrants are slightly less happy in some cases can then be explained by their relatively disadvantaged social position in the new country and by problems of adaptation. In the case of Turks in Germany such effect are clearly involved.

The second prediction (b) is a specification of the first one and is thus in fact largely disproved as well. Still we can look at the minor differences between happiness of migrants and the general public in the country of settlement. In Australia that difference is hardly greater among fresh migrants than among first-generation veterans. In Germany the prediction is confirmed; second-generation migrants are closer to the average German than their first-generation parents. Obviously this can also be the result of better adjustment to German society. (Data not shown).

The third prediction (c) is not supported either. In only half the cases do we see that the rank order of happiness among migrants more or less reflects the differences among mother-countries. None of the rank order correlations reaches significance in this small sample. See once more [scheme 5.2.2.2](#).

5.2.2.3 East Germans equally happy as West Germans?

If happiness is largely determined by "cognitive cultural norms" that root in "distinctive historical experiences" of nations and are "transmitted from generation to generation", we can expect that there is little difference in average happiness between East Germany (former DDR)

and West Germany. Germans share the same cultural heritage and speak the same language. The political separation lasted only half a generation and did not cut off all cultural exchange.

Data: Since the reunification in 1990, the periodical West German 'Wohlfahrts Surveys' are held in East Germany as well. Also, an East German version of the large scale Socio-Economic Panel study (SOEP) has been started. Both studies involve measures of happiness. The data are not shown here. See table 1.2.2b in part II of this book.

Results: The data clearly falsify the prediction. East Germans are significantly less happy than West Germans: scores on 11 step satisfaction-with-life scale are respectively 6.0 and 7.3 in 1991. The difference can be explained by the poorer living conditions in former East Germany. In the following decade successful resurrection will probably erase the dissimilarity in happiness.

5.2.2.4 *Cultural pattern in happiness that cannot be explained by quality of living conditions?*

If the observed differences in happiness between nations are a matter of outlook-on-life rather than of quality-of-life, there must be nations that are happier than their quality-of-life would predict and others unhappier. In this context the following predictions can be made:

- a. The actual happiness in nations must differ markedly from the level predicted by the quality of living conditions it provides. Deviations are the rule.
- b. The pattern of deviations must be similar for nations that share a same cultural heritage.

Data: Of 23 nations we have data on both happiness (happiness-in-life, satisfaction-with-life) and quality of living conditions (material wealth, social equality, political freedom and access to knowledge). Remember section 5.1.2. In the context of this question we will now consider the variance in happiness that cannot be explained by quality of living conditions: the so called 'residual variance'. To that end we first extracted a common factor in the scores on the 8 living conditions of the 28 nations of which we have comparable data on that matter. The first factor we found explains 66% of the total variance and has an Eigenvalue of 5.3. Next scores, on this factor were crossed with happiness of the 23 nations of which we have both data on average happiness-in-life and satisfaction-with-life. The results are presented in the [schemes 5.2.2.4a](#) and [5.2.2.4b](#). In both plots the linear regression line is drawn, which represents the predicted degree of happiness at various levels of living. In other words: the regression line depicts how happy the average citizen should be given the living conditions in his country. The residual variances are the vertical distances between the actual happiness score and the regression line.

Results: Contrary to the first prediction (a), the deviations are typically small. Most cases are close to the regression line. The most deviant nations are India and Mexico, but even these cases

cannot be characterized as outliers, because the distance is less than two times the standard deviation.

This is no big surprise, because we have seen earlier in section 5.1.2 that living conditions explain most of the variance in happiness. The first factor used here explains only slightly less of the variance.

Still, it is possible that the unexplained variance ($\pm 40\%$) is due to the hypothesized cultural differences in outlook on life. Let's therefore consider whether there are cultural similarities in the pattern of deviations.

In this data-set there are at least three clusters of countries which share a common cultural background: 'Latin' countries, 'Germanic' countries and 'Anglo-Saxon' countries.

'Latin' countries exist in Europe as well as in America. In Europe: Italy, France, Spain and Portugal, and in (Latin) America: Brazil and Mexico. A look at the charts in [scheme 5.2.2.4](#) shows that there is no common happiness pattern among these nations. Some deviate consistently positively from the regression line (Brazil) and others deviate negatively (Italy). Spain is close to the regression line in both cases.

'Germanic' countries in this data-set are Austria, Germany, the Netherlands, Switzerland, and to some extent also the Scandinavian countries Denmark, Norway and Sweden. The scores of these countries are all close to the regression line, slightly above and slightly below. There is thus no indication of an extra cultural effect.

The same applies to the 'Anglo-Saxon' countries: Australia, Britain, Canada and the USA. Contrary to common belief about inflated happiness of Anglo-Americans, average happiness in the USA appears to be slightly lower than the quality of its living conditions would justify.

The most deviant case is India, which is in both scattergrams clearly below the line. That result is contrary to the idea that Eastern outlook on life would help to neglect earthy misery. Indians are in fact more unhappy than to be expected in their condition. This can be the result of a negative outlook. By lack of comparable countries we don't know yet. It is also possible that the assumption of linearity is misleading and that happiness drops in fact disproportionately at the lower levels of living. In that case India could neatly fit the regression line.

All in all, the second hypothesis (b) must be considered falsified for the time being.

In summary

This section checked the theory that happiness in nations is not indicative of livability of nations, because happiness would be largely a matter of outlook that developed in earlier conditions and is transmitted from generation to generation. Four tests were performed:

Firstly, the hypothesis was tested that unhappiness in nations is the result of a general cynical outlook on life. Contrary to the hypothesis, happiness in nations appears not consistently related to attitudinal cynicism.

Secondly, the implication was checked, that a socialized outlook must manifest in the happiness of migrants. Subjective appreciation of life would therefore have little reference to actual quality of life in the country. Contrary to the hypothesis, the happiness of migrants appears to be closer to the average in the country-of-settlement than to the average in their country-of-origin.

Thirdly, the we checked the inference that happiness must be similar in former East- and West Germany, because all Germans share the same cultural heritage. Contrary to the hypothesis, a sizable difference appeared.

Finally we considered the nation variance in happiness that is not explained by quality of living conditions, and that could thus be attributed to outlook. Contrary to the hypothesis these deviations are small and do not concur in recognizable cultural pattern.

Together these tests make it highly improbable that the observed differences in happiness result from cultural differences in outlook-on-life rather than from variation in actual quality-of-life.

In this context we must also remember section 5.1.2, which showed that the differences in happiness between nations can be largely explained by variation in living conditions. There is thus a good alternative to the cultural-outlook explanation.

5.3 SUMMARY

This chapter considered whether average happiness in nations is a valid indicator of the livability of these nations. Two kinds of validity tests were performed: First, *global tests* for concurrent and congruent validity. Second, several *specific checks* of some common objections against the use of happiness for this purpose.

The global tests for congruent validity showed that average happiness in nations correspond with healthiness, though not with incidence of suicide. These two alternative 'output' indicators of livability explain together 37% of the variance in happiness. The test for concurrent validity showed a strong relationship with quality of crucial living conditions in the country. Happiness is highest in the countries that provide most material comfort, social equality, political freedom and access to knowledge. Together these input indicators explain 77% of the variance in average happiness.

Various specific validity tests did not expose happiness either. The observed differences in average happiness between nations do not seem to result from cultural bias in its measurement. It is also unlikely that they result to a great extend from cultural variation in outlook on life.

All in all, it is fairly probable that the differences in happiness, as observed in survey studies, do reflect differences in livability of nations.

chapter 6

HOW THE DATA ARE GATHERED

- 6.1 Focus on nations
 - 6.2 Survey research traditions
 - 6.3 Search procedure
 - 6.4 Summary
-

Having established that average happiness is a valid indicator of the livability of society, the next step is to take a closer look at the available data. For that purpose section 6.1 considers the concept of 'society'. It will become apparent that the bulk of the available data concerns 'nations'. Next, in section 6.2 we take a look at the research traditions which produce data on happiness in nations. Finally, section 6.3 reports how the scattered data were gathered.

6.1 FOCUS ON NATIONS

Comparing societies is typically the subject of cultural-anthropology. Unfortunately, anthropologists have as yet paid little attention to livability. Studies that did consider the matter used other output indicators than happiness, such as suicide and violent behaviors. There are no data on happiness in the 'Human Area Files' (Catalogue of anthropological research findings by society). This neglect has several reasons. One is that most anthropologists stress cultural relativism, and for that reason have reservations about such an 'absolutist' concept as livability. Another reason is that anthropological methods of data gathering are not suited for the quantitative assessment of happiness. Though understandable, the lack is deplorable. Data on happiness in primitive societies could provide an opportunity to test theories about faltering livability in the process of modernization. It would be particularly interesting to know how happy people are in the few 'unspoiled' hunter/gatherer societies, that are closest to the situation in which the human species developed.

History does not inform us about livability of societies either. There are some historical studies on health and life-expectancy, but historians cannot assess how happy people were in the past. At best, we can make educated guesses on the basis of observations by diarists or themes in the belle-lettres. However, similar sources in present day society typically yield a very different picture of average happiness than representative surveys. Social commentators and novel writers tend to overemphasize unhappiness.

Consequently, we must do with data from present day society. These data largely concern nations. The survey studies from which they result are typically instigated by national institutions, mostly the state.

All nation-states are in some sense a society. Even if a nation state hosts separate sub-cultures, it still provides a common political system and mostly more than that. Yet a society is not necessarily a nation. In

fact, separate societies can exist under the roof of one nation, and one society can be split up into more than one nation. It is quite difficult to define precisely what a society is and it is simply impossible to isolate non-state societies empirically. Hence we can do little else than focus on nations. This is no better-than-nothing-choice. There are good reasons to focus on nations.

Though 'nation' is not identical with 'society', there is at least a substantial overlap. Nations typically emerged from the clustering of similar local societies and state-formation has involved cultural homogenization and development of various new common structures. The longer nations exist, the more they tend to become a society.

Another point is that the current discourse is centered on nations rather than on societies. Mere societies can hardly influence their own livability. Only when state-like institutions have developed, such attempts become feasible and discussion of the matter hence sensible. In fact, the discussion about the Good Society has focussed on social reform in the nation-state; that is, on priorities in socio-economic development and social policy. For that purpose national data are quite appropriate.

6.2 SURVEY RESEARCH TRADITIONS

Assessment of average happiness in nations requires surveys among representative samples of the population. Such surveys came into use in 1950's, in first world nations. In the beginning, questions on happiness have been posed incidentally in surveys about various attitudes and health. Later, happiness became a regular topic in the following survey traditions:

International survey studies

After World War II several cross-national studies have been performed on values and aspirations around the world. A main purpose of these studies was identifying differences and similarities in concerns, for the purpose of promoting international co-operation. Several of these studies also assessed happiness.

The first of these was an 11 nations 'Tension' study, shortly after World War II (Buchanan & Cantril, 1953). The happiness data of this study are reported in table 1.2.1a of part II of this book. In 1960 Cantril performed his famous World Survey among 14 countries (Cantril 1965). That study involved what he called a 'ladder-rating' of present life. See table 1.3. This study was largely replicated in 1975 in the Kettering/Gallup World Survey (Gallup 1976). The happiness findings of this latter study are reported in tables 1.1.1a, 1.2.2b and 1.3 in part II.

Around 1980 two international value studies were performed, which both involved acceptable measures of happiness: One is a Japanese initiative and involved identical surveys in 13 nations (Leisure Development Center, 1980). The results of this study are presented in table 1.1.1c. The other international value study came forth from the European Value Study in 1980, which was enlarged to the 22 nations World Value Study I (WVS I). In 1990 the World Value Study was replicated (WVS II). Data are presented in the tables 1.1.1b, 1.2.2a and 2.2a. Again in part II of this book.

Since 1972, the European Commission performs bi-annual surveys in all EC countries. The emphasis of these 'Eurobarometer' surveys is on the development of attitudes towards European integration, but personal happiness is followed as well. The happiness-series of this survey-program are reported in tables 1.1.1a and 1.2.1b.

National Quality of Life Surveys

Since the 1960's, most affluent nations have developed some kind of 'Social Indicator' system. These statistical systems are meant to monitor the quality of life in the country and to identify social problems at an early stage. Next to various social statistics, most of these systems involve periodical surveys. These 'Quality-of-Life-Surveys' assess in the first place how well people are doing objectively; that is, how much money people have at their disposal, how well they are housed, whether they have paid work, to what degree they are socially isolated, etc. Most surveys also inquire about the subjective evaluation of these living conditions; how satisfied citizens are with their income, house, work and relationships. In that context most surveys also contain questions about the appreciation of life-as-a-whole.

Periodical Quality-of-Life-Surveys involving acceptable happiness items have been held in Japan ('Life of the Nation Survey' since 1958), Germany ('Wohlfahrts Surveys' since 1974), the Netherlands ('Life Situation Surveys' since 1980), South Africa ('South African Quality of Life Surveys' since 1983) and the USA ('General Social Surveys' since 1970). The above mentioned Eurobarometer surveys provide bi-annual data on happiness in all EC countries separately (since 1972).

In most other western nations Quality-of-Life surveys are at least performed incidentally. Some of these one-time surveys involve acceptable measures of happiness: i.e. the Scandinavian Welfare Survey in the early 1970's (Allardt 1975) and Schulz's (1985) study in Austria.

National Panel Surveys

Next to periodical Quality-of-Life surveys, some countries also have large scale panel studies that follow the same persons longitudinally. Most of these studies aim primarily at socio-economic variables, such as changes in income, work and housing. Some also contain questions on health and attitudes. Occasionally, such nationwide panel studies involve indicators of happiness: for instance the American Panel Study on Income Dynamics (1968-1972) and the yearly German 'Socio Economic Panel' (SOEP) since 1985.

Various Surveys

Quite often questions on happiness and mood are a side-issue in surveys about other subjects, for example in studies about mental health, medical consumption, addiction, leisure behavior and political preferences. Usually, such studies use established measures. Their happiness data can therefore be inserted in existing time series.

6.3 SEARCH PROCEDURE

There is no international agency that collects the results of all these studies on happiness. Neither is there an international clearing house that keeps stock of current items in national surveys. Therefore, the available data had to be raked in by going through the entire literature on happiness. This laborious job was part of a wider search for empirical data on happiness. See p 345 World database of Happiness. The following sources were used.

Abstract systems:

Several international abstract systems were scanned: the Psychological Abstracts, the Sociological Abstracts, the International Dissertation Abstracts and the Educational Resources Information Centers abstract system. A broad range of keywords are used in the searches. These keywords are: *adjustment (general life-, personal-) affect (general-, -level), attitude (life-), contentment, elation, evaluation (life-), happiness, hedonic(-affect, -experience, -level, -mood), morale, satisfaction (emotional-, general life-) and well-being (inner-, psychological-, general-)*. Not only titles were screened, but also the full text of the abstracts and the index.

Libraries:

Catalogues of university libraries have been sifted through in several nations: Australia, Britain, France, Germany, Hong Kong, the Netherlands, USA. The search concerned not only works that carry the word happiness or a synonym in the title, but also books in related fields. Promising books were called in and inspected.

Data-banks:

Several data-banks have been consulted in the search for surveys that involved happiness-related items. In the USA the Roper Archive and in the Netherlands the Steinmetz Archive.

Investigators:

On two occasions some thousand active investigators in this field have been mailed with a request to mention empirical studies on happiness in their country.

References:

All the reports traced in these ways (several thousands) were called in and inspected for promising references to further studies on happiness. These studies were also considered.

Completeness

This procedure guarantees an almost exhaustive coverage of English language journal articles and dissertations. It is estimated that 80% of English language books and unpublished research reports have been traced. German and Dutch language publications are also fairly completely covered. However there are serious gaps in the coverage of reports in French, Italian, Japanese and Spanish. Almost no studies from second world countries (former communist) were found and very few from third world countries. It is not clear whether hardly any studies are done in these countries, or that we failed to find them.

Number of studies found

Some two thousand survey studies were found that involved measures of happiness. Less than half of these used questions that meet the validity demands mentioned in section 4.2. Some three hundred studies had to be dropped because these were not representative to a national adult population. End 1995 the search and selection resulted in 761 representative survey studies with acceptable happiness measures. These studies

were performed in 66 nations. The current number of studies included is mentioned on the start-screen of the database-program.

6.4 SUMMARY

Data on happiness in human societies are available only for present day nation states. These data come from cross-national surveys as well as from periodical Quality-of-Life surveys in particular nations. This information was raked together by combing abstracts systems, library catalogues and data-banks. Active investigators in the field were mailed. End 1995 761 usable studies were found from 66 nations in the period. The current number of studies included is mentioned on the start-screen of the database-program.

This is chapter 6 of the book 'Happiness in nations' by Ruut Veenhoven, RISBO series: Studies in socio-cultural transformation nr 2, Erasmus University, 1992, Rotterdam, Netherlands ISBN 90-72597-46-X

chapter 7

HOW THE DATA ARE HOMOGENIZED

- 7.1 Heterogeneity of the data
 - 7.1.1 Heterogeneity in happiness variants
 - 7.1.2 Heterogeneity in assessment modes
 - 7.1.3 Heterogeneity in lead phrases
 - 7.1.4 Heterogeneity in labeling of response categories ???
 - 7.1.5 Heterogeneity in number of response categories
 - 7.2 Grouping comparable indicators
 - 7.2.1 Presentation by happiness variant
 - 7.2.2 Presentation by indicator type
 - 7.2.3 Grouping of near-identical items
 - 7.2.4 Equivalent items
 - 7.3 Standardizing scores on non-identical items
 - 7.3.1 Converting mean scores on measures of different happiness variants
 - 7.3.2 Converting mean scores on different measures of the same happiness variant
 - 7.3.3 Converting mean scores on equivalent items
 - 7.3.3.1 *Regression of average scores on equivalent items*
 - 7.3.3.2 *Standardization by expert weighting*
 - 7.3.3.3 *Standardization by linear transformation*
 - 7.3.3.4 *Expert rating and linear transformation compared*
 - 7.3.3.5 *Validity of expert ratings*
 - 7.4 Summary
-

All data reported in this book are based on *acceptable* indicators of happiness. As noted in the previous chapter, we selected only studies that meet specific validity demands (5.2). Though all acceptable, the indicators used in these studies are not all the same. The indicators not only measure different happiness-variants, but also do so by means of different methods. Therefore, the data are not simply comparable.

This heterogeneity has some advantages: The dissimilarity in happiness-variants allows a differentiated look at public happiness. For example, possible inconsistencies between hedonic level and contentment may provide clues about the processes that underlie differences in overall evaluation of life. The diversity in measurement methods is useful as well. It prevents dependency on only one method and provides an empirical basis for estimating method-effects.

Clearly, the heterogeneity has also disadvantages. The main goal of this inventory is to compare public happiness between nations and through time. The more heterogenous the data, the less we can compare.

Below we will first consider the heterogeneity of the data in more detail (7.1). On that basis we will group the data in subsets of (almost) identical indicators, within which we deem comparison possible (7.2). Next we will consider the possibilities for comparison across these subsets, by means of conversion procedures. Three possible methods are described and tested (7.3).

7.1 HETEROGENEITY IN ACCEPTED INDICATORS OF HAPPINESS

As we have seen in section 4.2, happiness has been measured in many different ways. That variety was considerably reduced by our selection on criteria for face-validity in section 4.2.2. Still, the enumeration of acceptable assessment modes in [scheme 4.2.2](#) counts no less than 67 indicator types. Of these only 14 are used in the nation studies inventoried here. See [scheme 7.1.1](#).

The indicators of happiness used in these selected studies differ in five respects:

1. Happiness variant measured
2. Assessment mode
3. Lead question
4. Labeling of response categories
5. Number of response categories

Let us consider these differences in more detail.

7.1.1 Heterogeneity in happiness variants

As can be seen in [scheme 7.1.1](#), most of the studies in this collection measure overall happiness. A limited number involve measures of hedonic level. Measures of contentment figure only sporadically in nation studies.

Though all these measures concern happiness, they do not measure the same kind. Hence the data they yield are not quite comparable: we cannot say that inhabitants of country A are happier than inhabitants of country B, if we know only that the former score high on an indicator of contentment and the latter low on an indicator of hedonic level. As explained in section 5.1, these variants do not necessarily coincide: resignation may involve high contentment together with depressed mood.

This possible divergence is not restricted to happiness. Similar incomparabilities are observed in other output-indicators used to estimate livability. As we have seen in chapter 3, the physical health in a country can be measured by 'physical fitness', 'absence of complaints' and 'life-expectancy', which do not necessarily coincide either. Short life-expectancy can go together with low incidence of health complaints.

7.1.2 Heterogeneity in assessment modes

For each of the happiness variants **scheme 7.1.1** mentions several acceptable assessment modes. The difference is mainly in the way of interrogation. Assessment of happiness by rating of non-verbal behavior is deemed acceptable only in the case of hedonic level (AFF 5).

Interrogation modes differ in two respects: *how* the subject is questioned (single or multiple questions) and *what* s/he is questioned about (i.e. satisfaction with life, general mood, past weeks affects, etc.).

Overall happiness is mostly measured by single direct questions. The lead phrases in these questions differ slightly. The most common phrase is 'satisfaction-with-life' (HAP 2.1). Second common is 'happiness-in-life' (HAP 1.1). Other questions invite to a rating of life between 'best-' and 'worst-possible' (HAP 3.1) or between 'delighted' and 'terrible' (HAP 4.1). Sometimes these questions are asked twice in the interview and the ratings are added (the few cases HAP 2.2 and HAP 4.2).

Hedonic level is assessed by both single direct questions about mood 'in general' (AFF 1.1), in the 'recent past' (AFF 2.1) and in the 'present' (AFF 3.1). In this case multiple question indicators dominate. Hedonic level is mostly assessed by means of Bradburn's Affect Balance Scale, which involves 10 questions about specific affects in the recent past (AFF 2.3). Hedonic level has also been assessed by interviewer ratings of expressive behavior (AFF 5).

The few assessments of contentment all concern single closed questions about perceived realization of aspirations (CON 1.1).

The stray mixed indicators concern some single closed questions referring both to happiness and affect level (MIX 1.1) and one index in which a general mood item figures together with questions on appreciation of life (MIX 2.1).

Scores on different indicators of the same happiness variant cannot simply be compared. In the same population, the average answer to a question on how 'happy' one is (type HAP 1.1) can be more positive than to a question on how close life is to 'best possible' (type HAP 3.1). That means that the former interrogation method gives a more favorable estimate of true happiness in that population than the latter. Likewise, method effects can complicate comparison between scores on indicators of hedonic level. It is for instance not at all sure that hedonic level is higher in a country were a single question on general mood (type AFF 1.1) is rated 7.5 on a 0-10 scale, than in a country were average Affect Balance (AFF 2.3) is 6.5 on the same scale or, interviewer rated cheerfulness (AFF 5) is 5.5.

Therefore, the data are presented by type of indicator. Each table in part II and III of this book specifies the type of happiness indicator concerned.

Still, there are differences within these indicator type-categories. Questions of the same kind may differ slightly in wording of the lead question, in labeling of response categories and in number of response options.

7.1.3 Heterogeneity in lead-phrases

One of the most commonly used indicator is a single closed question on 'happiness-in-life' (type HAP 1.1). This question has been put in different ways. [Scheme 7.1.3](#) presents some of lead questions used:

Though all these questions use the word 'happiness' as the key-term, they differ subtly in time-perspective ('generally', 'at the moment') and in delineation of the topic ('your life', 'all together'). Such minor differences can of course produce small variations in average scores, which can jeopardize comparisons between nations and through time. The difference in average happiness between nations is mostly not greater than one or two points on a 10 step scale. Differences of one point caused by variation in wording can therefore obscure much of the true differences in happiness across nations.

Similar variation exists in the phrasing of questions about 'satisfaction-with-life'. Though all these items use the term 'satisfaction', they differ slightly in definition of 'life'. Some refer to 'life-as-a-whole', whereas others are more specific and ask about satisfaction with 'present life' or with 'the life you lead'.

These differences led us to decide that a further refinement of the indicator classification was necessary. In that context, the answer categories were considered as well.

The difference is in this case largely in the last answer category: 'not at all happy', 'unhappy', 'not very happy' and 'not too happy'. If all these response options are given an equal weight (i.e. 1 on a 1-3 scale), questions that provide a response option of the former kind will probably yield a more favorable estimate of true happiness in a population than the latter. The more pertinent the unhappy category, the less respondents will choose it, and the more will characterize themselves as 'fairly' happy. Similar variation in response categories exists with other question types, in particular with questions of type HAP 2.1. Obviously, such variations also limit the comparability of the data, especially if items also diverge in the number of response categories offered.

7.1.5 Heterogeneity in number of response categories

Questions type HAP 1.1 are commonly presented with three answer categories. However, there are also variants with four or five answer categories. [Scheme 7.1.5](#) presents some examples of rating-scales of varying length.

Clearly such differences hamper comparison as well. One cannot say that public happiness is higher in a country with score 2 on a 3-step scale, than in a country with score 3 on a 5-step scale.

7.2 GROUPING COMPARABLE INDICATORS

The main goal of this book is to compare public happiness between nations and through time. Therefore, its data are organized in comparable sets. These sets are in fact the tables in part II and part III of this book. The construction of these comparable sets involved the following steps:

7.2.1 Presentation by happiness variant

As we have seen in section 7.1.1, indicators of different happiness variants do not produce comparable results. In the same country at a particular time, overall happiness may rate point 7.5 on a 0-10 scale, hedonic level 6.0 and contentment 8.2.

For that reason this book presents the data of different happiness variants separately. Part II has four sections: section 1 presents the findings yielded by indicators of 'overall happiness', section 2 findings on 'hedonic level' and section 3 findings on 'contentment'. Because classification is dubious in some cases, section 4 presents some 'mixed indicators' separately. In part III these four categories are distinguished as well, although the primary classification in that part is by population characteristics.

This classification breaks the collection into four pieces: one big piece (overall happiness), one smaller piece (hedonic level) and two minor pieces (contentment and mixed indicators).

7.2.2 Presentation by indicator type

In [scheme 7.1.1](#) we have also seen that indicators of the same happiness variant differ in assessment method. In the case of overall happiness the difference is in the key term of interview questions; either 'happiness', 'life-satisfaction', 'best-worst' or 'delighted-terrible'. In the case of hedonic level there are more methodological differences in subject of observation (avowed mood or cheerful appearance), in observers (respondent or interviewer) and -in the cases of self-reported affect- both in temporal perspective (general, past year, past few weeks) and in questioning (single and multiple). Comparison between scores on such different indicators is not possible either.

Therefore, the data are split up further now, according to the method classification in [scheme 7.1.1](#). This breaks the collection into thirteen pieces: six variants of overall happiness (HAP 1.1, HAP 2.1, HAP 2.2, HAP 3.1, HAP 4.1 and HAP 4.2), five variants of hedonic level (AFF 1.1, AFF 2.1, AFF 2.3, AFF 3.1 and AFF 5), one variant of contentment (CON 1.1) and two of mixed indicators (MIX 1.1 and MIX 1.2).

All tables in part II and part III of this book enumerate the indicator type involved.

7.2.3 Grouping of near-identical items

Within indicator type there are still differences, in particular among single questions about overall happiness. These items differ in lead phrase, labeling of response categories and number of response categories. This variation is greatest in the two best filled indicator categories: single questions on happiness-in-life (HAP 1.1) and single questions on satisfaction-with-life (HAP 2.1). The other well filled indicator categories are reasonably homogenous (HAP 3.1, HAP 4.1, AFF 2.3 and AFF 5). For the rest, indicator categories are so badly filled that they provide as yet no basis for comparison.

Happiness-in-life Single questions on happiness-in-life were further differentiated in three more homogenous classes and a rest category. The three class distinction is mainly based on the number of response categories, but we also considered similarity of lead phrase and category labels. Divergent items were moved to the rest category. This resulted in four tables in part II. Table 1.1.1a: '3-step happiness', table 1.1.1b: '4-step happiness', table 1.1.1c: '5-step happiness' and table 1.1.2: 'further single questions on happiness'; the rest category.

Though almost identical, the items in the first three homogenous categories still differ slightly in lead question and labeling of answer categories. To allow further differentiation, the tables contain references as to the precise wording of the questions. For instance, table 1.1.1a enumerates twelve variations on the question 'In general, how happy would you say you are?' These variations are marked by a code: H1 to H12. In the notes to the table, all questions are presented in English translation.

Satisfaction-with-life In the case of single questions on satisfaction-with-life (HAP 2.1) there are two main question types: Firstly, questions that focus on 'satisfaction with the life one leads' and that use short verbally labeled answer categories. Secondly, questions about 'satisfaction with life-as-a-whole' that are represented on a longer graphic rating scale of which only the extremes are defined verbally. Within these two variants there are further differences in length of rating-scales.

Again, identical subsets were created on the basis of similarity in lead question and rating-scale. This resulted in five separate tables in part II. First, three tables on the question on 'satisfaction with the life one leads': table 1.2.1a: 3-step way-of-life-satisfaction, table 1.2.1b: 4-step way-of-life satisfaction and table 1.2.1c: 5-step way-of-life satisfaction. Next, two tables on 'satisfaction with life-as-a-whole': table 1.2.2a: 10-step life-satisfaction and table 1.2.2b: 11-step life-satisfaction. Items that do not fit any of these subsets are again separately presented in a rest category (table 1.2.3 various life-satisfaction items).

The resulting classification of the data is presented in [scheme 7.2.3](#). That scheme also mentions the tables in part II of this book where the scores on these indicators are reported. The table titles in the scheme are printed in italics: ***bold italics*** refer to similar items; here comparison is possible between nations and through time. *Non-bold italics* denote heterogenous rest-categories, that do not allow comparison.

[Scheme 7.2.3](#) does not enumerate the indicators figuring in part III of this book. All the tables in that part are based on separate studies that involved the same items and can therefore be compared mutually as well.

7.2.4 Equivalent items

Most of the data concern single questions on 'happiness-in-life' (HAP 1.1) and 'satisfaction-with-life' (HAP 2.1). In the foregoing section we have grouped these items in near-identical classes. Accordingly, the scores on these indicators are presented in separate tables in part II. In some sense this differentiation goes too far. However, because there is still a lot of similarity in these items.

There are three clusters of items that involve essentially the same question, though they differ slightly in number and labeling of response categories. Though the numerical scores on these questions are not comparable, their content is equivalent. Therefore they are suitable for conversion to a same standard. We call this *equivalent items*. Conversion procedures will be discussed in section 7.3.3.

Most of the questions on happiness-in-life are considered equivalent. Among the questions about satisfaction-with-life two groups of equivalent items are discerned: Firstly, questions about satisfactions with ones way of life (typically scored on short rating scales). Secondly, questions about satisfaction with life-as-a-whole that are rated on longer graphic scales. See again [scheme 7.2.3](#).

7.3 CONVERTING AVERAGE SCORES ON NON-IDENTICAL ITEMS

This partition of the data into sets of (near) identical questions breaks this data collection into splinters. The number of cases for comparisons is thereby reduced considerably. Though comparison is better possible within the purged categories (tables), there is less to compare: less countries in each subset and less years in time-series. Therefore, we considered the possibilities for converting scores on different indicators to a common standard. We focussed on transforming averages. Conversion of measures of dispersion was not attempted.

Converting average scores on different questions on happiness is in fact estimating how respondents would have answered on a question that was not presented to them. That estimate is made on the basis of their responses to one or more other questions they did answer.

The simplest estimate of that kind is inferring the average response on an (unasked) question A in the light of a response on question B. For instance: we can assume that people in a country which scores 5 on a 10-step life-satisfaction question (B) would have scored 2.5 on a 5-step happiness (A) item. Such estimates can help to reduce the number of 'missing values' in nation-sets or time-series. If we have too few observation on the basis of question A, we can supplement these with transformed scores on question B.

More far-reaching is transforming all scores for all questions to one standard; i.e. to an imaginary 100 step happiness scale. That would of course create the greatest possible data-set.

Such estimates are no more than guesses. One can never be sure how people in a country would have answered a question that was not posed to them. Still, one can make educated guesses. Lets us take a look at the possibilities for transformation and see how these work out in this data-set.

7.3.1 Converting average scores on measures of different happiness variants

As noted above, the indicators of overall happiness, hedonic level and contentment measure essentially different things. Hence scores on these indicators can *not* be transformed to one common standard. At best such scores can be combined in an overall index. However, that is hardly helpful conceptually. Indicators of overall happiness are already supposed to cover the whole. Moreover, such a procedure would not create more comparable data.

7.3.2 Converting average scores on different measures of a same happiness variant

The four blocks in [scheme 7.1.1](#) present different methods for measuring the same happiness variants. All indicators type HAP in the first block are supposed to measure 'overall happiness', all indicators type AFF in second block 'hedonic level' and all indicators type CON in the third block 'contentment'. In principle different measures of the same phenomenon are comparable. However in practice they are not. As we have seen in section 7.1.2, method-effects may veil the differences in true happiness.

Still, it is possible that there is constancy in these method effects which may allow estimates of missing values. Suppose that we have average scores on two questions in a sizable number of nations; i.e. on the question on 'happiness-in-life' (X) and on the question about 'best-worst possible life' (Y). Suppose further that the average scores on the former question are typically more positive than on the latter, and that the relation can fairly well be described by an equation; for instance the formula $X = 1,25 + 0,5 Y$, where X

is 5-step happiness (independent variable) and Y is 11-step best-worst (dependent variable). We can then estimate average best-worst rating of a country of which we have only information about average happiness-in-life. The parameters for such a formula can be found by means of regression analysis. In that way we can derive estimates for missing happiness values in nation-sets and time-series.

Such conversions of one measure to another are risky, because one is never sure that the equation derived from a set of countries for which scores on both measures are available, also applies to the country with a missing X-score. Yet, the risk that the equation does not apply is clearly smaller if it is based on many cases (countries, years) and if the variability (deviance from the regression line) is low.

We explored this possibility in an analysis of cross-national studies that involved several items on overall happiness. We inspected the relation of responses in four pairs of questions: 1) happiness-in-life vs. satisfaction-with-life, 2) happiness-in-life vs. best-worst-possible-life, 3) satisfaction-with-life vs. best-worst-possible-life and 4) happiness-in-life vs. delighted-terrible-life.

The scores on these pairs of items were analyzed by means of bi-variate regression. If there is a clear linear relation, the average scores must neatly fit the regression line. In that case the equation of that line provides a formula for converting one score to another. If however the scores appear to be scattered, there is apparently no consistency in the ratio of responses to these questions across countries.

This analysis requires two choices: a choice for the most appropriate regression line and a choice of the acceptable divergence from that line. The first choice concerns three possible regression lines: 1) the regression line with happiness-Y as the dependant variable, 2) the regression line with happiness-X as the dependant variable and 3) the intermediate line based on the z-scores of Y and X. If we want to predict a missing score on happiness-Y in a particular country on the basis of happiness-X in that country, regression line 1 is clearly more appropriate than regression line 2; because Y is the dependent variable in this case and not X. Regression line 1 is also preferable to z-score line 3.

The acceptable dispersion around the regression line is usually indicated by 5% confidence intervals at each side. These confidence intervals are typically more narrow around the average than at the extremes of the distribution. Due to the limited number of observations at hand here, it is not well possible to estimate such confidence intervals. Therefore, we reverted to a more simple criterion and fixed the acceptable dispersion at 10% of the possible scale range; 5% above and 5% under the line. This may seem a rather narrow tolerance area, but the actual range of variation in the data at hand here is in fact only 50% of the possible range.

The 10% tolerance area is depicted graphically in the schemes below. If a sizable amount of the cases are outside that area, the dispersion is clearly too great and consequently transformation not justified. If there are only a few cases slightly outside the area, it is worth considering the probability that these are incidental outliers.

Regression of responses to items on 'happiness-in-life' and 'satisfaction-with-life'

Two cross-national studies involved questions on both 'happiness-in-life' and 'satisfaction-with-life'. The 11 nations Gallup/Kettering World Survey and the 22 nations World Value Study I.

The Gallup/Kettering World Survey involves a 3-step happiness (table 1.1.1a, question H8) and an 11-step life-satisfaction (table 1.2.2b, question S17). The average scores on these items in the eleven countries were crossed. See the scattergram in [scheme 7.3.2a](#). Six of the eleven scores are very close to the regression line. Four cases are outside the interval however. The regression line is heavily influenced by the extreme case of India. However, there are no reasons to consider that case as invalid. Moreover, omitting India does not provide a better fit.

The World Value Survey I involves a 4-step happiness item (table 1.1.1b, question H13) and 10-step life-satisfaction (table 1.2.2a, question S10). The average scores on these items are crossed. See [schemes 7.3.2b](#). Again there are quite a few cases outside the acceptable range of variation.

All in all, these data do *not* provide a solid basis for estimating life-satisfaction in countries on the basis of responses to questions about happiness-in-life, or vice versa. This is a pity, because the present data-set involves many missing values that might have been estimated in this way.

Regression of responses to questions on 'happiness' and the 'best-worst possible life'

The 11 nation Gallup/Kettering World Survey also involved a question on 'Best-Worst' possible life (table 1.3, question BW 2, currently known as the 'Cantril Ladder- rating of present life'). The average scores on this item were also crossed with happiness (table 1.1.1a, question H8). See [schemes 7.3.2c](#). In this case several cases are outside the interval, though not very far. Again Mexico and West Germany are most deviant. Estimating BW scores on the basis of responses to questions about happiness-in-life is this very risky.

Regression of scores on questions about 'satisfaction-with-life' and 'best-worst possible life'

The above mentioned questions on 'satisfaction-with-life' and 'best-worst possible life' in the Gallup/Kettering World Survey are also crossed. This pair is especially interesting because both questions use the same rating scale: Cantril's 0-10 step ladder-picture. The data are presented in [scheme 7.3.2d](#). In this case all the scores are neatly within the 10% interval. Unlike the previous scattergram, India and West Germany do not appear as deviant. This suggests that we can obtain reasonably good estimates of missing Best/Worst scores on the basis of observed Life-Satisfaction scores. The appropriate transformation formulae are mentioned at the bottom of the scheme.

In the present data-set there are many missing values which can be substituted in this way. For a lot of countries we know the score on 11-step satisfaction-with-life around 1975, but not the score on 11-step best-worst possible life: f.e. Austria, Belgium, Finland and the Netherlands. In the latter case conversion yields an estimated Best-Worst score for the Netherlands of 6.8, which is close to the score 7.1 observed in a small sample at that time. (See note 4 to table 1.3). There are also quite some countries of which we know the best-worst score at a particular time, but not average satisfaction-with-life. Such cases are Israel, Poland and Yugoslavia. Compare table 1.2.2b with table 1.3.

Regression of responses to question on 'happiness-in-life' and 'Delighted-Terrible-life'

Michalos' 'Global Student Well-Being Survey' involves both a question on 'Happiness-in-life' (table C1) and a question on feelings about life in terms of 'Delighted-Terrible' (table C2). This data set is particularly suited for the purpose of identifying a possible stable ratio in the responses to these items. Firstly, both questions are rated on a 7-step scale. Secondly, the number of nations is largest (38). Thirdly, the respondents are university students and probably understand differences in wording better than respondents drawn from the general population.

The data are presented in [scheme 7.3.2e](#). Again we see a clear pattern of the scores around a linear regression line, but once more there are outliers. Of the 38 countries, 6 are outside the tolerance interval; two countries are beyond the line in both analyses (Thailand and Bangladesh). Though not dramatic, this deviance marks that transformation of one score to an other is risky.

In the present data-set there is only one case of a missing value, which could be estimated in this way. That is the case of Russian university students, of which we have a D/T score (4.15 on a 1-7 scale: see table C2), but not a happiness rating (absent in table C1). The estimated happiness score would be 4.32.

Regression of responses to 4-step 'satisfaction with way-of-life' and 10-step 'satisfaction with life-as-a-whole'

Finally we considered two items on 'satisfaction-with-life'. Though there is no study that asked both questions in the same interview, there are highly comparable data from surveys in West-European countries in 1981. The Eurobarometer survey involves a 4-step question on satisfaction with the life one leads (Question S4, table 1.2.1b). World Value Study I contains a 10-step question on satisfaction with life-as-a-whole (Question S12, table 1.2.2a). Eight countries were involved in both studies.

The scores on these items in the eight countries are presented in [schemes 7.3.2f](#). The correlation is high ($r=+.94$) and the scores are all within the 10% interval. Hence transformation seems justified in this case. Missing values on 4-step satisfaction with way of life can be estimated on the basis of scores on 10-step satisfaction with life-as-a-whole. Reversely, missing values on 10-step satisfaction with life-as-a-whole can be estimated reliably on the basis of observing responses to 4 step satisfaction with way-of-life. The conversion formulae are again presented at the bottom of the schemes.

Several missing values can be substituted in this way. Of Greece and Luxembourg we have scores on 4-step satisfaction in 1981 (table 1.2.1b) but not scores on 10-step satisfaction (table 1.2.2a). Conversion of 4-step satisfaction yields the following estimates of 10-step satisfaction: Greece 6.44 and Luxembourg 7.84. Likewise we can now estimate 4-step satisfaction of many countries of which we have only 10-step satisfaction scores, such as Australia, Hungary, Iceland, Mexico and White Russia.

In summary

In two cases (pairs of items) the consistency of responses is sufficiently great. These pairs are: 1) 11-step 'satisfaction-with-life-as-a-whole' and 11-step 'best-worst-possible-life', and 2) 4-step 'satisfaction with way-of-life' and 10-step 'satisfaction with life-as-a-whole'. In these cases transformation to and from seems

justified, at least when the transformed values are between the highest and lowest observed score of untransformed happiness (intrapolation). Going beyond the observed range (extrapolation) is not advised.

In three cases the consistency is not sufficient however. The cases concerned are all pairs with 'happiness-in-life': a) with 'satisfaction with life-as-a-whole', b) with 'Best-Worst possible life' and c) 'with Delighted-Terrible life'. Transformation is therefore not recommendable in these cases.

Substitution of missing cases by means of transformation results in identical data-sets for different happiness items. In other words: the concerned tables in part II of this book will contain the same cases (nations-years). This leaves the user a choice: he can use either one table or the other. This option may tempt to go for the one that produces the most desirable results. That is likely to create confusion. We therefore advise to choose the data-set (table) with the least transformed cases. Original scores are always preferable to estimated ones. If both sets might include about equally much of such cases we advise to consider them both, in order to check possible differences.

7.3.3 Conversion of average scores on equivalent items

A more modest approach is to focus on measures of the same kind: that is on similar questions about the same happiness variant. In section 7.2.4 we have already identified items that are 'equivalent' in content, but differ in rating scales and are therefore not comparable. For example: there is no substantial difference in the 3-step and the 4-step variant of the question 'Taking all together, how happy would you say you are' (H7: very/fairly/not-too, H13 very/quite/not-very/not-at-all). Still the numerical scores are not comparable: we cannot say that 2.5 on the former item marks higher happiness than 3.0 on the latter. Conversion is easier in this case. We need not go into comparison of qualities (characterization of life), but can restrict to estimates of quantity (ratings of the same).

As in the previous case, we could try to transform scores by means of regression equations. However, that approach requires that we estimate a linear relationship and establish whether the observations are sufficiently close to the regression line. Unfortunately, we have insufficient data for that purpose (7.3.3.1). Yet, there are more possibilities in this case. As we deal with differences in measures of quantity only, we can try to transform these to a common scale; that is, 'standardize' the average scores. Two methods can be used for that purpose: weighting of response categories by experts and simple linear transformation. Expert-weighting is most appropriate where we want to standardize scores on rating-scales that differ in verbal labels of response categories. This method will be described in section 7.3.3.2. Linear transformation is more appropriate where the difference is only in the length of graphic rating-scales. That method will be considered in section 7.3.3.3. Next the sections 7.3.3.4 and 7.3.3.5 will check the validity of these transformations.

7.3.3.1 Regression of average scores on equivalent items

In principle we can follow the same method as used for transforming scores from different methods, now hoping for a greater consistency. That procedure requires studies that involve several such subtly differing questions; preferably many of that kind in different nations.

Such studies are hardly available however. The surveys that involve different questions on happiness typically pose questions of different kinds and not variations on the same. Only studies that focus on measurement issues sometimes consider different variations of equivalent questions. Unfortunately, these studies do not cover all the variants at hand here. Even the detailed study on happiness questions by Andrews and Withey (1976) involved only a fraction.

7.3.3.2 *Standardization by expert weighting*

Quite another approach is to read equivalent items carefully and estimate off hand the level of happiness indicated by the various answer-categories on some common scale. For instance one could consider the common three step happiness item 'Taking all together, how happy would you say you are: very happy, pretty happy or not too happy'. One can then estimate the weight of these three responses on a 0 to 10 step scale. For example: a weight of 9 for the 'very happy' response, 7 for 'pretty happy' and 4 for 'not too happy'.

The weights awarded depend of course on personal interpretation of the questions and on response tendencies. This bias can be reduced by using more than one judge. The more judges, the greater the chance that personal interpretation-differences neutralize each other. The use of more than one judge also makes variation in interpretation visible. Interjudge-reliabilities can be computed and if these are not satisfactory, the attempt can be stopped.

Judges can be 'typical respondents' or 'experts'. The use of respondents has the advantage that one gets a better view on the interpretation of the item in practice. However, that advantage applies only when there is a typical respondent, which is not the case in this comparative endeavour. Ratings can also be made by people who are well acquainted with the matter; for instance students, experienced interviewers or colleague investigators. That latter method is described by Togerson (1958:67). We followed his directions.

This weighting method is obviously a rather uncertain one. There is no check whether one assigns the right weights or not.

Weighting responses to equivalent questions on happiness-in-life

Nine subtly different questions on happiness-in-life (type HAP 1.1) were considered. The introductory sentence of these questions is almost identical. The difference is in the length and labeling of the rating scales. These items were rated by ten investigators working on the World Database of Happiness, who were all well acquainted with the subject. These experts graded the degree of happiness indicated by each response category on a 0-10 scale. The results are presented in [scheme 7.3.3a](#).

These ratings appear fairly consistent. Standard deviations are typically below one interval on this ten step scale. Only in the weighting of unhappy categories do the judges diverge. Not surprisingly this occurs on the item that provides only one possibility for expressing unhappiness.

The overall means were used to compute standardized 0-10 scores for all items on happiness-in-life reported in the tables 1.1.1a, 1.1.1b and 1.1.1c. These converted means are reported in a column in the tables next to the original means.

Weighting responses to equivalent questions about satisfaction-with-life

In the same vein response categories of questions on satisfaction-with-life (type HAP 2.1) were weighted. The results are presented in the [schemes 7.3.3c](#) and [7.3.3d](#). In only two cases can we see how a same answer category is answered in the context of a slightly different configuration of further response options. The difference is negligible in these cases. Hence we decided again to use the overall mean.

The overall means were used to compute a 0-10 range standardized score for all the findings in the tables 1.2.1a, 1.2.1b and 1.2.1c in part II. These standard means are reported in a column in the tables next to the original mean.

The response category 'very happy' is used in different contexts: in three step scales, as well as in four step scales and five step scales. It is further used in contrast to 'not too happy' as well as 'not happy'. These variations hardly influence the ratings. The same applies to the often used category 'fairly' happy. Therefore we decided to use the average weights per response category irrespective of the question context. The averages are presented in [scheme 7.3.3 b](#).

7.3.3.3 Standardization by linear stretch

The above method of expert weighting of verbally labeled response categories is less appropriate if the difference between response scales is only the length. For instance in the case of the same question on life-satisfaction that is either scored on a 0-10 scale or on a 1-10 scale. In such cases simple linear transformation will do. For that purpose we used the following formula.

$$M_t = \frac{M_o - V_l}{V_h - V_l} \times 10$$

where

M_t = Transformed mean (to range 0-10)

M_o = Mean on original scale

V_l = Lowest possible score on original scale (generally 0 or 1)

V_h = Highest possible score on original scale (generally a value between 7 and 10)

The formula is thus designed that the end-points of the original rating-scale, coincide after transformation with the endpoints of the target (0-10) scale.

In this way we transformed average scores on 10 step-satisfaction in table 1.2.2a to an 11- step 0-10 score, which is presented next to the original means in table 1.2.2b.

The same method was applied to the data in table D (part III) that report a cross-national study in which the Best-Worst question was scored on a 1-9 Ladder.

Also some incidental scores were transformed linearly. In table 1.3 1-9 range scores from Israeli studies were upgraded to 0-10 (see note 5, table D). In table 1.4 an Australian 1-9 rating is cut down to the common range 1-7 (see note 2, table D).

7.3.3.4 Expert-rating and linear-stretch compared

One can of course wonder whether the latter method of linear transformation is preferable to the former method of expert ratings. Isn't that objective arithmetic rule preferable to subjective estimates by judges, and isn't the transformation by expert-ratings, essentially, also a correction for length of the rating-scales?

An evident objection is that linear transformation works only if the extremes of rating-scales represent the same 'true' happiness level and if the distances between successive steps are equal. These requirements are met only when rating-scales are graphical or numerically divided in equal steps, and when only the extremes are labeled verbally with identical words. These requirements are not quite met in most of the cases at hand here. Still, one could argue that the size of the difference between these methods is too small to take the trouble of making expert-ratings.

Therefore, we inspected whether the results of linear transformation differ substantially from the above discussed method of expert weighting. Both methods were applied to scores on questions on happiness-in-life (type HAP 1.1) in six industrialized nations around 1980. The results are presented in [scheme 7.3.3.4](#).

The results differ considerably indeed. As we can see linear transformation produces higher scores on items with longer scales, whereas expert rating does not.

7.3.3.5 Validity of expert-rating

It is of course possible that the expert transformation involves a considerable distortion. The experts may have attributed weights to response categories that differ from the meanings respondents had in mind when answering the same questions. Therefore, the transformed scores may not provide a good estimate of true happiness in nations, in particular not of differences with that respect. The validity of our transformed scores can again be tested in two ways: by test for congruent validity and by test for concurrent validity.

An evident test for congruent validity is assessing the correlation between transformed and untransformed scores. If we assume that the original scores provide a valid estimate of happiness in nations, a perfect correlation means that the transformed scores do equally well. If the correlation is not perfect, there are three possible explanations. The first possibility is then that the transformed scores estimate true happiness less well than the original scores (the above mentioned possibility). Reversely, the second possibility is that the averages based on expert weighting are in fact closer to true happiness than the untransformed scores. This could be so, because the latter assume equal distances between rating options, whereas the expert ratings do not. Thirdly, it is of course possible that both are flawed in different ways. If transformed and untransformed scores are imperfectly correlated, further tests for external current validity must decide which is the best; for example by inspecting which variant explains most of the variance in quality of living conditions in nations, in an analysis as shown in section 5.1.2. If however, transformed and untransformed scores appear to be perfectly correlated, it is highly probable that both measure true happiness adequately. Further testing for concurrent validity is not useful in that latter case.

We checked congruent validity of our expert rating on two datasets: once more the Gallup/Kettering World Survey and on World Value Study I. Again we used the regression procedure and the 10% interval around the regression line. [Scheme 7.3.3.5](#) presents the scattergrams of transformed and original scores on the 3-step question on happiness-in-life (H8) in the Gallup/Kettering survey. The correlation is perfect

($r=+.99$). The scores are neatly on the regression line. Apparently the transformation procedure involved no distortion.

We also considered the transformed and original scores on the 4-step happiness question in World Value Study I. Here again we see an almost perfect correlation ($r=+.98$) and all deviations are within the 10% interval.

We can conclude that our expert ratings successfully passed this validity test.

7.4 SUMMARY

This study collects the result of investigations that used acceptable measures of happiness. These acceptable measures are not quite identical. They differ in five aspects: 1) Variant of happiness measured, 2) Assessment mode, 3) Phrasing of the lead question, 4) Labelling of response categories and 5) Number of response categories. This chapter explains how the divergent data were classified into equivalent categories. It further considers three techniques for transforming responses to dissimilar questions into comparable scores.

Classification This reference book presents the data by kind of happiness indicator. This breaks the data collection into four main parts: one big part on 'overall happiness', a smaller one on 'hedonic level' and two minor ones referring to 'contentment' and 'mixed indicators'. Within these parts the collection is further differentiated in tables of near-identical indicators. This results in 13 tables with identical items and 5 tables for heterogenous rest categories. Most of the tables with identical items concern overall happiness (10). Among these, three groups of questions some can be discerned which ask essentially the same thing, but that differ only in the rating of response. Though not 'identical', the items in these clusters are 'equivalent'. As such they qualify for conversion to a common scale. The possibilities for converting average scores on divergent indicators of happiness are however limited.

Transformation Scores on indicators of different happiness variants can *not* be converted to the same standard. They measure essentially different things that do not necessarily coincide.

Scores on different indicators of the same happiness variant can be converted in principle. However, in practice it is quite difficult to estimate the method effects involved. If sufficient data are available, we can inspect whether there is a linear relationship between responses yielded by different indicators in the same populations. Such data are only available for some single questions on overall happiness. We found a reliable relation in the nation scores on the two pairs of items: 1) 10-step life-satisfaction by 4-step satisfaction with way-of-life, and 2) 11-step life-satisfaction by 11-step best-worst possible life. In these cases missing values on one variable can be reliably estimated by linear regression on the basis of observed scores on the other; interpolation is less risky than extrapolation. In three pairs we found no reliable relation however: 1) happiness-in-life by satisfaction-with-life, 2) happiness-in-life by best-worst possible life, and 3) happiness-in-life by delighted-terrible life. In these latter cases we deem transformation inadvisable.

chapter 8

USE OF THIS DATA-SET

- 8.1 Validating measures of livability
 - 8.2 Establishing differences in livability
 - 8.2.1 Comparing happiness between nations
 - 8.2.2 Comparing happiness through time
 - 8.3 Identifying determinants of livability
 - 8.3.1 Concomitants of level of happiness in nations
 - 8.3.2 Concomitants of change in average happiness in nations
 - 8.4 Identifying consequences of livability
 - 8.5 Comparing inequality in nations
-

In chapter 1 we have seen that the inductive search for optimal societies involves five steps: 1) selection of performance criteria, 2) operationalizing these criteria, 3) applying these criteria to a large set of societies, 4) reading off the performance rank order and 5) identifying characteristics of best performing societies. We have now made the first three steps: step 1: choice for livability, step 2: estimating livability by output, in this case average happiness, and step 3: gathering data about happiness in as many nations as possible. The latter step is the main purpose of this book. This chapter will now shortly consider step 4 and step 5. It will also note some further uses of this data-set.

First, section 8.1 notes that this data-set was in fact indispensable in taking step 2. Operationalization requires validation, and validation cannot be done without a good data-set.

Next, section 8.2 is about step 4. It considers whether there are differences in livability (as assessed by happiness) between nations (8.2.1) and whether levels and rank orders of livability change over time (8.2.2).

Section 8.3 is about step 5 and considers determinants of high and low livability. Determinants can be identified by comparing characteristics of countries that differ in livability (8.2.1, cross-sectional analysis) and by analyzing concomitants of change in livability over time (8.3.2, longitudinal analysis).

Correlates of livability are not necessarily determinants of it. They can as well be consequences. Step 5 requires that we disentangle causes and consequences. Therefore section 8.4 considers this possibility in more detail.

This data-set can also be used for comparing nations on another performance criterion; the criterion of equality. Rather than on *level* of happiness we can focus on *dispersion* of happiness in nations and rank nations to the degree that they provide equal happiness to their citizens. That possibility is shortly considered in section 8.5.

8.1 VALIDATING MEASURES OF LIVABILITY

The data in this book can be used for assessing their own usefulness. The validity of happiness as a measure of livability cannot be established by reasoning alone, but requires empirical checks. We cannot do so if we have no data. For the time being, the data seem to suggest that happiness is a useful indicator of livability. Remember chapter 5. However, further analyses on broader data-sets may later prove otherwise. If that is the case, this is probably my last book on happiness in nations.

8.2 ESTABLISHING DIFFERENCES IN LIVABILITY

Step 4 requires that we establish a rank order of nations with respect to their livability. In that context we will first compare livability between nations at one point in time. Section 8.2.1 considers whether there are any differences in public happiness between present day nations and explores the possible maximum and minimum of happiness in a society. Next, in section 8.2.2 these matters are considered in a temporal perspective. Is there any change in livability in nations over the last decades? If so, how much improvement in happiness is apparently feasible at what term? How sensible is public happiness to deterioration of living conditions?

8.2.1 Comparing happiness between nations

The notion of an optimal society presupposes that there are differences in livability of nations; in this context differences in happiness. So the first thing to be checked is whether this is the case indeed. Are some nations really more livable than others or is there, in fact, hardly any difference? If there are notable differences, the next question is to what extent the observed variation in livability reflects the possible variation. In this context: whether public happiness could realistically be higher than the highest in our rankorder or lower than the lowest in our collection. Identification of optimal societies requires that we have a view on the entire possible range.

Are there any differences?

The very concept of livability presupposes that some nations fit human nature better than others. Is that really true, or are humans that adaptable that they live equally well under all social regimes? We know that there are large differences in health and longevity, but these could be due to variation in medical technology and ecological conditions, rather than to dissimilarity in livability of nations. There are also differences in prevalence of suicide, but these differences can to a large extent be attributed to variation in coping with misfortune, rather than to societal differences in exposure to adversity. It is therefore worth knowing whether or not nations differ significantly in the average happiness of their citizens.

Several investigators have already observed that there are indeed considerable differences in average happiness between present day nation-states: e.g. Buchanan & Cantril (1953), Cantril (1965), Inkeles (1960, 1991), Inglehart (1977, 1991) and Gallup (1975). Their studies are based on data-sets of ten to fifteen countries. The larger data-set in this book shows that these differences are no methodological artifacts of small samples. It also shows that the difference is not limited to specific indicators of happiness.

In table 1.2.2b (part II) we see for instance that average satisfaction-with-life as expressed on a scale from 0 to 10 is 7.6 in Canada and only 3.5 in India. In table 1.3 we see a difference on the 0-10 best-worst-possible-life rating of 7.0 in Canada and only 1.6 in the Dominican Republic. Sizable differences between other countries exist as well. As we have seen in section 5.2.1, it is unlikely that these differences are the result of measurement bias. A look at the other tables in part II of this book shows that the pattern of differences is consistent across indicators. 8.1 presents some illustrative cases.

What level is realistically possible?

Clearly no society can provide heaven-on-earth, but what level of livability is maximally possible? What level can we realistically try to achieve? This data-collection cannot answer these questions completely, but it shows at least what levels of happiness are realized in present day nation-states.

A look at the tables in part II shows high levels of happiness in several countries. In the North-West European countries for instance, about 75% of the population characterizes itself as very or fairly happy (table 1.1.1a). When asked about mood in the last few weeks, these people appear quite positive as well (table 2.2a). The data also show that this is no exceptional temporary performance. These high levels of happiness are observed in several countries and persist over the years. Hence it is a feasible level, that can in principle be achieved in other parts of the world as well.

Is there a bottom line?

Reversibly, one can wonder whether there is a level below which a society can hardly sink. That level could be determined by human resilience and inventivity. Even in extremely bad circumstances, such as the Nazi-concentration camps, some people appeared to maintain some satisfaction in life (Frankl, 1969). It is worth knowing that level, in order to evaluate the performance of nations. If human nature more or less guarantees that some 25% will be fairly happy in any circumstances, the score of several present day third world nations is close to the absolute minimum. Possibly, there is also some bottom line in that societies become more likely to change or dissolve below some level of livability.

Again this data-set does not inform us about the lowest level possible, but only about the lowest level that has been observed in present day nation states. That is the earlier mentioned case of the Dominican Republic in 1962, where the average score on the 0-10 step best-worst-possible-life rating was 1.6 (table 1.3). In this country 84% of the population characterized themselves as unhappy (score 0-3) at that time. Probably there are countries where average happiness is even lower. Happiness surveys are typically not held in the most desperate places of the world.

8.2.2 Comparing happiness through time

This data-set involves various time-series of average happiness in 15 nations. The longest series is from the USA and covers 45 years, the series in Japan covers 32 years and series in the first nine EC countries cover almost 20 years. Analysis of this series allows answers to the following questions.

Is there any change at all?

A basic belief underlying most social policy is that it is possible to create a more livable society in which people find more happiness. That assumption is disputed however. It has been claimed that quality-of-life can hardly be changed, because living conditions are determined by immutable social structures and national character. Societies that are badly livable are seen as doomed to remain so forever. It is worth knowing whether this is true. If so, planned social reform for the sake of livability is pointless.

This data-set allows us to answer this question where happiness is concerned. A glance at the time-series in this volume shows much continuity indeed. For instance in Japan and the USA, public happiness has remained at about the same level during the last decades. However, several Western-European countries witnessed a steep rise in average happiness in the years of reconstruction after World War II. In Brazil happiness rose considerably in the 1960's. On the 0-10 Best-Worst Possible Life Scale Brazilians scored 4.6 in 1960 and 6.2 in 1975. Likewise, the successful resurrection of West Germany after World War II manifested in itself a rise from 5.5 to 6.6 in that period (See table 1.3).

There are also examples of more gradual increase in happiness. Comparison of the happiness ratings yielded by the World Value Studies in 1980 and 1990 shows modest increases

in several European nations; in particular among the originally least happy nations: happiness rose in France, Italy and Spain. Possibly this is a fruit of European integration.

Scheme 8.2.1 presents some illustrative cases. Again we present countries of which three indices of happiness are available. The data provide examples of both consistent increase in happiness (Italy, France) and consistent stability (Iceland, Ireland). Britain is an example of differential change; overall happiness has dropped

between 1980 and 1990, but not hedonic level. This latter inconsistency in change across happiness variants can be interpreted as signifying that 'aspirations' have been disappointed in this country, but that the gratification of real 'needs' has actually improved.

In this data-set there are no examples of consistent decrease in happiness. That suggests that livability has improved in the first world countries during the last decades. This is worth acknowledging by critics of modern society.

How much improvement is feasible in what term?

Planned effort to improve the livability of nations requires realistic goals; preferably defined in measurable terms. In that context it is worth knowing what changes have occurred in comparable circumstances.

As mentioned above, this data-set contains only a few examples of marked increases in public happiness. The increases are between one and three points on a 10 point scale. If we take into account that the actual variation on this scale is only about five points, this change in a 15 year period is rather drastic. This suggests that substantive improvements are possible on a relatively short term; at least in countries that start at a low level.

Data on this matter are still fragmentary. In the near future former East-Germany will present an interesting case.

Does decline occur with delay?

It has been suggested that deterioration of living conditions in a nation manifests itself only later in higher mortality and lower happiness. It is worth knowing whether this is indeed the case; both for scientific understanding and for political monitoring.

The available time-series in this volume provide some data for studying this question. They show rather minor direct effects of war and economic recession on happiness. As we will see in more detail below, the study of Veenhoven and Chin-Hon-Foei (1989) observed that the 1981/82 economic recession affected average happiness with a one year delay. Cantril (1965:90/92) observed a more immediate effect in India in 1962, at the outbreak of war with China.

The complicated issue of distinguishing long-term and short-term effects on well-being has been discussed in more detail by Brenner (1989). The statistical analyses required for that purpose require longer time-series than those presented here.

8.3 IDENTIFYING DETERMINANTS OF LIVABILITY

Having established *that* nations differ in livability as indicated by average happiness (step 4), the next task is to find out *what* makes some nations are more livable than others (step 5). Determinants of livability can be traced down empirically, by identifying its concomitants. If the most livable countries share some common characteristics such as freedom and equality, and if a change in these matters is followed by change in happiness, we can be pretty sure that these matters contribute to livability in some way. The promotion of freedom and equality is then a suitable means for making society more livable.

Since we cannot observe livability itself, we must do with its indicators: in this case with happiness, one of livability's results. Determinants of happiness will be close to determinants of livability, though not necessarily fully identical. Societal determinants of happiness can be identified to some extent.

In section 8.1.3 the determinants that have appeared in cross-sectional analyses of happiness are considered. Next, section 8.3.2 summarizes some results of longitudinal analyses of continuity and change in average happiness in countries.

8.3.1 Concomitants of level of happiness in nations

Now it is clear that some countries are much more happy than others, the next question is of course why. Which 'input' factors produce this difference in 'output'? Is the difference in material affluence, in lifestyle, in religion, in upbringing? In section 5.1.2 we have already seen that material affluence, social equality, political freedom and access to knowledge explain much of the variance in average happiness between nations, and hence qualify as important input factors. Economic and political characteristics of nations have been considered in more detail in several studies that used parts of the happiness data presented in this book. The results are summarized below. As yet we know little about the relationship between average happiness and cultural characteristics of nations, such as dominant lifestyle, religion and patterns of socialization.

Current findings

Economic characteristics The relationship between happiness and economic characteristics of nations has been studied by Cantril (1965), Diener (1993), Easterlin (1974), Inglehart (1977), Tepperman (1990) and Veenhoven (1984, 1988). Four economic characteristics have been considered: 'economic prosperity', 'economic growth', 'economic security' and 'income quality'.

As far as *economic prosperity* is concerned, the data leave no doubt that people in poor countries are less happy than inhabitants of the affluent nations. In fact, a curvilinear

relationship appears: the correspondence between average happiness and gross-national product per capita being more pronounced in the poorest part of the world than in the richest one. As such, it neatly reflects the law of diminishing returns. Economic prosperity seems to add most forcibly to happiness to the extent that it forestalls unbearable material discomfort. Within the poorest part of the world, there are strong correlations between average happiness and the percentage of people living in 'extreme poverty' and the percentage of people suffering from 'hunger'. It is as yet not known to what extent 'luxury' adds to the appreciation of life, or how it might do so. For more detail, see Veenhoven (1989a, 1990) and Diener et al. (1993).

Contrary to common belief, average happiness does not appear particularly high in the nations that provide most *economic security*. There is at least no correspondence between average happiness and 'inflation rates', while a correspondence with 'social security expenditures' exists only in the subset of poor countries.

There is neither support for the claim that *income inequality* in a country is detrimental to the happiness of its citizens: among present day affluent nations at least there is no relation between average happiness and income-inequality as expressed in Gini-coefficients.

Political characteristics Three political characteristics have been considered in their relationship to average happiness: the degree of 'freedom' in the country, the level of 'democracy' and the incidence of political 'violence' and 'protest'. For a review, see Veenhoven (1984).

As far as *political freedom* is concerned it is clear that people are currently happiest in the nations where governments are least 'coercive' and where the 'freedom of the press' is held most in respect. As we have seen in section 5.1.2 the correlation drops considerable when economic affluence is controlled. The shape of the relationship is linear. Unlike the case of economic affluence no pattern of diminishing returns is visible. As far as freedom does actually add to happiness it can do so directly by sparing people the frustrations of oppression as well as in various indirect ways, such as by promoting their 'self respect' in the long run and by fostering the notion that they are in 'control' of their lot. Apart from the positive effects negative ones may also exist. As yet it is not established which causal effects are involved.

Similar statistical relations appear to exist between average happiness and the *level of democracy* in the country; both with the degree to which the political reality fits in with the ideal of a 'liberal democracy' and with the degree to which interest groups can express their interests ('interests democracy'). The correlations are again quite sizable both in a world-sample and among western nations. As we have seen in section 5.1.2 the correlation disappears after control for economic affluence. As in the case of political freedom it is not established which causal effects are involved and to which extent positive and negative effects neutralize each other.

Finally, it appears that happiness is relatively low in nations characterized by a high incidence of *political violence* and *political protest*. This applies both to political unrest during the past decades and to present civil disorder. Typical cases of low happiness and much violence and protest are France and Italy in 1970's. Again the correlation exists in the poorest part of the world as well as in the most affluent part. However, various -as yet unidentified- spurious

factors may be involved and again the correlations may mean that unhappiness evokes protest rather than that prevalence of political unrest renders people unhappy. Possible effects of political unrest on happiness are once more likely to be complex and conditional.

Peace and war Effects of *thread of war* on public happiness have been studied by Cantril (1965:90/92) and by Bradburn & Caplovitz (122/126). These investigators found hardly any effects. However, there is little doubt that *actual warfare* is generally detrimental to the happiness of people in afflicted countries. The effects of World War II are for instance visible in the happiness levels in the countries concerned. Thirty years later happiness still differentiates between the most and the least afflicted nations, and between winners and losers. Various effects are likely to be involved: at the social system level harm to 'economic prosperity', 'political freedom' and 'political stability' and at the individual level in many cases a disorganization of 'intimate ties', a shattering of 'health' and undermining of 'mental effectiveness'.

New opportunities for analysis

The above mentioned current findings are based on rather small numbers (mostly about ten) of industrialized countries. This book provides a broader and more differentiated data-set. As such it can improve understanding in the following ways.

First of all, the greater number of nations allows more conclusions. The collection at hand here provides equivalent data from more than 30 countries around 1980; of 30 nations we have an average on a question type HAP 1.1 and of 33 countries a score on a question type HAP 2.1. is available. Though that is still only a fraction of the 180 nations that exist currently, it improves the possibilities for analysis considerably. Random variation can better be controlled. Weak tendencies can be made visible. In this context it is worth mentioning the example of social security. It is generally believed that high (state provided) social-security adds to the livability of society and that citizens are therefore happier in extended welfare-states such as Sweden, than in reluctant welfare providers such as the USA and Japan. Some small country sets provided support for that view; largely because the few third world countries in these sets are characterized by low state-welfare and low happiness; both largely an effect of low economic development. However, replication on larger country-sets that allowed a differentiation between developed and underdeveloped countries showed that state-welfare effort is essentially unrelated to average happiness among rich industrialized nations (Veenhoven and Ouweneel, 1993).

A second advantage of this broader data-set is that it allows some multivariate analysis. It is for instance possible to control the effect of economic affluence. We have done so with the correlations reported in table 5.1.2. It appears that the correlations with social equality and education remain almost equally high when (real) national income is controlled for, but that the correlation with political democracy disappears.

8.3.2 Concomitants of change in average happiness in nations

The search for the good society is largely a matter of trial and error, especially where livability is concerned. We are generally unable to infer in advance how ongoing transformations -planned or unplanned- will effect livability in the long run. Hence we must rely on experience. This requires careful observation. Impressionistic observation by social commentators is often not adequate. Therefore, systematic social statistics are needed as well. This data-set is meant to allow a systematic and unbiased view on change in average happiness through time.

The time-series on happiness at hand here provide a view on the effects of several major developments in modern societies during the last decades. Comparison through time provides information that is complementary to the information from the above discussed comparison between nations and that can help to isolate causal effects. For example, the observed correlation between freedom and happiness in section 5.1.2 does not mark freedom as the cause. It may as well be a consequence. However, if increases in freedom in a country appear to be followed by increases in happiness, we can be pretty sure that we have identified a determinant.

An interesting variable in this context is economic growth; in most countries the supply of goods and services per head has doubled. We can now inspect whether this development was followed by a rise in happiness. Above we have seen that originally poor countries such as Brazil became happier after economic growth, but in the USA happiness remained essentially at the same level in spite of doubling of GNP (Veenhoven;1989). An analysis of happiness in the EC-countries 1975-1984 shows only slight changes in average happiness following economic rise and decline with one year delay. The effect was greatest in the countries that provided the least social security (Chin-Hon-Foei, 1989).

Another major development in the last decades is the expansion of state welfare in many countries. It is generally believed that these countries have consequently become more livable, though at the same time less competitive economically. Recently, Veenhoven and Ouweneel (1990) have explored whether the welfare-expanders have indeed improved happiness and life-expectancy in first world nations. Surprisingly, no difference appeared.

8.4 IDENTIFYING CONSEQUENCES OF LIVABILITY

In the foregoing section we have interpreted correlates of happiness as *determinants* of happiness, that are indicative of determinants of livability. However, correlates of happiness can also indicate *consequences*: consequences of happiness itself or consequences of the livability which produced happiness. These possible consequences are worth studying as well.

Firstly, the identification of determinants of livability requires that we disentangle causes and consequences. So step 5 in our search for optimal societies involves an exploration of possible effects of livability as well.

Secondly, appraisal of livability's consequences is of relevance for step 1: the selection of performance criteria. If livability tends to involve beneficial effects, such as greater productivity and better mutual understanding, that makes livability more desirable as an end-goal and hence more eligible as performance criterion. If however, high livability of the country tends to be detrimental to economic productivity and artistic creativity, we will be more inclined to opt for other goal values. In fact, the selection of performance criteria is not a once and forever choice, but a step in an ongoing cyclical search. Insight into such interdependencies or incompatibilities is essential for any social policy that seriously aims at creating an optimal society.

The effects of livability are probably not the same for all its aspects. It is for instance pretty clear that good physical health of the citizens will generally add to the economic productivity of the country. However, it is less evident that happy citizens work better than unhappy ones. Analysis of that kind have been performed on health statistics and suggest that improvements in health do indeed pay for themselves economically. Happiness data have not yet been considered in that context.

This data-set allows a first exploration of possible effects of public happiness. The discerned characteristics of happy nations are then considered as consequences rather than as causes. In this view the societal correlates of happiness reported in section 5.1.2 can be interpreted as signifying that happiness of citizens in a society contributes to economic productivity, social equality, political peace and intellectual development.

Because such effects are typically long term phenomena, we need long time-series for that purpose. As there are obviously many factors involved in these changes, we need a sizable number of cases (countries) in order to reduce random variation. The present data-set provides only modestly long time-series in a small number of countries. Consequently, the data allow as yet no more than an opportunity for exploration. Elaborate statistical analyses will have to wait until the collection has grown sufficiently.

8.5 COMPARING INEQUALITY IN NATIONS BETWEEN NATIONS

So far we have considered the *level* of happiness in nations, as expressed by its mean. This book provides more information than averages alone. It also presents the distribution of responses and thereby informs us about the *dispersion* of happiness in nations.

Dispersion of happiness in a country is an outcome-measure of *social-inequality*. A country where everybody is equally happy, apparently is more equal than a society where one half of the population is very happy and the other half unhappy.

Measuring social-inequality in countries by dispersion of happiness has two main advantages. A first advantage is that it informs us about inequality in 'realized' life-quality in a country, whereas the focus of current indicators is about 'potential' life-quality. Current research is about inequality in 'life-chances', such as difference in access to income, power and knowledge. It is uncertain to what extent these chances are relevant for the quality of life (in other words, to what extent they are relevant input components of livability).

A second advantage is that dispersion of happiness provides a broader view on social inequality. Current measures focus on equality in specific matters, such as income or political power. Dispersion in happiness covers all relevant life-domains. Therefore, it is also better comparable through time. Declining income-inequality says little about equal life-chances at large in a society that becomes ever more affluent and where materialism declines.

As yet, only a few investigators have explored the possibilities of measuring social inequality by dispersion in realized life-equality. Ultee et al. (1988) considered dispersion in life-expectancy in nations. Spread in life-expectancy means in fact incidence of premature death. There are substantial differences between nations in this respect. In all countries dispersion has declined considerably since World War II.

Veenhoven (1990, 1991, 1992) has considered inequality in happiness between countries. He found sizable differences between countries as well. Inequality in happiness appears to be greatest in the socio-economically most unequal nations and is smaller in politically democratic and economically developed nations.

Is dispersion of happiness a good indicator for social inequality in nations? To answer this question two validity tests were performed.

Firstly, congruent validity was tested by assessing the degree of correspondence with the other indicator of dispersion in realized life-quality; dispersion in length-of-life in nations. **Scheme 8.5** presents data from 29 nations. On 28 of these data on dispersion of longevity are available. $r = +.36$.

Secondly, concurrent validity was tested by assessing the correspondence with income-inequality. N is 25 in this case. Again, a significant correlation emerges: $r = +.64$ ($p < .01$). Remember the finding in section 5.1.2, that income inequality is less sizably related to average level of happiness. The correlations are largely produced by the difference between first world and third world countries. Among first world countries alone are less pronounced.

The same analysis was run with standard deviations of responses to questions on satisfaction-with-life (tables 1.2.2a + b). Correlations were much lower in this case, and statistically insignificant. Possibly this is because of the smaller and slightly different nation-set.

Temporal trends in inequality in happiness have not been explored as yet.

8.6 SUMMARY

What does this data-set serve for? First of all for establishing whether it is of any worth itself. We need the data-set to investigate the validity of happiness as an indicator of livability. That is what we did that in chapter 5.

Because happiness appeared to be a good measure of livability, the data-collection can be used for charting livability. It allows comparison between nations and across time.

The data-collection helps to identify determinants of livability in an inductive way. As such it will complete current speculative deductions. The data-set will also help to identify consequences of good or bad livability.

The data-collection provides not only information about level of happiness in nations, but also about its dispersion. As such it allows a new view on inequality in nations.

Conversion is better possible when indicators (questions) are substantially equivalent, and differ only in number and labeling of response categories. In that case standardization by expert-weighting is justified. The expert-transformation applied here successfully passed a test for congruent validity.

If differences between equivalent items concern only the length of a graphic or numerical rating scale, simple linear transformation is most appropriate.

Only the latter two standardization methods (expert-weighting and linear transformation) are applied in this data collection. In the tables in part II transformed scores are mentioned for equivalent items. Transformed means are presented next to the original means.

Scheme 3.1
Some current indicators of quality of living conditions

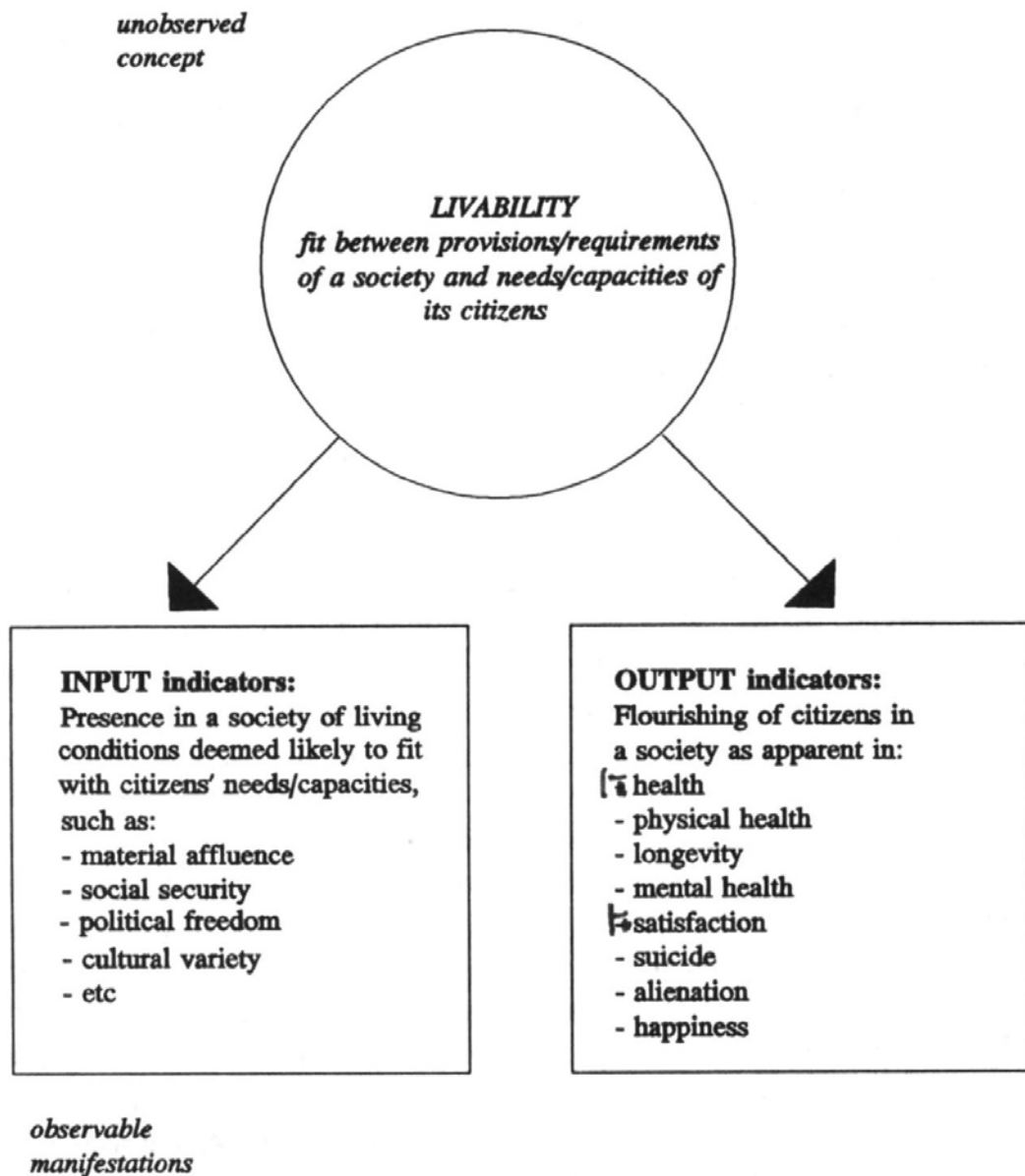
<i>Nations</i> (Estes 1984)	<i>(Narrol 1983)</i>	<i>Large cities</i> (PCC 1990)
<p>Education</p> <ul style="list-style-type: none"> - school enrolment - pupil teacher ratio - % illiterate - % expenditures <p>Healthcare</p> <ul style="list-style-type: none"> - physicians per 1000 <p>Women's rights</p> <ul style="list-style-type: none"> - male/female education ratio - women's suffrage <p>Economic welfare</p> <ul style="list-style-type: none"> - growth rate - income per head - inflation - food production <p>Population stability</p> <ul style="list-style-type: none"> - birth rate -death rate - % increase - % under 15 <p>Geographic situation</p> <ul style="list-style-type: none"> - % arable land - number natural disasters <p>Political stability</p> <ul style="list-style-type: none"> - demonstrations - riots - strikes - armed attacks - violent deaths <p>Political participation</p> <ul style="list-style-type: none"> - years since independence - years since constitution - parliamentary system - functioning parties - influence military - numbers of elections <p>Cultural homogeneity</p> <ul style="list-style-type: none"> - % same mother tongue or language - % same religion - ethnic fractualization 	<p>Brotherhood</p> <ul style="list-style-type: none"> - social security - childbeating death <p>Progress</p> <ul style="list-style-type: none"> - national income - contributions to science <p>Peace</p> <ul style="list-style-type: none"> - foreign war death <p>Order</p> <ul style="list-style-type: none"> - homicides - civil strife death <p>Variety</p> <ul style="list-style-type: none"> - freedom of press 	<p>Public safety</p> <ul style="list-style-type: none"> - murders <p>Food cost</p> <ul style="list-style-type: none"> - % income spent on food <p>Living space</p> <ul style="list-style-type: none"> - persons per room <p>Housing standard</p> <ul style="list-style-type: none"> - % with water/electricity <p>Communications</p> <ul style="list-style-type: none"> - telephones per 1000 <p>Education</p> <ul style="list-style-type: none"> - % children at school <p>Quiet</p> <ul style="list-style-type: none"> - noise level <p>Traffic flow</p> <ul style="list-style-type: none"> - speed in rush hour <p>Clean air</p> <ul style="list-style-type: none"> - pollution

The indexes of Estes and Narrol also involve some output indicators in the area of 'health'

Scheme 3

Indicators of livability: summary scheme

Indicators of livability: summary scheme



Scheme 4.2.2

Accepted indicators of happiness

OVERALL HAPPINESS

HEDONIC LEVEL OF AFFECT

Indicator code	Type of indicator	Indicator code	Type of indicator
HAP 1	Questions on <i>happiness-in-life</i> 1.1 - Single closed questions 1.2 - Index of multiple closed questions 1.3 - Open-ended question	AFF 1	Questions on hedonic level <i>in general</i> (indefinite period) 1.1 - Single closed questions on average effect 1.2 - Index of multiple closed questions on average affect 1.3 - Index of closed questions on specific affects
HAP 2	Questions on <i>satisfaction-with-life</i> 2.1 - Single closed questions 2.2 - Index of closed questions	AFF 2	Questions on hedonic level <i>in recent past</i> 2.1 - Single closed question on average affect 2.2 - Index of closed question on average affect 2.3 - Index of closed question on specific affect
HAP 3	Questions on <i>Best-Worst possible life</i> 3.1 - Single closed questions 3.2 - Index of multiple closed questions	AFF 3	Repeated questions on <i>hedonic affect of the moment</i> (time sampling) 3.1 - Single closed question on average mood of the moment 3.2 - Index of multiple closed question on specific affects of the moment
HAP 4	Questions on <i>Delighted-Terrible life</i> 4.1 - Single closed questions 4.2 - Index of multiple closed questions	AFF 4	Projective measures
HAP 5	Further questions on <i>life appreciation</i> 5.1 - Single closed questions	AFF 5	Rating by others 5.1 - Clinical ratings 5.2 - Peer ratings 5.3 - Ratings by teachers, nurses, parents etc.
HAP 6	Composites, combining two or more of the above	AFF 6	Composites, combining two or more of the above mentioned indicators
HAP 7	Open questioning 7.1 - Open questions 7.2 - Focussed interview 7.3 - Clinical rating	AFF 7	Open questioning

CONTENTMENT

Indicator Type of indicator
code

MIXED INDICATORS

Indicator Type of indicator
code

CON 1 Questions on perceived *realization of wants*
1.1 - Single closed questions
1.2 - Index of closed questions

CON 2 Open questioning
2.1 - Open questions
2.2 - Focussed interview
2.3 - Clinical ratings

MIX 1 Questions on *happiness & affect*
1.1 - Single closed questions
1.2 - Index of closed questions

MIX 2 Questions on *happiness & contentment*
2.1 - Single closed questions
2.2 - Index of closed questions

MIX 3 Questions on *affect & contentment*
3.1 - Single closed questions
3.2 - Index of closed questions

MIX 4 Questions on *happiness & affect & contentment*
4.1 - Single closed question
4.2 - Index of closed questions

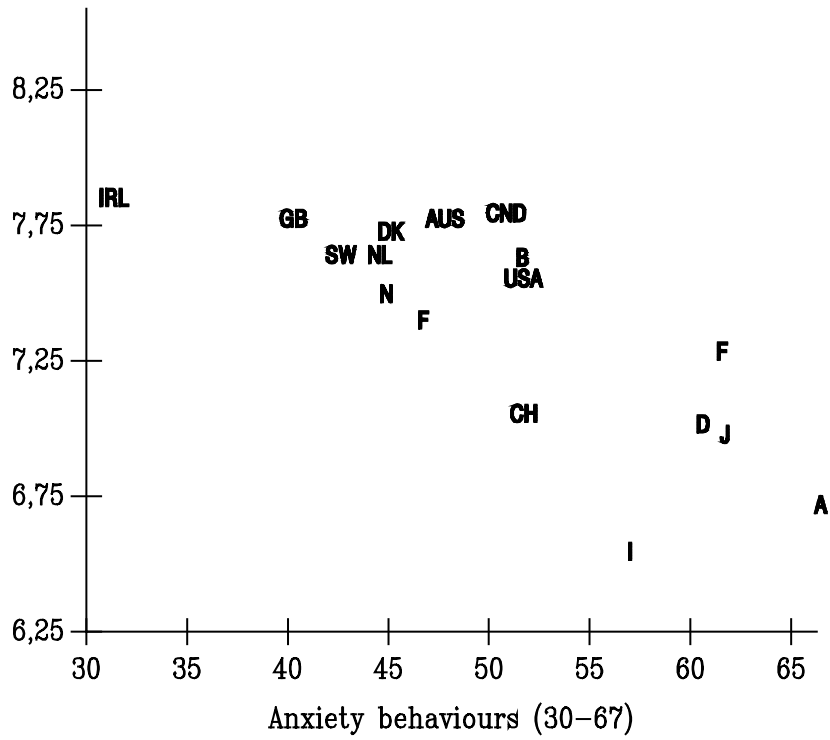
MIX 5 Open questioning
5.1 - Open questions
5.2 - Focussed interviews
5.3 - Clinical ratings

Scheme 5.1.1.1

Happiness and mental distress

17 nations 1970 - 1980

Happiness-in-life (0-10)

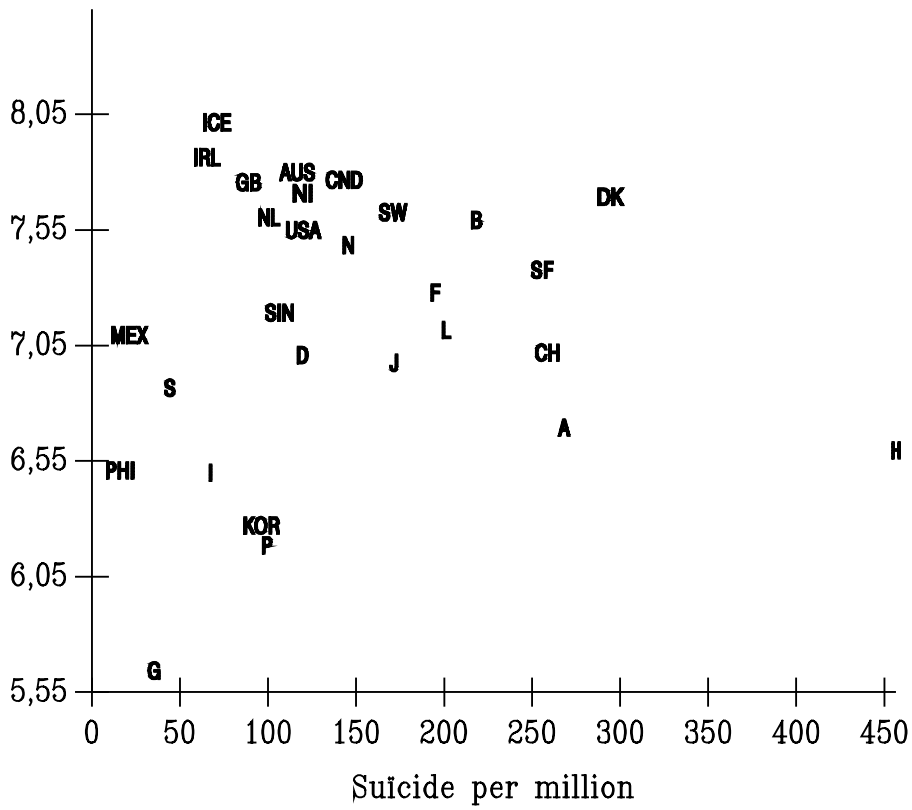


Data: Happiness: table 1.1.1a, data 1980. Distress: Lynn (1982:239, data 1970).

r = -.76

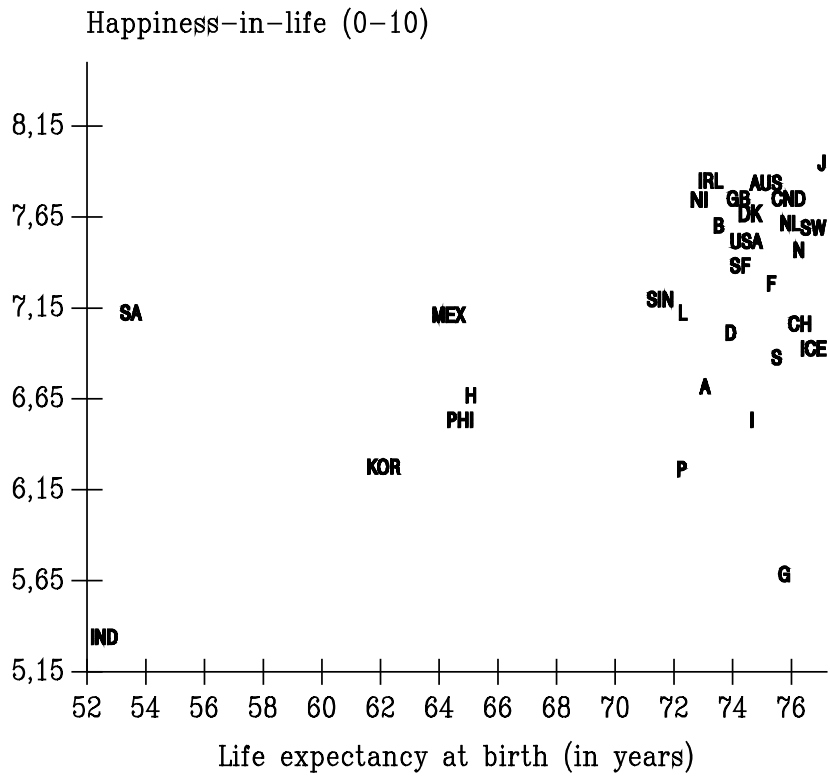
Scheme 5.1.1.2
 Happiness and suicide
 27 nations circa 1980

Happiness-in-life (0-10)



Data: Happiness: table 1.1.1a. Suicide: UN 1985.
 $r = +.03$ (ns)

Scheme 5.1.1.3
Happiness and life-expectancy at birth
31 nations circa 1980



Data: Happiness: table 1.1.1a+b+c. Life-expectancy: UN 1982.
 $r = +.53$ ($p < .05$)

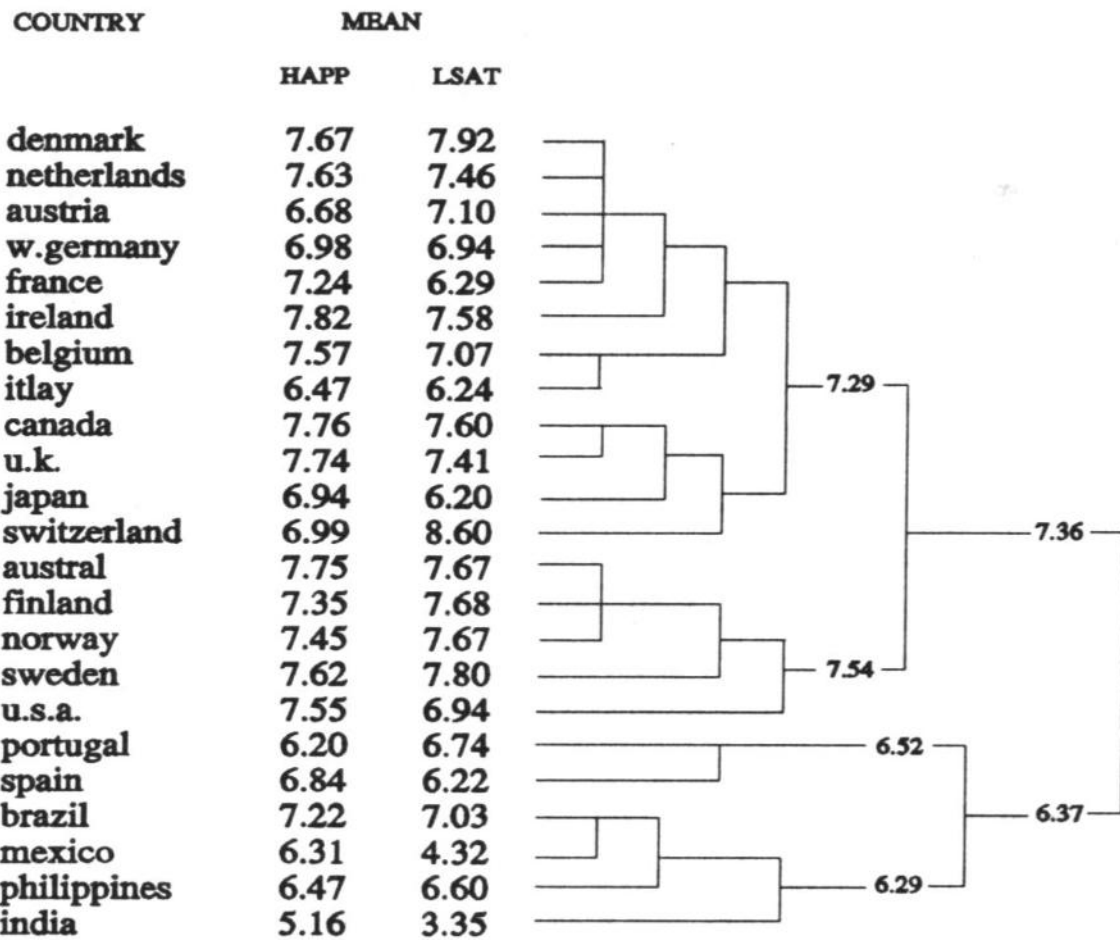
Scheme 5.1.2a
Happiness and living conditions: correlational analysis
23 countries circa 1980

<i>national characteristics</i>	<i>correlation with happiness</i>			
	listwise (N=22)		pair-wise	
	<i>zero-order correlation</i>	<i>economic prosperity controlled</i>		
<i>Material comfort</i>				
- Real national income	+ .69*	-	+ .70*	(N=28)
- Nutrition	+ .50*	-.19	+ .28*	(N=28)
<i>Social equality</i>				
- Women's emancipation	+ .75*	+ .64*	+ .61*	(N=27)
- Social security	+ .57*	+ .20	+ .51*	(N=26)
<i>Freedom</i>				
- Freedom of press	+ .55*	+ .27	+ .54*	(N=28)
- Political democracy	+ .54*	-.02	+ .58*	(N=24)
<i>Access to knowledge</i>				
- Education	+ .82*	+ .60*	+ .69*	(N=28)
- Media attendance	+ .54*	+ .07	+ .54*	(N=27)
R ²	+ .77*			

Data: Happiness: table 1.1.1a + b + c. Living conditions: see text. * p<.01

Scheme 5.1.2b

Happiness and living conditions: cluster analysis
23 countries circa 1980



Data: Happiness: table 1.1.1a + b + c and table 1.2.2a + b + c. Living conditions: See text.

Scheme 5.2.1.1a
Happiness rank order of nations on three survey questions
11 nations circa 1975

<i>Country</i>	<i>Happiness question</i>		
	<i>happiness-in-life</i>	<i>satisfaction-with-life</i>	<i>best/worst possible life</i>
Canada	1	2	1/2
Australia	2/3/4	1	1/2
Britain	2/3/4	4	3
USA	2/3/4	3	4
Brazil	5	6	7
France	6	7	8
W. Germany	7	5	5
Mexico	8	8	6
Japan	9	10	9
Italy	10	9	10
India	11	11	11
<i>rank order</i>	----- +.94 ----- -----4444-- +.94 -----		
<i>correlation (r_s)</i>	----- +.91 -----		

Data: table 1.1.1a, 1.1.2b and 1.3.1.

Scheme 5.2.1.1b**Happiness in bi-lingual nations compared**

Average happiness in language categories in bi-lingual countries

Average happiness in neighboring countries with the same language

Question: "On the whole, are you very satisfied (4), fairly satisfied (3), not very satisfied (2), or not at all satisfied (1) with the life you lead?"

Belgium

- French speaking 3.23

- Dutch speaking 3.47

France 2.88

Holland 3.34

Question: "All things considered, how satisfied or dissatisfied are you with your life as a whole? Which number comes closest to how you feel?" The respondent was asked to choose a number from a card containing an 11-point scale ranging from 1 to 11.

Canada

- French speaking 8.89

- English speaking 8.62

France 7.60

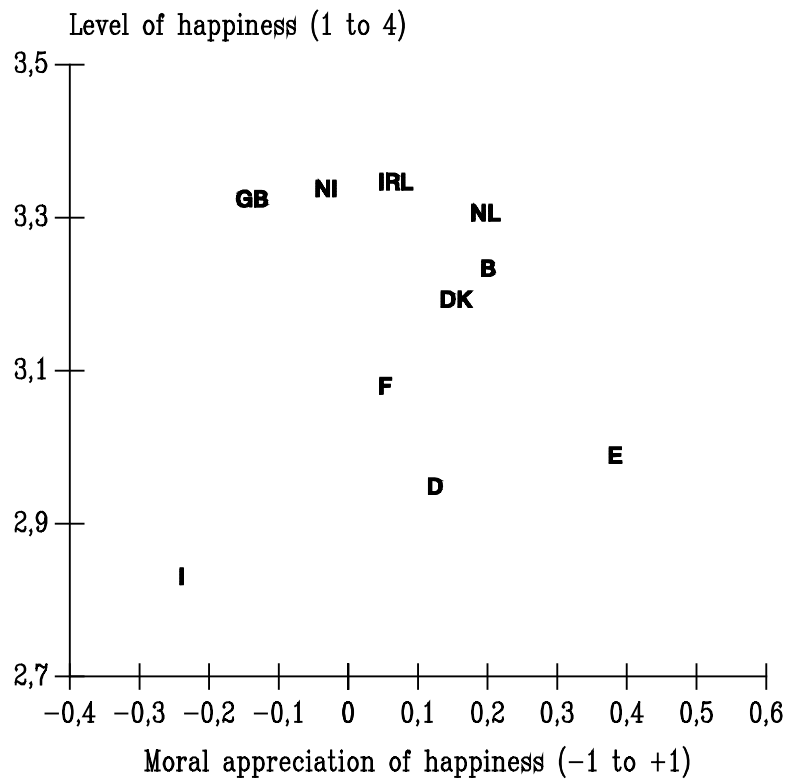
UK 8.50

USA 8.60

Data: Nation averages: table 1.2.1b and 1.2.2.b.

Linguistic categories: Belgium: Inglehart 1977:160/2, Canada: Blishen et. al. 1980:33

Scheme 5.2.1.2a
Happiness level and moral appreciation of happiness
10 EC countries 1980

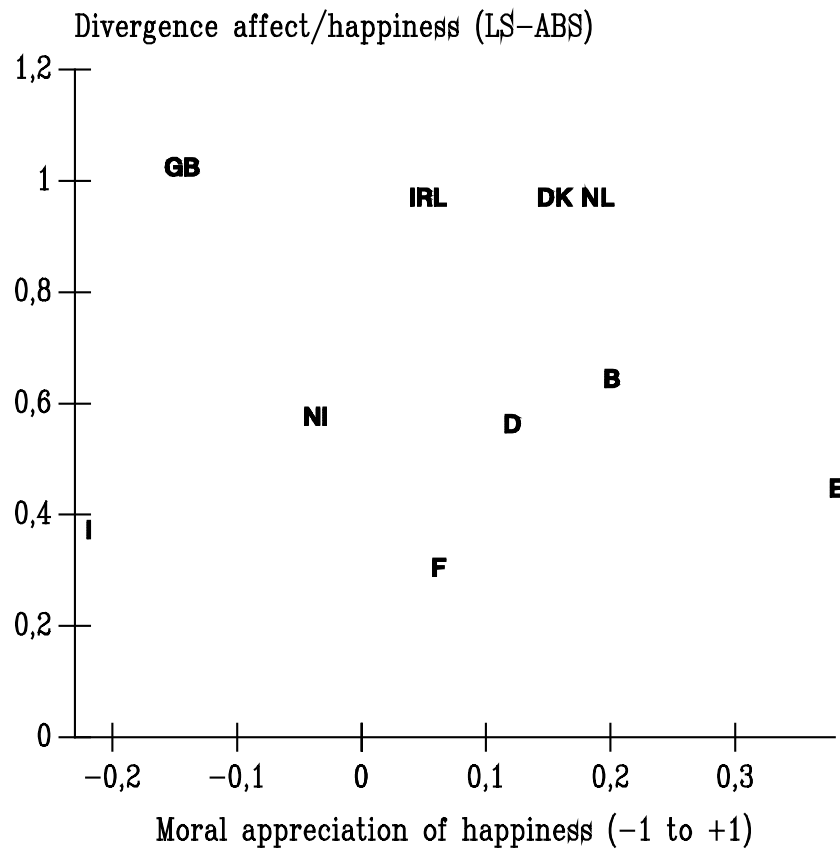


Data: Happiness: table 1.1.1b. Moral appreciation of happiness. Halman (1987: 159/178).
 $r = +.00$ (ns)

Scheme 5.2.1.2b

Divergence between reported 'happiness' and 'affect' by moral appreciation of happiness

9 EC countries



Data: Happiness table 1.1.1b, Affect: table 2.2.

Moral appreciation of happiness: Halman (1987:159/187).

$r = -.02$ (ns)

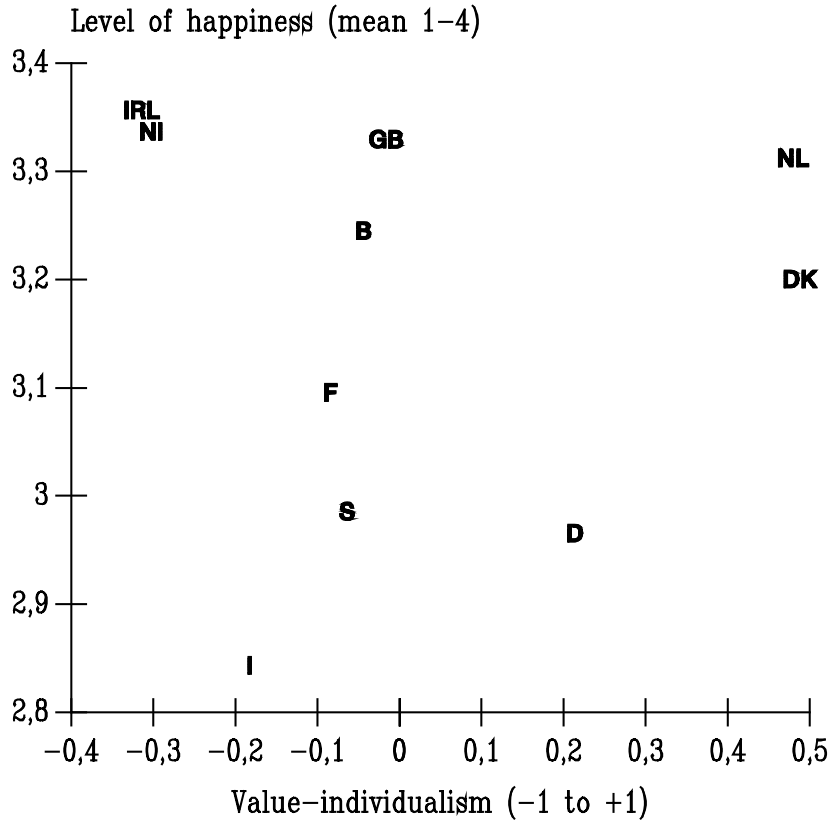
Scheme 5.2.1.2c**Correlation of 'general happiness' and last weeks 'affect' in some nation samples**

<i>country</i>	<i>measure of overall happiness (single questions)</i>	<i>correlation with past weeks affect (Affect Balance Scale)</i>	<i>source</i>
Britain	Happiness-in-life	$r = +.41$	Harding 1982:173
	Satisfaction-with-life	$r = +.45$	
EC	Happiness-in-life	$r = +.41$	Halman 1987:210
	Satisfaction-with-life	$r = +.45$	
Puerto Rico	Happiness-in-life	$G = +.51$	Matlin 1966:10/313
USA	Happiness-in-life	$r = +.50$	Andrews & Whithey 1976/85:292
	Satisfaction-with-life	$r = +.43$	
	Delighted-Terrible Life	$r = +.45$	
	Best-Worst possible Life	$r = +.47$	

Data: World Database of Happiness, Catalog of Correlates, variable category H1.2.1 (Veenhoven 1994).

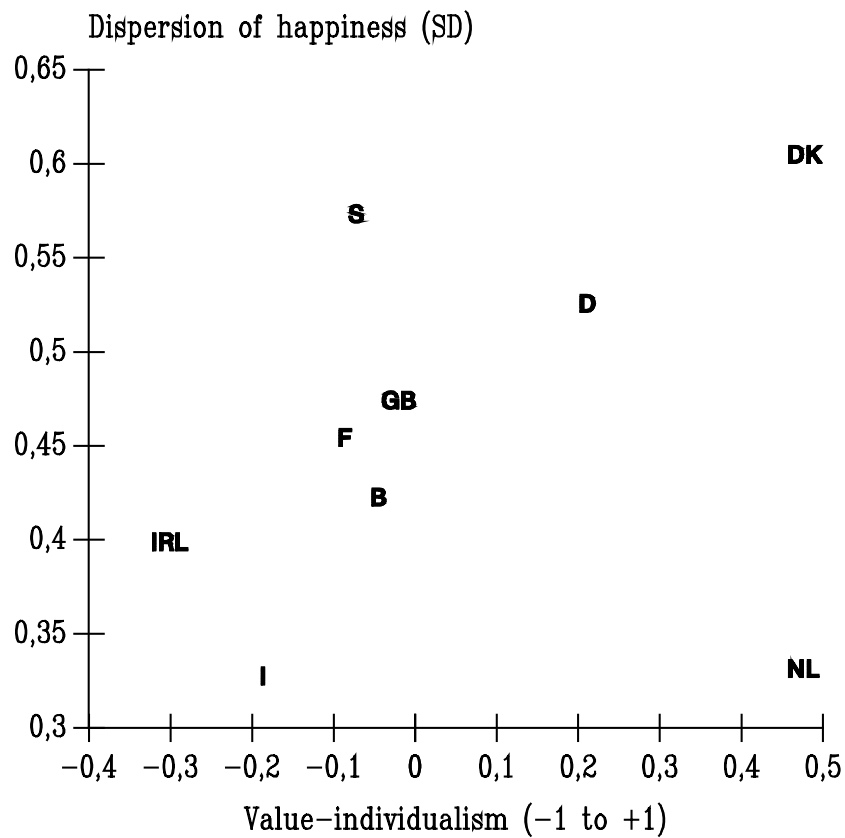
G = gamma.

Scheme 5.2.1.3a
 Happiness level (mean) and value-individualism
 10 EC countries in 1980



Data: Happiness: table 1.1.1b. Value individualism Halman: (1987:28/159/178)
 $r = -.27$ (ns)

Scheme 5.2.1.3b
Happiness-dispersion (SD) by value-individualism
9 EC countries in 1980



Data: Happiness table 1.1.1b. Value individualism Halman: (1987:28/159/178)
 $r = -.46$ (ns)

Scheme 5.2.1.3c

% responses on 11 categories of response scale on a question on happiness
14 countries in 1975

"Here is a picture of a mountain, suppose the top of the mountain (10) represents the best possible life for you and the bottom (0) represents the worst possible life for you. Where on the mountain do you feel you personally stand at the present time?"

	10	9	8	7	6	5	4	3	2	1	0	DK/NA
Australia	11	7	23	21	17	15	3	2	-	1	-	-
Africa (South Sahara)	1	1	6	9	18	18	19	12	8	5	3	-
Benelux	4	4	13	22	21	19	7	5	2	1	2	-
Brazil	9	5	14	14	19	21	8	5	2	1	2	-
Britain	9	8	20	16	21	15	9	1	1	-	-	-
Canada	10	8	22	23	17	13	4	2	1	-	-	-
France	5	3	13	15	17	22	13	8	1	1	2	4
Germany (W)	5	6	19	20	18	19	6	2	-	-	1	-
India	2	2	2	1	5	17	14	21	15	10	8	2
Italy	4	4	10	14	22	22	8	7	4	2	3	-
Japan	1	4	15	12	24	25	9	4	4	1	1	-
Mexico	5	4	19	14	23	22	6	2	2	3	-	-
Scandinavia	15	9	31	23	11	6	2	2	1	-	-	-
USA	13	6	17	20	13	18	6	3	1	1	1	1

Data: Gallup/Kettering (1975) Q6A. See table 1.3

Scheme 5.2.1.4

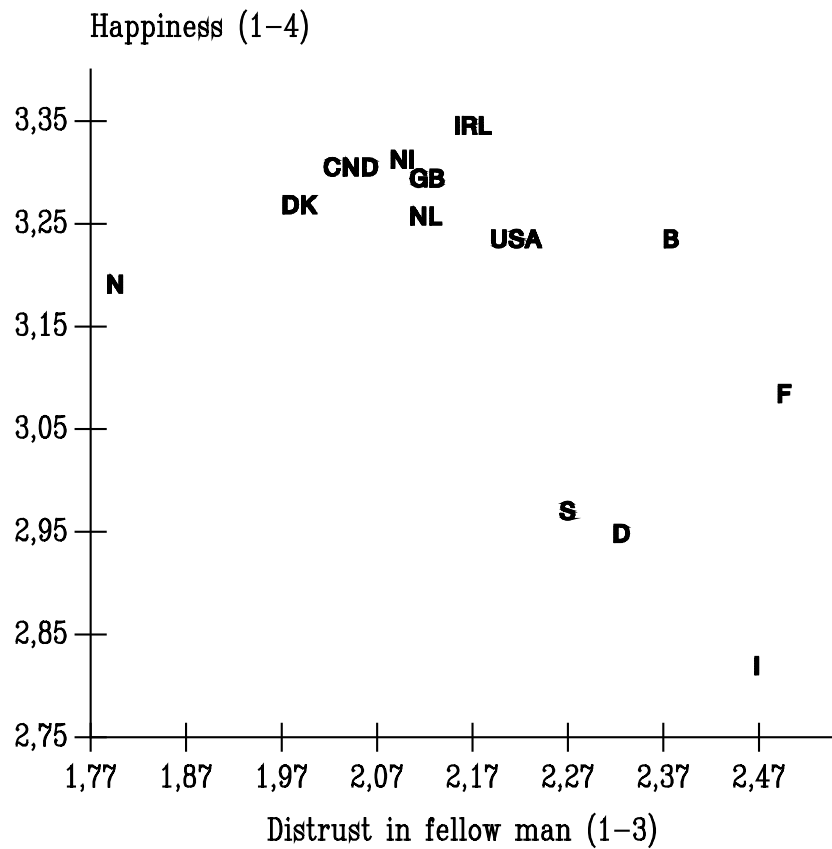
% non-response (don't know, no answer) on three questions about overall happiness

Six parts of the world in 1975

<i>Part of the world</i>	<i>question about overall happiness</i>		
	<i>happiness- in-life</i>	<i>satisfaction- with-life</i>	<i>best-worst possible life</i>
Australia	0	1	0
South Sahara	1	0	0
North America	2	1	1
Latin America	2	1	0
Far East	2	1	1
- Japan	12	0	0
- India	1	2	2
Western Europe	2	0	1

Data: tables 1.1.1a, 1.2.2b and 1.3.

Scheme 5.2.2.1a
 Happiness and distrust in fellow man
 13 Western nations in 1980



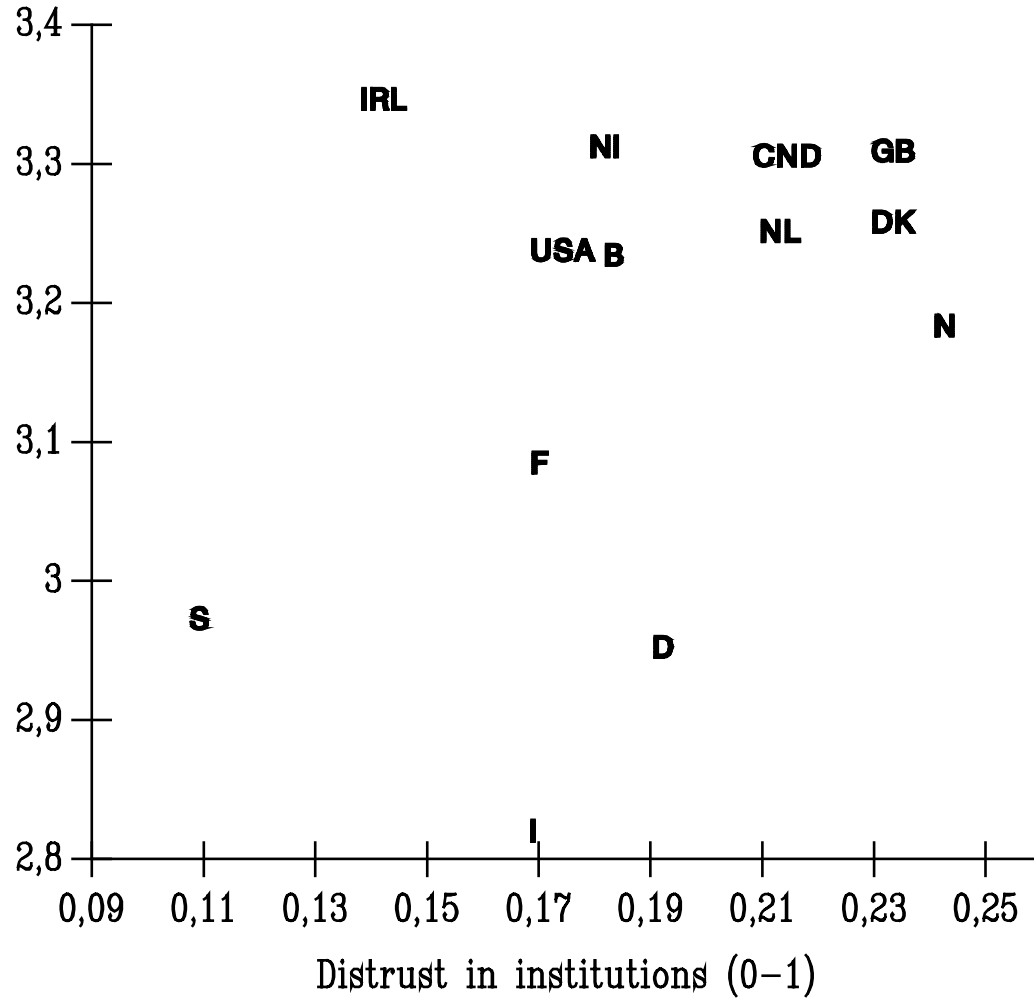
Data: Happiness: table 1.1.1b. Trust in fellow man: Halman 1991:317
 $r = -.61$ ($p < .05$)

Scheme 5.2.2.1b

Happiness and trust in society

13 Western nations in 1980

Happiness (1-4)



Data: Happiness: table 1.1.1b. Trust in society: Halman 1991:317

r = +.36 (

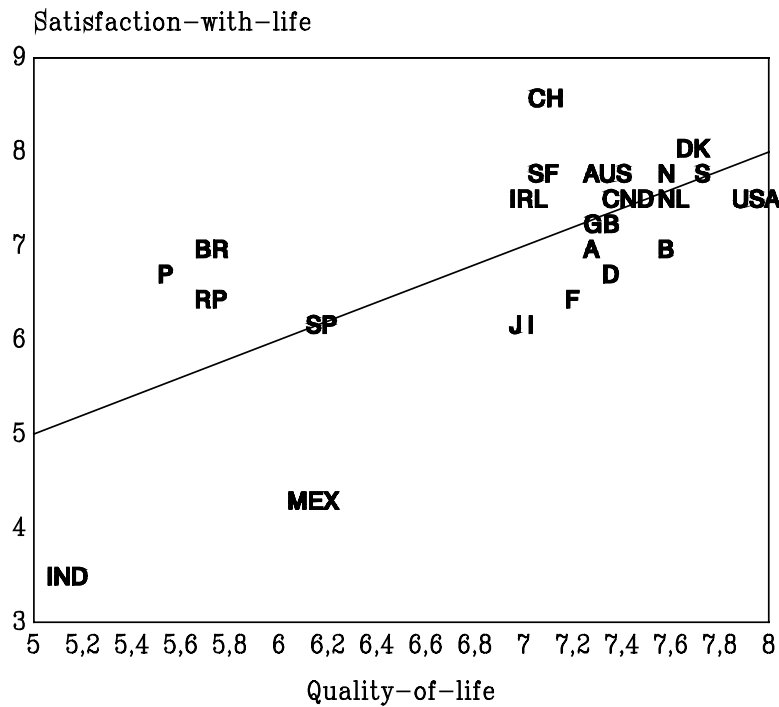
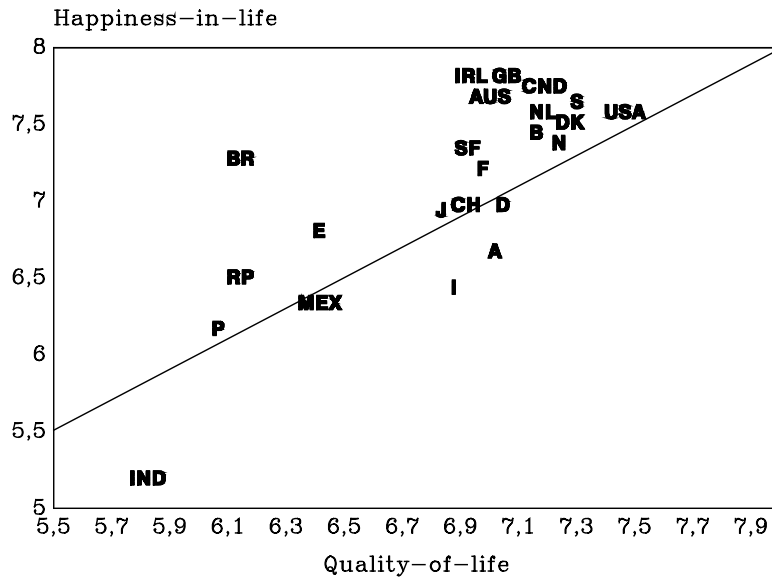
Scheme
5.2.2.2**Life-satisfaction of migrants (scale 0 - 10)**

	<i>average life-satisfaction of migrants in country of settlement</i>				<i>average life-satisfaction in country of origin (total population)</i>	
	Australia 1981 ¹ N=246	1984 ² N=656	1982 ³ N=770	Germany 1984 ⁴ N=1569	1981 - 1983	
<i>average life-satisfaction in country of settlement (total population)</i>	7.6	7.9	7.7 ⁵	7.4		
British migrants	8.0	8.0	-	-	7.6 ⁶	Britain
Greek migrants	7.6	7.4	7.2	7.1	5.9 ⁶	Greece
German migrants	-	7.7	-	-	7.5 ⁶	Germany
Irish migrants	-	8.0	-	-	7.7 ⁶	Ireland
Italian migrants	7.9	7.7	6.9	7.6	6.7 ⁶	Italy
Dutch migrants	-	7.8	-	-	8.0 ⁶	Netherlands
Spanish migrants	-	-	7.1	8.2	6.2 ⁷	Spain
Turkish migrants	-	-	6.2	6.9	<5.0 ⁸	Turkey
Yugoslavian migrants	-	7.7	7.1	7.8	±5.0 ⁹	Yugoslavia
<i>rankorder correlation (r_s) migrant life-satisfaction by satisfaction in country-of-origin</i>	+ .10 (ns) + .58 (ns) + .03 (ns) + .50 (ns)					

Notes:

see end of this chapter

Scheme 5.2.2.4
 Happiness and living conditions
 23 nations around 1980



Data: section 5.1.2

Scheme 7.1.1**Acceptable indicators of happiness used in national surveys**

<i>OVERALL HAPPINESS</i>			<i>HEDONIC LEVEL OF AFFECT</i>		
<i>code</i>	<i>type</i>	<i>N</i>	<i>code</i>	<i>type</i>	<i>N</i>
HAP 1	<i>Questions on happiness-in-life</i>		AFF 1	<i>Questions on affect in general</i>	
	1.1 Single closed questions	366		1.1 Single closed questions on average affect	11
HAP 2	<i>Questions on satisfaction-with-life</i>		AFF 2	<i>Questions on affect in recent past (month, year)</i>	
	2.1 Single closed questions	589		2.1 Single closed questions on average affect	2
	2.2 Multiple closed questions	1		2.3 Multiple closed questions on specific affects	53
HAP 3	<i>Question on Best-Worst possible life</i>		AFF 3	<i>Questions on currently experienced affect</i>	
	3.1 Single closed questions	54		3.1 Single closed questions on average affect	2
HAP 4	<i>Questions on Delighted-Terrible Life</i>		AFF 5	<i>Ratings of cheerful appearance by others</i>	20
	4.1 Single closed questions	5			
	4.2 Multiple closed questions	4			
<i>CONTENTMENT</i>			<i>MIXED INDICATORS</i>		
<i>code</i>	<i>type</i>	<i>N</i>	<i>code</i>	<i>type</i>	<i>N</i>
CON 1	<i>Questions on perceived realization of wants</i>		MIX 1	<i>Questions covering overall happiness and hedonic level</i>	
	1.1 Single closed questions	7		1.1 Single closed questions	34
				1.2 Multiple closed questions	1

Typology: [scheme 4.2.2](#)

N = number of surveys that used such indicator.

Scheme 7.1.3

Variation in lead-phrases with questions on happiness-in-life (type HAP 1.1)

In general how happy would you say you are?

Taken all together, how happy would you say you are?

How happy do you feel as you live now?

When somebody would say "this person is very happy" is he right or wrong?

Generally speaking, are you a happy person?

How happy is your life at this moment?

Source: table 1.1.1a + b + c.

Scheme 7.1.4**Variation in labeling of response categories with a 3-step question on happiness-in-life (type HAP 1.1)**

In general, how happy would you say you are?

very happy	very happy	very happy
fairly happy	fairly happy	pretty happy
not at all happy	not happy	not too happy

Source: tables 1.1.1a + b + c.

Scheme 7.1.5**Variation in number of response categories with a simple closed question on happiness**

Taken all together, how happy would you say you are

very happy	very happy	very happy
fairly happy	quite happy	rather happy
not too happy	not very happy	neither happy nor unhappy
	not at all happy	fairly unhappy
		very unhappy

Source: tables 1.1.1a + b + c.

Scheme 7.2.3

Classification of indicators of happiness used in representative nation surveys according to comparability

happiness variant	indicator code	short name	table in part II
OVERALL HAPPINESS			
	HAP 1.1	Single closed questions on happiness-in-life	
		<i>3-step happiness</i>	<i>1.1.1a</i>
		<i>4-step happiness</i>	<i>1.1.1b</i>
		<i>5-step happiness</i>	<i>1.1.1c</i>
		} <i>equivalent</i>	
		Further question on happiness	
		<i>Various happiness items</i>	<i>1.1.2</i>
	HAP 2.1	Single closed questions on satisfaction-with-life	
		<i>3-step satisfaction</i>	<i>2.1.1a</i>
		<i>4-step satisfaction</i>	<i>2.1.1b</i>
		<i>5-step satisfaction</i>	<i>2.1.1c</i>
		} <i>equivalent</i>	
		<i>10-step satisfaction</i>	<i>1.2.2a</i>
		<i>11-step satisfaction</i>	<i>1.2.2b</i>
		<i>101-step satisfaction</i>	<i>1.2.2c</i>
		} <i>equivalent</i>	
		Further questions on satisfaction-with-life	
		<i>various life-satisfaction items</i>	<i>1.2.3</i>
	HAP 3.1	Single closed questions on Best-Worst possible life	
		<i>11-step Best-Worst (Cantril ladder)</i>	<i>1.3</i>
	HAP 4.1	Single closed questions on Delighted-Terrible life	
		<i>7-step Delighted-Terrible</i>	<i>1.4</i>

Scheme 7.2.3 Continued

happiness variant	indicator code	short name	table in part II
HEDONIC LEVEL OF AFFECT			
	AFF 1 AFF 2.1+ AFF 3.1	Single closed questions on usual affect <i>Various feeling items</i>	2.1
	AFF 2.3	Multiple closed questions on specific affects in the recent past <i>10-item Affect Balance Scale</i>	2.2
	AFF 5	Rating of cheerful appearance <i>8-aspect rating of cheerfulness</i> <i>global rating of cheerfulness</i>	2.3a 2.3b
CONTENTMENT			
	CON 1.1	Single closed question on perceived realization of wants <i>Various contentment items</i>	3
MIXED INDICATORS	MIX 1.1 + MIX 1.2	<i>Various closed questions that concern both overall happiness and hedonic level</i>	4

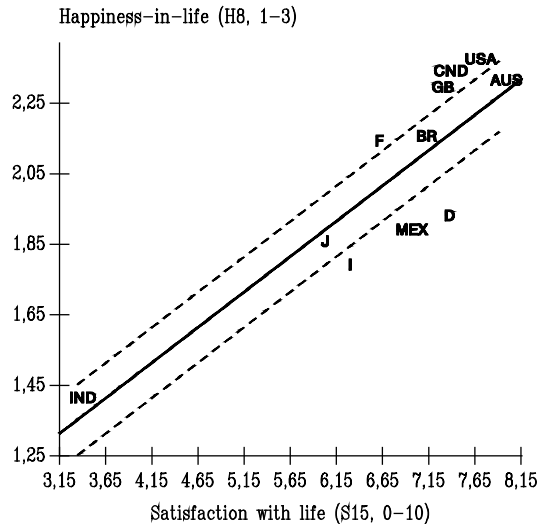
Bold italics : comparable items*Non-bold italics* : non-comparable items

Equivalent : comparisons across tables possible after transformation

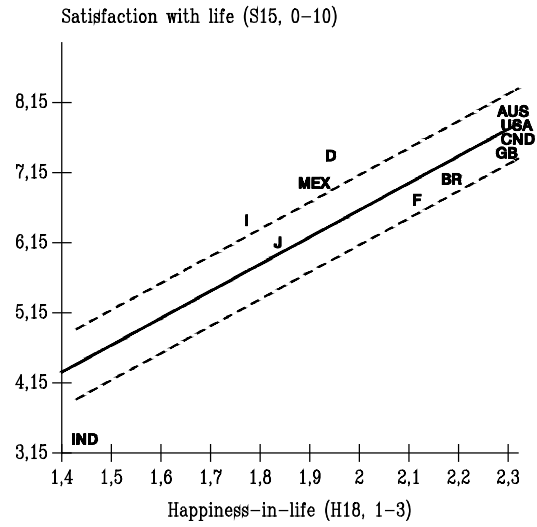
Scheme 7.3.2a

Average scores on items about 'happiness-in-life' and 'satisfaction-with-life' in 11 countries

11 nations in 1975



Happiness = 0.68 + 0.20 Satisfaction.



Satisfaction = -1.10 + 3.86 Happiness.

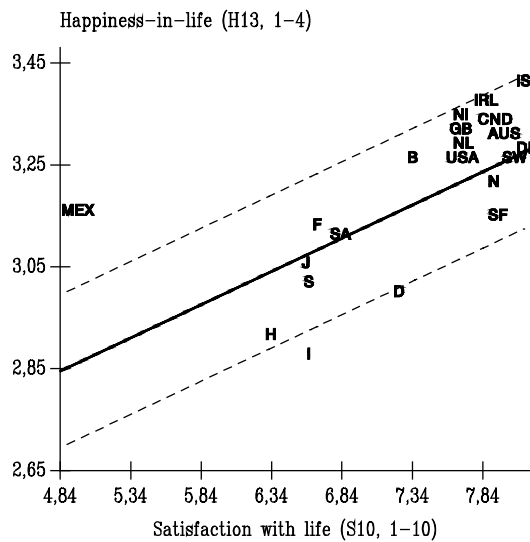
Data: Gallup/Kettering World Survey 1975. See table 1.1.1a and 1.2.2b.

Nation codes: see p 283. r = +.88

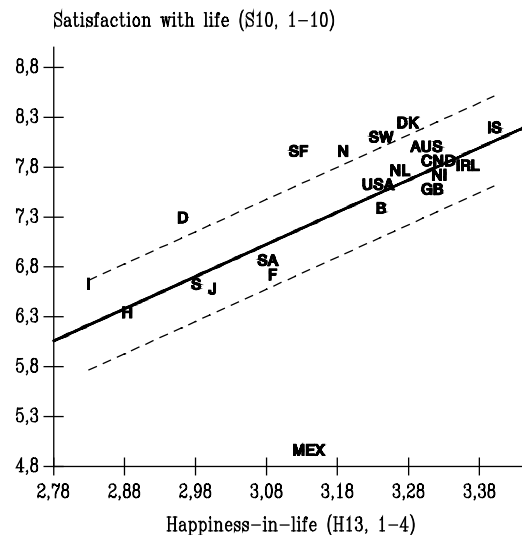
Scheme 7.3.2b

Average scores on items about 'happiness-in-life' and 'satisfaction-with-life'

22 nations in 1980



Happiness = 2.21 + 0.13 Satisfaction



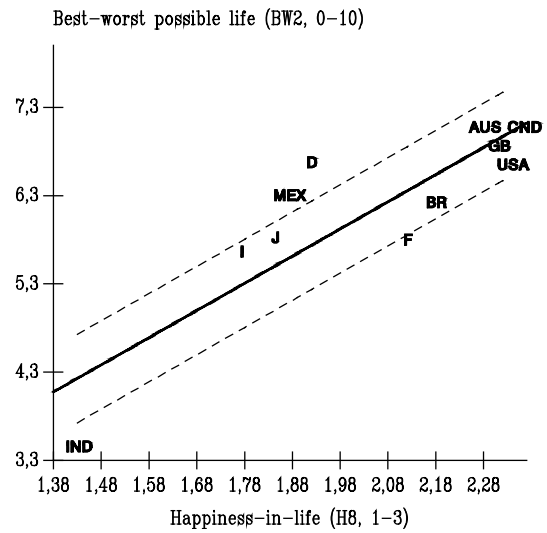
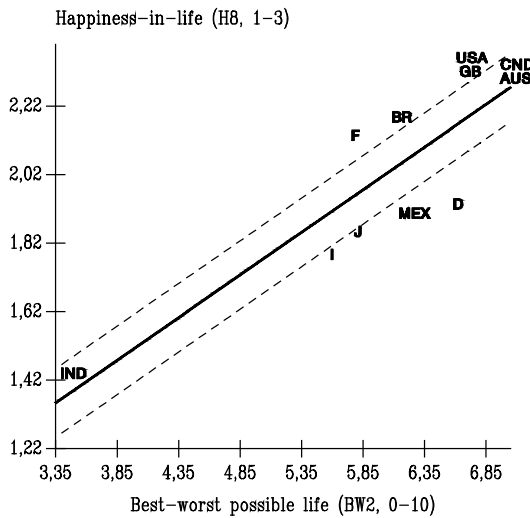
Satisfaction = -2.92 + 3.23 Happiness

Data: World Value Study I 1980. See table 1.1.1b and 1.2.2a.

Nation codes: See p 283. r = +.65

Scheme 7.3.2c

**Average scores on items about 'happiness-in-life' and 'best-worst possible life'
11 nations in 1975**



Happiness = 0.52 + 0.25 Best/Worst.

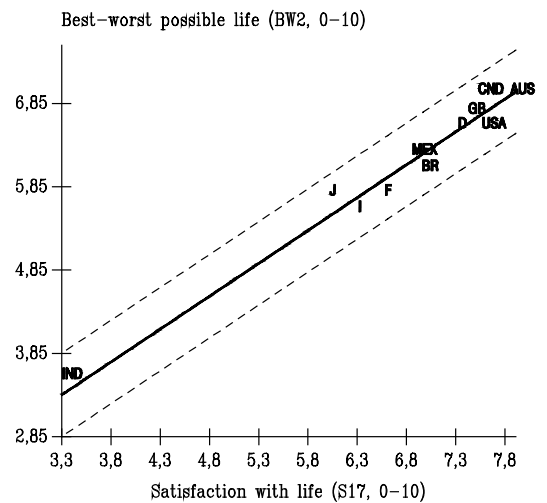
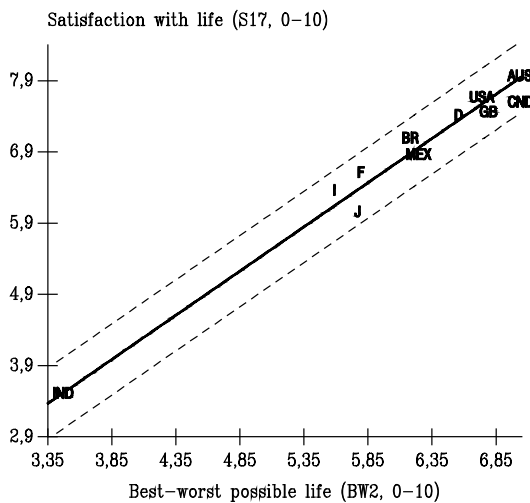
Best/Worst = 0.18 + 3.08 Happiness.

Data: Gallup/Kettering World Survey 1975. See table 1.1.1a and 1.3.
Nation codes: See p 283. r = +.88

Scheme 7.3.2d

Average scores on questions about 'Satisfaction-with-life' and 'Best-Worst possible life' (both questions rated on same graphic scale)

11 nations in 1975



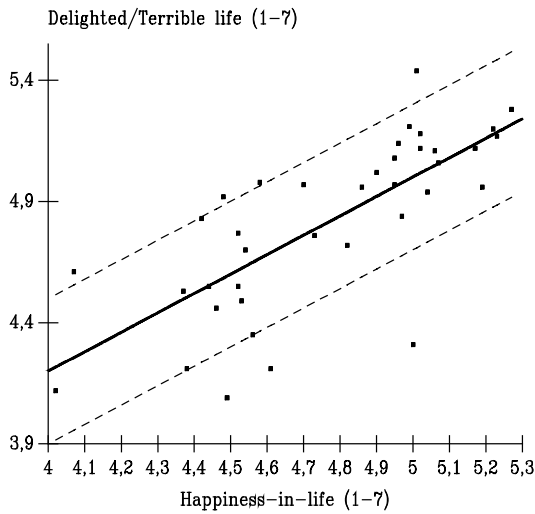
Satisfaction = -0.79 + 1.24 Best/Worst.

Best/Worst = 0.75 + 0.79 Satisfaction.

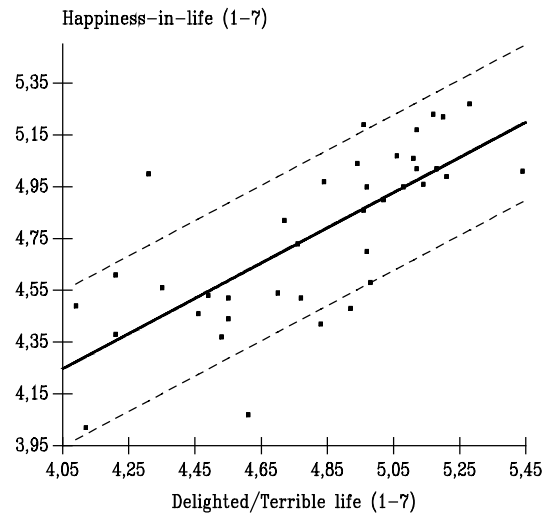
Data: Gallup/Kettering World Survey 1975. See table 1.2.2b and 1.3.
Nation codes: See p 283. r = +.99

Scheme 7.3.2e

Average scores on 'happiness-in-life' and 'delighted-terrible life' (Both questions rated on 1-7 scales).
University students in 38 countries 1985



$D/T = 1.00 + 0.80 \text{ Happiness.}$

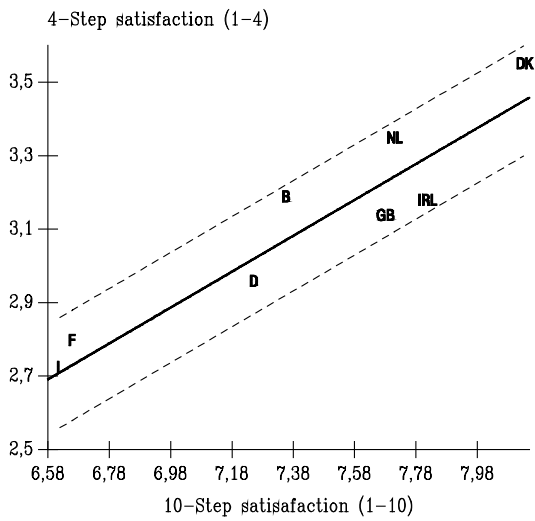


$\text{Happiness} = 1.50 + 0.68 \text{ D/T}$

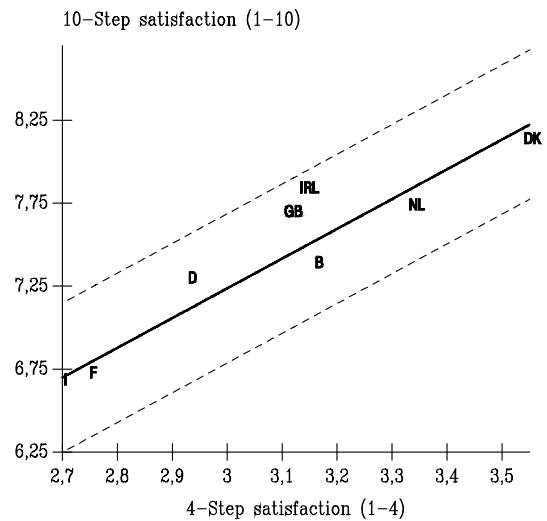
Data: Michalos (1986). Student Well-being Survey. See tables C1 and C2. $r = +.74$

Scheme 7.3.2f

Average scores on 4-step 'satisfaction with way-of-life' and 10-step 'satisfaction with life-as-a-whole'
8 nations in 1980/81



$4\text{-step satisfaction} = -0.53 + 0.49 \text{ 10-step}$



$10\text{-step satisfaction} = 1.85 + 1.8 \text{ 4-step}$

Data: Eurobarometer 1981. See table 1.2.1b. World Value Study I. See table 1.2.2a.

Nation codes see p 283. $r = +.94$

Scheme 7.3.3a**Ratings on a 0-10 scale of response-categories to equivalent questions on happiness-in-life.**

<i>Question</i>	<i>Mean rating</i>	<i>Standard deviation</i>	<i>Location in part II table</i>	<i>type</i>
In general, how happy would you say you are?				
- very happy	9.2	0.75	1.1.1a	H1/2
- fairly happy	6.4	0.49		
- not very happy	3.5	1.28		
In general, how happy would you say you are?				
- very happy	9.2	0.98	1.1.1a	H3
- fairly happy	6.3	0.64		
- not at all happy	1.1	0.94		
In general, how happy would you say you are?				
- very happy	9.3	0.64	1.1.1a	H4/5
- fairly happy	6.5	0.50		
- not very happy/not at all happy*	2.5	1.53		
In general, how happy would you say you are?				
- very happy	9.2	0.98	1.1.1a	H6
- fairly happy	6.3	0.64		
- not happy	2.7	1.27		
In general, how happy would you say you are?				
- very happy	9.0	0.63	1.1.1a	H7/8/9
- fairly happy	6.8	0.60		
- not too happy	4.2	0.75		
Taking all things together, how would you say things are these days				
- very happy	9.3	0.64	1.1.1a	H10/11/12
- pretty happy	6.7	0.78		
- not too happy	4.0	1.18		
Taken all together, would you say you are?				
- very happy	9.3	0.90	1.1.1b	H13
- quite happy	7.2	0.40		
- not very happy	3.9	0.70		
- not at all happy	1.0	0.89		
Is your life at the moment?				
- very happy	9.3	0.90	1.1.1b	H14
- quite happy	7.2	0.40		
- quite unhappy	3.9	0.70		
- very unhappy	1.0	0.89		
How happy do you feel as you live now? Please choose one item from this card, that comes closest to your feeling				
- very happy	9.4	0.66	1.1.1c	H15
- fairly happy	6.9	0.54		
- neither happy or unhappy	5.1	0.30		
- fairly unhappy	3.4	0.49		
- very unhappy	0.6	0.80		

* Combined categories. Scores on separate categories not available in some cases

Scheme 7.3.3b**Expert ratings on a 0 - 10 scale of responses to equivalent questions on happiness-in-life****Mean ratings by response category. N = 10**

response category	Meanrating in the context of question type:									Overall mean
	H1	H3 H2	H4	H6 H5	H7	H10 H8 H9	H13 H11 H12	H14	H18 H15 H17 H16	
very happy	9.2	9.2	9.3	9.2	9.0	9.3	9.3	9.4		9.3
quite happy							7.2			7.2
happy*							7.0		7.0	
pretty happy						6.7				6.7
fairly happy	6.4	6.3	6.5	6.3	6.8			6.9		6.5
rather happy*									6.0	6.0
neither happy nor unhappy								5.1		5.1
rather unhappy*								4.0	4.0	
not too happy					4.2	4.0				4.1
not very happy	3.5		3.5				3.9			3.7
fairly unhappy								3.4		3.4
not happy				2.7						2.7
not very + not at all**										2.5
not at all happy		1.1					1.0			1.0
very unhappy								0.6		0.6

* This item did not figure in the original weighting procedure and was estimated later

** Value assigned to combined categories where scores on separate categories were not available

Scheme 7.3.3c

Expert ratings of responses on a 0 - 10 scale of response categories to equivalent questions about 'satisfaction with way-of-life'

Results by question. N = 10

<i>Question</i>	<i>Mean rating</i>	<i>Standard deviation</i>	<i>Location in part II table</i>	<i>question</i>
How satisfied are you with the way you are getting on now?				
- very satisfied	9.4	0.49	1.2.1a	S1+2+3
- all right	7.0	0.63		
- dissatisfied	2.9	1.04		
On the whole, how satisfied are you with the life you lead?				
- very satisfied	9.3	0.64	1.2.1b	S4+7
- fairly satisfied	6.5	0.50		
- not very satisfied	3.7	0.78		
- not at all satisfied	1.3	1.10		
On the whole, how satisfied are you with the life you lead?				
- fully satisfied	9.7	0.48	1.2.1b	S5
- not fully but to an extent satisfied	6.9	0.57		
- as yet unsatisfied	4.0	0.67		
- very unsatisfied	1.7	0.95		
On the whole, how satisfied are with the life you lead?				
- satisfied	8.5	0.71	1.2.1b	S6
- rather satisfied	6.8	0.42		
- as yet unsatisfied	4.0	0.67		
- unbearably dissatisfied	1.2	0.63		

Scheme 7.3.3d**Expert ratings on a 0 - 10 scale of responses to equivalent questions type HAP 2.1****Mean ratings by response category N = 10**

<i>response category</i>	<i>Mean rating in the context of question type:</i>						<i>Overall mean</i>
	<i>S1</i>	<i>S4</i>	<i>S5</i>	<i>S6</i>	<i>S8</i>	<i>S9</i> <i>S10</i> <i>S11</i>	
fully satisfied			9.7				9.7
extra ordinary satisfied*					9.5		9.5
very satisfied	9.4	9.3			9.2		9.3
satisfied				8.5	8.5		8.5
all right	7.0						7.0
not fully but to some extent satisfied			6.9				6.9
rather satisfied*				6.8			6.8
pretty satisfied*	6.7						6.7
fairly satisfied		6.5			6.5		6.5
neither satisfied nor dissatisfied*					5.1		5.0
as yet unsatisfied			4.0	4.0	4.0		4.0
rather dissatisfied*							4.0
still dissatisfied*		4.0					4.0
not very satisfied		3.7			3.7		3.7
fairly dissatisfied*					3.4		3.3
dissatisfied	2.9				2.9		2.9
very unsatisfied			1.7				1.7
very dissatisfied					1.7		1.7
not at all satisfied		1.3					1.3
extremely dissatisfied*		1.2					1.2
unbearably dissatisfied				1.2			1.2

* These items did not figure in the original weighting procedure and were later estimated

Scheme 7.3.3.4

Two methods of transformation compared: Expert weighting and linear-transformation

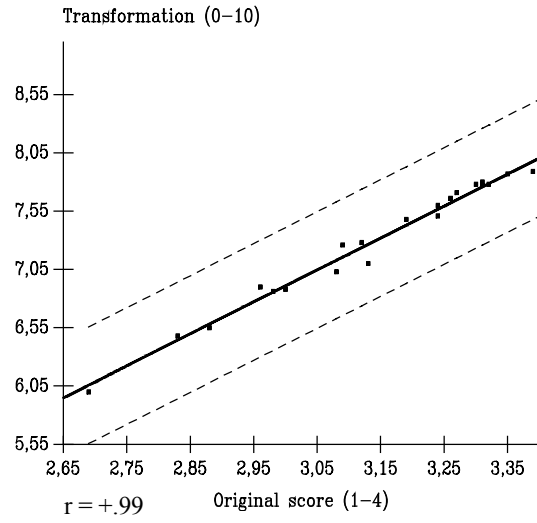
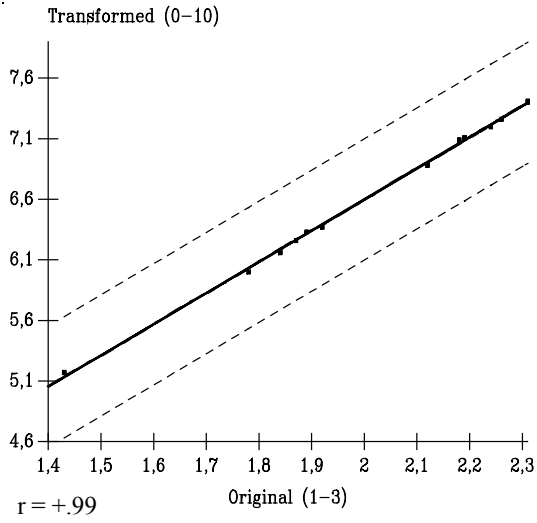
<i>country</i>	<i>method</i>	<i>happiness question</i>		
		<i>3-step</i> <i>(table 1.1.1a)</i>	<i>4-step</i> <i>(table 1.1.1b)</i>	<i>5-step</i> <i>(table 1.1.1c)</i>
Australia	expert	7.4	7.8	7.6
	linear	6.5	7.4	8.3
Germany (W)	expert	6.6	6.9	6.2
	linear	5.1	6.5	6.8
France	expert	6.6	7.2	6.4
	linear	5.1	7.0	7.0
Italy	expert	5.8	6.5	6.1
	linear	3.7	6.1	6.6
Japan	expert	6.2	6.9	6.2
	linear	4.2	6.6	6.7
USA	expert	7.2	7.6	7.4
	linear	6.0	7.4	8.2

Scheme 7.3.3.5

Transformed and original scores compared: 3-step and 4-step happiness

3 step happiness

4 step happiness



Data: Gallup/Kettering World Survey. See table 1.1.1a. World Value Study I. See table 1.1.1b.

Scheme 8.1

Differences in average happiness between nations
Some illustrative cases circa 1980

<i>nation</i>	<i>indicators of happiness</i>		
	<i>single question on happiness-in-life</i>	<i>single question on satisfaction-with-life</i>	<i>10 item index of questions on affects in recent past</i>
<hr/>			
<i>high happiness</i>			
Iceland	8.0 (a)	8.0 (c)	7.5 (e)
Australia	7.8 (a)	7.8 (c)	7.0 (e)
<i>medium happiness</i>			
Japan	6.9 (a)	6.3 (c)	5.3 (e)
Spain	6.8 (a)	6.3 (c)	5.8 (e)
<i>low happiness</i>			
Greece	5.6 (b)	5.9 (d)	-
India	5.2 (b)	3.5 (d)	-

Data: a: table 1.1.1b; b: table 1.1.1a; c: table 1.2.2a; d: table 1.2.2b; e: table 2.2.

Scheme 8.2.1**Changes in average happiness of nations over a decade****Some illustrative cases 1980 - 1990. Standardized scores 0 - 10**

<i>country year</i>		<i>indicators of happiness</i>		
		<i>single question on happiness-in-life</i>	<i>single question on satisfaction-with-life</i>	<i>10 item index of questions on affects in recent past</i>
<i>consistent increase</i>				
Italy	1980	6.5	6.4	5.9
	1990	6.9	7.1	6.2
France	1980	7.2	6.4	6.0
	1990	7.4	6.6	6.3
<i>consistent stability</i>				
Iceland	1980	8.0	8.0	7.5
	1990	7.9	7.9	7.5
Ireland	1980	7.8	7.7	6.6
	1990	7.8	7.8	7.0
<i>partial decrease and increase</i>				
Britain	1980	7.8	7.5	6.4
	1990	7.7	7.3	6.7

Data: World Value Study I and II. See tables 1.1.1b, 1.2.2a and 2.2.

Scheme 8.5
Inequality in happiness in nations compared with two other indicators of social inequality
29 nations in the 1980's

<i>Country</i>	<i>dispersion of happiness on 0 - 10 scale</i>	<i>dispersion of length-of-life (Gini-coefficients)</i>	<i>dispersion in income (Gini-coefficients)</i>
Australia	1.80	.102	.397
Austria	2.10	.111	.367
Belgium	2.03	.109	.302 ¹
Brazil	3.60	.240 ²	.572
Britain	1.87	.100	.345
Canada	1.80	.114	.361
Denmark	1.77	.104	.351
Finland	1.70	.102	.340 ¹
France	2.00	.109	.332
Germany (West)	1.77	.109	.327
Greece	3.35	.126	-
Hungary	2.20	.131	.310 ¹
Iceland	1.62	.094	-
India	2.35	.363 ²	.428
Ireland	2.00	.105	.374
Italy	2.20	.108	.329
Japan	2.10	.087	.264
Korea (South)	2.45	-	.300
Luxembourg	2.85	.118	-
Mexico	4.00	.209	.506 ¹
Netherlands	2.03	.094	.303
Norway	2.06	.096	.340
Philippines	2.08	.351	.340
Portugal	2.27	.144	-
Singapore	1.65	.114	.400
Spain	2.30	.121	.347 ¹
Sweden	1.83	.092	.394
Switzerland	2.85	.097	.336
USA	2.07	.111	.342

correlation (r) |----- r = +.36 (p<.01) -----| |--- r = +.48(p<.01)-----|

|----- r = +.64 (p<.01)-----|

Data: Dispersion of happiness: tables 1.1.1.a + b + c.
Dispersion of length-of-life, UN Demographic Yearbooks 1966, 1974, 1985.
Dispersion of total household income: UN 1985, UNDP 1990
1) data 1960's
2) estimate based on Gini on available household income after taxes: .03 added

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1. Victoria Immigrant Survey, 1981, Secondary analysis, 1-9 Terrible-Delighted scale, transformed linearly to 0-10.
2. Australian National Science Survey, 1984, Secondary analysis, 1-10 Dissatisfied-Satisfied scale, transformed linearly to 0-10.
3. German Survey among foreign workers (Ausländerumfrage), 1982. Data reported in Zapf & Brachtel 1984:294, 0-10 Utmost dissatisfied-Utmost satisfied scale.
4. German Socio-Economical Panel (Sozio Economisches Panel, SOEP), first wave, 1984, Secondary analysis, 0-10 Utmost dissatisfied - Utmost satisfied scale.
5. German Welfare Survey (Wohlfahrtssurvey), 1980. Data reported in Zapf & Brachtel, 1984:294.
6. Eurobarometer 19, 1983. Data reported in Inglehart 1985:12, 0-10 very dissatisfied - very satisfied scale.
7. European Value Study 1981, Secondary analysis, 1-10 dissatisfied - satisfied scale, transformed linearly to 0-10.
8. Estimate on the basis of a cross-national study among university students in which Turkish students scored very low (4.2 on a 1-7 Terrible-Delighted scale) and lower than students in Greece, Spain and Yugoslavia (Michalos 1991:83)
9. Estimate on the basis of:
 - a. National sample in 1962 which observed a score 5.0 on a 0-10 Worst-Best Possible Life scale (Cantril 1965:258),
 - b. Cross-national study among subjects aged 15-40 in 1967 in which Slovenia scored 5.06 on a 1-9 Worst-Best Possible Life scale (5.1 on 0-10 scale).