

8 USES OF THIS COLLECTION OF RESEARCH FINDINGS

8/1 Validating measures of livability

8/2 Establishing differences in livability

8/2.1 Comparing happiness between nations

scheme

8/2.2 Comparing happiness through time

scheme

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

scheme

8/6 Summary

Intro

In [chapter 1](#) of this introductory text 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
- 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. That third step is the main purpose of this collection of Happiness in Nations.

In this chapter I will now shortly consider step 4 and step 5. It will also note some

further uses of this data-collection.

First, in [Section 8/1](#) I note that this dataset was in fact indispensable in taking step 2. Operationalization requires validation, and validation cannot be done without a good data. Next, in [Section 8/2](#) I go into step 4 and consider whether there are differences in livability (as assessed by happiness) between nations ([Section 8/2.1](#)) and whether levels and rank orders of livability change over time ([Section 8/2.2](#)).

In [Section 8/3](#) I proceed to step 5 and consider determinants of high and low livability. Determinants can be identified by comparing characteristics of countries that differ in livability ([Section 8/3.1](#), cross-sectional analysis) and by analysing concomitants of change in livability over time ([Section 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 collection of research findings 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](#). In [Section 8.6](#) I summarize this last chapter.

8/1 Validating measures of livability

The data in this collection can be used for assessing their own usefulness. The validity of happiness as an indicator 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 datasets may later prove otherwise. If that is the case, this is probably my last work on happiness in nations¹.

¹ This remark dates from the first edition of this book in 1993. Research since has supported this view. See later literature mentioned at the end of this chapter.

8/2 Establishing differences in livability

8/2.1 Comparing happiness between nations scheme

- 8/2.1.1 Are there any differences?
- 8/2.1.2 What level is realistically possible?
- 8/2.1.3 Is there a bottom line?

8/2.2 Comparing happiness through time scheme

- 8/2.2.1 Is there any change?
 - 8/2.2.2 How much improvement is feasible?
 - 8/2.2.3 Does decline occur with delay?
-

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. In [Section 8/2.1](#) I consider whether there are any differences in public happiness between present day nations and explore the possible maximum and minimum of happiness in a society. Next, in [section 8/2.2](#) I examine these matters 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, that is, differences in happiness across nations. So, the first thing to be checked is whether this is the case indeed. Are some nations more livable than others are or are there, in fact, hardly any difference? If there are considerable differences, the next question is to what extent the observed variation in livability reflects the possible variation. In this context: whether average happiness could realistically be higher than the highest in our rank-order or lower than the lowest in our collection. Identification of optimal societies requires that we have a view on the entire possible range.

8/2.1.1 Are there any differences?

The very concept of livability presupposes that some nations fit human nature better than others do. Is that 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 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 datasets of ten to fifteen countries. The larger dataset that is available in this collection shows that these differences are no methodological artefacts of small samples. It also shows that the difference is not limited to specific measures of happiness.

In the list of observed responses to the 11-step question on life-satisfaction (O-SLW/c/sq/n/11/) we see for instance that, in 1975 the average was 7.7 in Canada and only 3.5 in India. Likewise, we can see that in the early 1960's the average rating on the Cantril ladder scale (O-BW) was about 6.8 in Canada and only 1.6 in the Dominican Republic. Sizable differences between other countries exist as well. As we have seen in [chapter 5](#), section 5/2.1, it is unlikely that these differences are the result of measurement bias. A look at the average scores across nations on the various queries in this collection shows that the pattern of differences is consistent. [Scheme 8/2.1.1](#) presents some illustrative cases.

8/2.2.2 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 distributions in this collection shows high levels of happiness in several countries. In the North West European countries for instance, about 75% of the population characterize itself as 'very' or 'fairly' happy in response to a single question on 'how happy one is these days' (O-HL/c/v/4). When asked about mood in the last few weeks, these people appear quite positive as well (A-BB/c/mq/10). 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 also be achieved in other parts of the world.

Scheme 8/2.1.1**Differences in average happiness between nations Some illustrative cases circa 1980**

<i>Nation</i>	<i>Questions on happiness</i>		
	<i>Single question on Happiness-in-life (O-HL)</i>	<i>single question on satisfaction-with- life (O-SLW)</i>	<i>10 questions on recent affect (A-BB)</i>
<i>High happiness</i>			
Iceland	8.0	8.0	7.5
Australia	7.8	7.8	7.0
<i>Medium happiness</i>			
Japan	6.9	6.3	5.3
Spain	6.8	6.3	5.8
<i>Low happiness</i>			
Greece	5.6	5.9	
India	5.2	3.5	

8/2.1.3 Is there a bottom line?

Reversibly, one can wonder whether there is a level below which a society can hardly sink. Human resilience and inventively could determine that level. 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 guarantees that some 25% will be 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 collection of distributional findings 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. 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 collection contains various time-series of average happiness in 15 nations. The longest series is from the USA and covered 55 years in 2000, the series in Japan covered about 40 years and series in the first nine EC countries cover almost 30 years. Analysis of this series allows answers to the following questions.

8/2.2.1 *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 dataset 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 West-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 a rise from 5.5 to 6.6 in that period (See scores on question O-BW/c/sq/1/11).

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 for 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 collection 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.

Scheme 8/2.2

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 questions on recent affect</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

8/2.2.2 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 dataset 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 consider 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.

8/2.2.3 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.

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

8/3 Identifying determinants of livability

8/3.1 Concomitants of level of happiness in nations

8/3.1.1 [Current findings](#)

8/3.1.2 [New opportunities for analysis](#)

8/3.2 Concomitants of change in average happiness in nations

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 8/3.1](#) I consider the determinants that have appeared in cross-sectional analyses of happiness. Next, in [section 8/3.2](#) I summarize 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 happier than others are, 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 [Chapter 5](#). 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 that are 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.

8/3.1.1 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 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 ('interest-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 extend 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'.

8/3.1.2 New opportunities for analysis

The above-mentioned current findings are based on rather small numbers (mostly about ten) of industrialized countries. This collection provides a broader and more differentiated dataset. 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 O-HL and of 33 countries a score on a question type O-SLW 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 dataset 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 transformation - planned or unplanned - will affect 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 collection of distributional findings on happiness in nations 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 Chapter 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 (2000) has explored whether the welfare-expanders have indeed improved happiness and life-expectancy in first world nations. Surprisingly, no difference appeared.

8/4 Identifying the 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 also worth studying.

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 has been performed on health statistics and suggests that improvements in health do indeed pay for themselves economically. Happiness data have not yet been considered in that context.

This collection 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 could 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 dataset 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 within nations across nations

So far, we have considered the *level* of happiness in nations, as expressed by its mean. This database 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 sizable 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 is the use of all these findings on happiness in nations? First of all, for establishing whether it is of any worth itself. We need this data-collection to investigate the validity of happiness as an indicator of livability. That is what we did that in chapter 5 of this introductory text.

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-collection 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.

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	-----+.36 p<.01 ----	----- +.48 p<.01-----
	----- +.64 p<.01 -----	

Data: Dispersion of happiness: this collection

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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