

## Well-Being *in* Nations and Well-Being *of* Nations Is There a Conflict Between Individual and Society?

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**Abstract** Human societies cannot exist without human beings and human beings cannot exist without a society. Still there can be a conflict of interest between the individual and society and there are historical examples of societies prospering at the cost of its members, and examples of people thriving at the cost of society. The degree of conflict or synergy will vary over time. This begs the question: How is it today? To what extent does the well-being of contemporary nations go together with the well-being of their inhabitants? In a system theoretical perspective one can distinguish four kinds of being 'well': (1) good external conditions, (2) appropriate internal functioning, (3) positive external effects and (4) system maintenance. At the level of nations these aspects of well-being cannot be meaningfully combined in one measure, hence each aspect is measured separately. At the level of individuals a fairly comprehensive measure is how long and happy people live. Data was available for 92 nations in the early 2000s. Analysis of these data shows much correspondence between the well-being of contemporary nations and average well-being of citizens in these nations. This appears in strong correlations between Happy Life Years and (a) the position of the nation in the world system, (b) the functioning of public institutions in the nation, (c) the productivity of the nation, and (d) the stability of the system. There are plausible explanations for this connection, one is that modern society fits human nature fairly well and another that happy citizens make a better society. So, there is no great conflict between the individual and society, at least not at this moment.

**Keywords** Quality of life · Happiness · Cross national · Quality of society

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## 1 The Question

Humans cannot survive without a society and societies cannot exist without members. Still there may be conflicts between the individual and society; one can imagine that social systems function better when they have considerable control over their individual members, but that this is a mixed blessing for the system's members. Likewise can competition with other societies strengthen the social system, while wearing out its constituent members.

This idea was voiced by Rousseau (1769) who believed that we lived better in the original state of nature than under civilization, and who was for that reason less positive about classic Greek civilization than his contemporaries. In the same vein, Freud believed that this conflict is inherent to social organization. In his 1923 book 'Unbehagen in der Kultur' (Society and its Discontents) Freud (1930) asserts that any social organization requires the repression of instinctual urges, and that the development of modern society necessitates ever more repression of natural impulses. Hence he believed that societal civilization is antithetical to human happiness and that we are typically less happy than our primitive forefathers. Likewise some evolutionary psychologists believe that natural selection cannot keep pace with societal development (e.g. Nesse 2004, p. 1343).

There is indeed evidence that the negative effects have prevailed in a major phase of human history. Some 10,000 years ago, humans began to change from hunting and gathering to agriculture and that alteration has changed human societies profoundly. The original small and egalitarian bands were driven out by ever larger and more hierarchical civilizations that gained much more control over their members (Lenski et al. 1995). In a fascinating book Maryanski and Turner (1992) depict this development as social evolution driving humans in a 'social cage'. Societies got stronger in this process, but human life did not get better. Under-nutrition was common and warfare rampant. Anthropological archeology has shown that people lived about the same length of time in agrarian societies as hunter-gatherers, but in less good health (Sanderson 1995).

Did human well-being also deteriorate in the next phase of societal evolution, when agrarian society was replaced by industrial society? Some critics of modernization believe that this is indeed the case. Karl Marx (1871) prophesied that the blind forces of capitalism would result in a process of 'Verelendung' ('miseryization'), with the working underclass getting ever poorer and becoming ever larger. In this line Braverman (1974) argued that mechanization and specialization degraded work in the 20th century. Sociologist Emile Durkheim (1897) was also not very positive and observed a growing moral disorientation, which he called 'anomie'. In his view, the modernization process disrupts the communal basis of morality, amongst other things because social control is reduced, and he provided evidence that this development had boosted suicide rates. Many later sociologists, who also see increasing loneliness and feelings of meaninglessness in modern society, echo this view. Appealing books written in this tradition include Riesman's (1950) "Lonely crowd" and Ritzer's (1993) "The McDonaldization of society" and Putnam's (2000) "Bowling alone".

In this paper I will check whether societal development indeed occurs at the cost of individual well-being.

## 2 Concepts of Well-Being

Comparing the wellbeing of individual and society requires first a definition of well-being. The word denotes the being 'well', but leaves unclear what wellness is involved. A look in

	<i>External</i>	<i>Internal</i>
<i>Chances</i>	<b>Favorable environment</b>	<b>Good functioning</b>
<i>Outcomes</i>	<b>Positive external effects</b>	<b>Continuance</b>

**Scheme 1** Four kinds of well-being

the literature shows that the word is used in connection to quite different merits. Following my earlier analysis of notions of ‘quality-of-life’ (Veenhoven 2000), four kinds of well-being can be distinguished.

## 2.1 Four Kinds of Wellbeing

The well-being of any system can be judged from different perspectives. One perspective is to look at the *chances* for the system, while the opposing perspective is to look at the wellness of *outcomes* for the system. Still another set of opposing views is to take either an *external* perspective or focus on the *inner* wellness of the system. When combined, these perspectives result in four kinds of well-being, which are depicted in Scheme 1.

When focusing on external chances, we deal with the *environmental conditions* of a system. Being in favorable conditions is seen as more ‘well’ than being in adverse conditions. When focusing on internal chances, we deal with the *internal functioning* of a system. Working as designed is deemed more ‘well’ than poor performance. If the focus is on external outcomes, we deal with *environmental effects* of a system. A system that works out positively on its environment being is deemed to be more ‘well’ than a system that causes harm. If we focus on the inner outcomes, we deal with system *maintenance* in the first place. In that view a system that keeps up is more ‘well’ than a system that perishes.

When applied to biological organisms, the chances of being well are denoted with the terms *biotope* (external chances) and *fitness* (internal chances), while the well-being outcomes are referred to as, respectively *ecological function* (external outcome) and *survival* of the organism or species (inner outcome).

When applied to business organizations the external chances for being well are embodied in the *market* while internal chances are in the *capital* of the firm. External outcomes can be denoted by the term *public wealth* and internal outcomes by *private profit*.

## 2.2 Well-being of Individuals

When applied to individuals, the following kinds of well-being appear: See Scheme 2.

In the upper half of the scheme we see two variants of potential quality of life, with, next to the outer opportunities in one’s environment, the inner capacities to exploit these. The environmental chances can be denoted by the term *livability*, the personal capacities with the word *life-ability*. This difference is not new. In sociology the distinction between ‘social capital’ and ‘psychological capital’ is sometimes used in this context. In the

	<i>External</i>	<i>Internal</i>
<i>Chances</i>	<b>Livability of environment</b>	<b>Life ability of person</b>
<i>Outcomes</i>	<b>Utility of life</b>	<b>Long and happy life</b>

**Scheme 2** Four kinds of individual well-being

psychology of stress the difference is labeled negatively in terms of ‘burden’ and ‘bearing power’.

#### *Livability of the Environment*

The left top quadrant in Scheme 2 denotes the meaning of good living conditions. Often the terms ‘quality-of-life’ and ‘well-being’ are used in this particular meaning, especially in the writings of ecologists and sociologists. Economists sometimes use the term ‘welfare’ for this meaning. Another term is ‘level of living’.

‘Livability’ is a better word, because it refers explicitly to a characteristic of the environment and does not have the limited connotation of material conditions. One could also speak of the ‘habitability’ of an environment, though that term is also used for the quality of housing in particular. Elsewhere I have explored this concept of livability in more detail (Veenhoven 1996, pp. 7–9).

#### *Life-Ability of the Person*

The right top quadrant in Scheme 2 denotes in inner life-chances. That is: how well we are equipped to cope with the problems of life. This aspect of the good life is also known by different names. The words ‘quality of life’ and ‘wellbeing’ are also used to denote this specific meaning, especially by doctors and psychologists. There are more names however. In biology the phenomenon is referred to as ‘adaptive potential’ and ‘fitness’. On other occasions it is denoted by the medical term ‘health’, or by psychological terms such as ‘efficacy’ or ‘potency’. Sen (1992) calls this quality of life variant ‘capability’. I prefer the simple term ‘life-ability’, which contrasts elegantly with ‘livability’.

#### *Utility of Life*

The left bottom quadrant in Scheme 2 represents the notion that a good life must be good for something more than itself. This presumes some higher values. There is no current generic for these external turnouts of life. Gerson (1976, p. 795) referred to these kinds as ‘transcendental’ conceptions of quality of life. Another appellation is ‘meaning of life’, which then denotes ‘true’ significance instead of mere subjective sense of meaning. I prefer the more simple ‘utility of life’, admitting that this label may also give rise to misunderstanding. Be aware that this external utility does not require inner awareness. A person’s life may be useful from some viewpoint, without them knowing.

### *Long and Happy Life*

Finally, the bottom right quadrant in Scheme 2 represents the inner outcomes of life. That is first of all the continuation of life, a short life being less ‘well’ than a long life; other things being equal.

As noted above survival is the typical outcome criterion in biology. Yet in higher organisms mere survival is not the only outcome, since these beings can also appraise how well they are doing when still alive. Most mobile organisms have the faculty of feeling good or bad and that serves to inform them whether they are in the ‘right pond’ or not. As such, feeling good embodies both subjective and objective well-being.

In the case of humans, the gift of thinking also allows individuals to monitor their feelings across time and conditions and to estimate how well they feel most of the time. The human faculty to reason also allows a comparative evaluation of the outcomes of life and the combination of affective and cognitive appraisals in an assessment of overall satisfaction with life. This is well-being in the eye of the beholder, also referred to as ‘subjective wellbeing’ or ‘happiness’.

So in the case of humans, internal outcomes of life manifest not only in how long one lives, but also how happy.

## 2.3 Well-Being of Nations

When applied to nations, the distinction into four kinds of well-being produces the variants presented in Scheme 3.

	<i>External</i>	<i>Internal</i>
<i>Chances</i>	<b>Ecological condition Geo-political position</b>	<b>Functioning</b>
<i>Outcomes</i>	<b>Burden to eco-system Contribution to civilization</b>	<b>Continuity Morale</b>

**Scheme 3** Four kinds of societal well-being

### *Ecological and Geo-Political Environment*

The left top quadrant in Scheme 3 denotes the favorableness of a nation’s environment. This has both physical and social aspects. Physical aspects were most important in the past, no strong societies having developed at the poles or in deserts. Modern technology has now reduced the significance of this environmental aspect of societal well-being. The social environment has become more important in the course of societal evolution; inter-societal competition has increase as has inter-dependency. Therefore the position of a nation in the world system seems to represent the major environmental chance factor these days. In this view a nation is better off the more central it is in the world system.

### *Functioning of Institutions*

The right top quadrant in Scheme 3 denotes the ability of the social system to maintain itself in the given environment. This ability is in the social organization and in the case of

present day nations in particular in the functioning of the state. In this view a nation is 'well' if its state institutions function properly.

#### *Contributions to the Eco-System and to Human Civilization*

The left bottom quadrant in Scheme 3 denotes the outcomes of society for its environment. These outcomes can concern the physical environment and the social environment. In the first case the wellbeing of a nation is judged by its impact on the eco-system, which means that a nation is more 'well' the less damage it causes. In the second case the wellbeing of a nation is judged by its impact on human civilization and in this context a nation is more 'well' if it produces significant innovations.

#### *Continuation and Morale*

Lastly the right bottom quadrant in Scheme 3 denotes the meaning of internal outcomes. How does that work out at the nation level?

The most basic outcome is again system maintenance and in the case of biological organisms this equates with survival. At first sight this would also apply to nations: one cannot say that a nation does well when it ceases to exist. Still, nations can become part of a stronger supra-national system and much of their characteristics be preserved in this way. This has happened with the member states of the European Union. So this criterion must be restricted to 'single death' such as a nation succumbing to inner tensions, e.g. the former Yugoslavia.

In the case of individual well-being, inner outcomes also reflect in evaluative appraisals of life, humans being able to reflect on their condition. Societies cannot reflect on themselves in the way individual persons do. Still, there are collectively held beliefs in nations about the nation and these tend to be linked to identification with the country and willingness to fight for the country. In this line one could argue that a nation is more 'well' the higher the civic 'morale' is.

### **3 Measurement of Well-Being**

Well-being is commonly measured using indexes that involve indicators drawn from each of the quadrants in the above schemes. An example of such an index of individual well-being is Allard's (1976) index of welfare and an example of an index of national well-being is the Human Development Index (UNDP 1991). Though commonly used, these indexes make no sense; they are mere bags of apples and oranges. The schemes help as to see why.

Firstly, there is little point in adding *chances* to *outcomes*. A system that has good chances but bad outcomes can hardly be said to be 'well'. Secondly, there is no point either in the adding of *external conditions* and *inner functioning*. It is the *fit* that matters and not the *sum*. Imagine that the well-being of Robinson Crusoe is measured using the sum of vegetation on his island and his knowledge of philosophy. I have discussed the limitations of these indexes in more detail elsewhere (Veenhoven 2000, p. 32)

#### 3.1 Measure of Apparent Well-Being in Nations: Individual Well-Being

In the case of biological beings, a lot of information on well-being is implied in survival. If a species survives and most of the specimens reach their programmed life time, external



### 3.2 Measures of Well-Being of Nations: National Well-Being

Comprehensive measurement is less well possible in the case of nations. As we have seen in Sect. 2.3, the concept of ‘survival’ applies less well to nations. The same holds for the concept of ‘happiness’. Nations have no mind that they can make up about their situation; they are rather an arena for individual views. Moreover, unlike biological organisms, nations have no affect system that monitors how well crucial needs are being met. So in the case of nations we must deal with separate aspects of well-being.

#### *Measures of External Conditions for Nations*

As noted above, any nation functions in a *natural environment*, which may be more or less favorable. Many aspects may be involved, such as temperature, rainfall, prevalence of poisonous plants, bacteria and industrial pollution. Only a few of these aspects have been sufficiently quantified to allow comparison across a great number of nations. For the purpose of this paper I limit to the ‘biological capacity’ of the land, that is, usable area per capita.

As discussed above, the *geo-political position* of a nation is becoming ever more important. This aspect of well-being also has many aspects that cannot be measured exhaustively. Still, some meaningful indicators are: (a) the economic competitiveness of the nation, and (b) its military power.

#### *Measures of Internal Functioning of Nations*

The inside functioning of nations has many aspects and cannot be measured comprehensively. Still there are good indicators for some major features, such as the effectiveness of government, rule of law and control of corruption. Another indicator is the functioning of the political system in giving voice to citizens and requiring accountability of rulers. These indicators are part of the World Bank’s system of indicators of ‘institutional quality’.

#### *Measures of External Effects of Nations*

Nations influence their wider environment in many ways and it is again not possible to chart all of these. As announced I limit myself to two external effects: burdening of the world’s eco-system and contributions to human civilization and even these are difficult to measure.

An indicator of ecological burden by nations is their ‘ecological footprint’, that is, the surface on earth used for the consumption of the average citizen. Now that viable landmass is becoming scarce, the use of too much of the earth’s surface is becoming ever more damaging. Environmental impoverishment is also involved in the use of non-renewable resources, this can be fairly well measured using energy consumption.

Contributions to human civilization are also difficult to measure, among other things because these manifest typically in the long-term. Still a nation’s contribution to technical innovation is probably well reflected in the number of patents per capita. It is also possible to quantify contributions to science by numbers of citations and contributions to arts by, for example, the number of novels and films produced per head. A limitation of these figures is that they do not reflect long term additions to the human heritage.

#### *Measures of Continuity of Nations*

At first sight, the continuity of a nation can be measured by the years since its establishment and there are comparable data on that matter. Yet formal proclamation does not always fit actual existence and a nation can have existed earlier in somewhat different shape. Continuity of nations can also be measured by the presence of threats to its



**Table 1** Happy Life Years in nations in the early 2000s, some illustrative cases

Nation	Average happiness (mean on scale 0–10)	Life expectancy (at birth)	Happy Life Years (life expectancy multiplied by 0–1 happiness)
Switzerland	8.1	79.0	63.9
Australia	7.7	78.9	60.7
USA	7.4	76.9	57.0
UK	7.1	77.6	55.0
Philippines	6.4	69.0	44.2
Japan	6.2	80.8	50.4
Taiwan	6.2	76.4	47.2
China	6.3	70.4	44.3
India	5.7	63.0	35.8
Russia	4.3	66.2	28.7
Zimbabwe	3.3	35.4	11.5

Source: Appendix A

existence, such as political instability, ethnic-fragmentation and civil war. Several of these indicators are combined in the ‘Failed State’ index.

Details of the above mentioned indicators of national well-being are presented in Appendix B.

#### 4 Differences in Well-Being *in* Nations

##### Cross-National Variation in Happy Life Years

Well-being of citizens *in* nations is measured using the average number of ‘Happy Life Years’ (c.f. Sect. 3.1). Data on that matter are available for 92 nations in the early 2000s. These data are presented in Appendix A. Some illustrative cases are presented in Table 1.

As one can see, there are wide differences in average well-being across nations, the average citizen in Switzerland living 64 happy years compared to only 12 happy life years in Zimbabwe.

These differences in Happy Life Years in nations are paralleled by variations in other indicators of average well-being in nations, such as the suicide rate ( $r = -.39$ ), incidence of depression ( $r = -.37$ ), self rated health ( $r = +.48$ ) and years lived in good health ( $r = +.68$ )

Comparison over time shows a rise in individual well-being in the late 20th century. Since 1973, Europeans have gained 4.3 happy life years, the Japanese 4.4 and Americans 5.2. This trend is likely to extend well into the 21st century (Veenhoven 2005b; Veenhoven and Hagesty 2006).

#### 5 Correspondence with Well-Being *of* Nations:

##### Correlation between Individual and National Well-Being

Now we come to answer the main question: Is there a conflict between well-being of nations and the well-being of their members? If so, that must manifest in negative correlations between indicators of societal well-being and individual well-being.

Below I will test this hypothesis using the various indicators of well-being of nations mentioned in Sect. 3.2 and the one comprehensive indicator of average individual well-being presented in Sect. 3.1. In each case I will compute correlations to see to what extent national well-being goes with individual well-being.

One of the problems in correlation analysis is that the observed statistical relationship may be influenced by a third factor, and in the context of this comparison of contemporary nations, this is the economic development of the nation. To see the independent effect of national well-being variables I also compute partial correlations, controlling the wealth of the nation as measured using real income per head. This is a rather drastic procedure that wipes away all the common variance of well-being variables with wealth and may result in an underestimation of the effect size. In this analysis wealth is not seen as an indicator of well-being of the nation.

### 5.1 Well-Being of Citizens and External Conditions of the Nation

Is individual well-being higher in nations that are in favorable external conditions? The correlations in Table 2 suggest that this tends to be the case indeed. All the correlations are positive, though the correlation with military power is small. Control for wealth wipes two of the correlations out (military power and integration in the world system) and abates the correlations with biological capacity and economic competitiveness. There is no indication of a negative effect of this aspect of a nation's well-being on the well-being of their citizens.

### 5.2 Well-Being of Citizens and Institutional Functioning of the Nation

Is the well-being of citizens also higher in nations where public institutions function better? The data suggest that this is the case. As can be seen in Table 3 there is a strong correlation between HLY and the World Bank's four indicators of institutional quality. Citizens live longer and happier in nations where the legal system functions well, where the government is effective and where corruption is low. This relationship is not entirely due to better economic performance, since considerable effects remain when the wealth of the nation is partialled out. Again there is no sign of a negative effect on the well-being of citizens.

### 5.3 Wellbeing of Citizens and External Effects of the Nation

Now the question about the relation with external effects. Is the well-being of citizens also higher in nations that burden the eco-system less? This appears not to be the case, the

**Table 2** HLY and nation's position

Well-being of nation	Correlation with well-being in nations as measured with Happy Life Years		N
	Zero-order	Wealth partialled out	
Biological capacity	+0.34	+0.27	77
Economic competitiveness	+0.73	+0.33	79
Military power	+0.16	-0.06	92
Integration in world system	+0.67	+0.02	60

**Table 3** HLY and institutional quality of the nation

Well-being of nation	Correlation with well-being in nations as measured with Happy Life Years		N
	Zero-order	Wealth partialled out	
Government effectiveness	+ .76	+ .30	90
Regulatory quality	+ .73	+ .29	90
Control of corruption	+ .78	+ .40	75
Voice and accountability	+ .71	+ .29	77

**Table 4** HLY and external effects of the nation

Well-being of nation	Correlation with well-being in nations as measured with Happy Life Years		N
	Zero-order	Wealth partialled out	
Ecological footprint	+ .60	+ .02	77
Energy consumption	+ .50	- .24	60
Technological achievement	+ .70	+ .12	53

correlations with ecological footprint and energy consumption being positive rather than negative. The correlations disappear when wealth of the nations is controlled, suggesting that they reflect an effect of consumption on individual well-being. Still individual well-being is apparently not affected by negative external effects of the nations, at least not in the present generation.

How about contribution of the nation to human civilization? In this case we see also a positive correlation, which almost disappears when wealth is controlled and this suggests that individual well-being is not much affected by this matter either (Table 4).

#### 5.4 Well-Being of Citizens and Self-Maintenance of the Nation

Lastly the issue of system maintenance. Is individual well-being higher in stable nations? The data suggest that this is the case. People live longer and happier in politically stable nations and this effect is still visible when wealth is controlled. Not surprisingly, individual well-being is lower in nations that are ethnically divided and where civil war is going on (Table 5).

**Table 5** HLY and upholding of the nation

Well-being of nation	Correlation with well-being in nations as measured with Happy Life Years		N
	Zero-order	Wealth partialled out	
Political stability	+ .64	+ .12	90
Ethnic fragmentation	- .36	- .15	89
Civil war	- .28	- .02	57

## 6 Discussion

These data do not support the idea of a contemporary conflict between the individual and society. The implied negative correlation between individual well-being and national well-being does not appear. Instead, the correlations are typically positive, which means that people thrive better in nations that do well as a system.

### 6.1 Limitations

Some limitations must be noted however. The indicators used here do not cover national wellbeing comprehensively and further research may show a more varied picture. Further, there are limitations to this cross-sectional approach. Confirmation in trend-analysis is desirable, but trend-data fall short at the moment.

Individual well-being appeared to be unrelated to external effect aspect of national well-being. Since this is a multi-facetted phenomenon, this requires more research. Still, one could imagine that citizens are least affected by the external effects of their nation.

### 6.2 Why Different in Modern Society?

As noted in the introduction, individual well-being has not always gone hand in hand with societal well-being, in particular not in the agrarian phase of human history. Why is that different now?

One answer is that the dynamics of agrarian existence tied people to a plot of land and made them very vulnerable to exploitation by warrior castes and lead them into a 'social cage'. Since human kind evolved in the social conditions of hunter-gatherer bands, the 'strong ties' of agrarian society do not fit human nature well and in this view we flourish better within the pattern of 'weak ties' of modern individualistic societies (Veenhoven 1999). This innate preference for weak ties fits a functional requirement of modern society in that it allows better division of labor.

Another answer is that life in modern society is more varied and challenging than life in traditional agrarian societies. Again one can argue that the hunter-gatherer life put people more to the test than agrarian life and that the hectic life in modern cities and economic competition may therefore fit better with human nature. If so, that would nicely fit a nation's interest in keeping up in the global economic competition.

Lastly one can also imagine that human well-being affects societal well-being. Now that we live longer, we can contribute more to society, not only because we make more working hours over our life-time, but also because specialization becomes more profitable. The happiness of citizens has also positive effects on a nation. Happy people tend to be more active and creative and are more cooperative. As such, the rise of individual happiness that accompanied societal modernization may involve an accelerating effect and add to societal performance.

## 7 Conclusions

The wellbeing of nations can occur at the cost of the well-being of their citizens, and this seems to have happened in the past. Yet in present day conditions there is no such conflict. It appears rather that people are better off in the nations that flourish best.

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## Appendices

### Appendix A Happy Life Years in 91 nations in the early 2000s

Nation	Enjoyment of life (scale 0–10)	Length of life (in years)	Happy life years
Albania	4.6	72.9	33.8
Algeria	5.2	69.4	36.0
Angola	4.3	40.4	17.2
Argentina	6.8	73.5	50.0
Armenia	3.7	71.7	26.5
Australia	7.7	78.9	60.7
Austria	7.8	77.8	61.0
Azerbaijan	4.9	70.6	34.5
Bangladesh	5.7	59.5	33.6
Belarus	4.0	68.6	27.3
Belgium	7.3	78.0	57.0
Bolivia	5.8	62.4	36.1
Bosnia	5.1	74.0	38.0
Brazil	6.8	67.7	46.3
Britain (UK)	7.1	77.6	55.0
Bulgaria	4.2	71.2	30.0
Canada	7.6	79.2	59.8
Chile	6.7	75.7	50.5
China	6.3	70.4	44.3
Colombia	8.1	71.2	57.8
Croatia	5.8	73.4	42.6
Cyprus	6.9	78.0	53.7
Czechia	6.4	74.5	47.9
Denmark	8.2	76.2	62.7
Dominican Republic	6.8	68.3	46.5
Egypt	4.8	67.3	32.6
El Salvador	7.2	69.9	50.5
Estonia	5.1	70.2	35.8
Finland	7.7	77.4	59.8
France	6.5	78.6	51.4
Georgia	4.1	72.8	29.8
Germany	7.2	77.6	56.1
Ghana	4.7	57.9	27.2
Greece	6.4	78.1	49.6
Guatemala	7.8	65.3	50.6

**Appendix A** continued

Nation	Enjoyment of life (scale 0–10)	Length of life (in years)	Happy life years
Honduras	7.2	68.1	49.2
Hungary	5.7	71.2	40.2
Iceland	7.8	79.5	62.2
India	5.7	63.0	35.8
Indonesia	6.6	65.8	43.6
Iran	6.0	69.4	41.4
Ireland	7.6	76.6	58.3
Israel	6.7	78.5	52.3
Italy	6.9	78.6	54.2
Ivory Coast	5.7	44.2	25.3
Japan	6.2	80.8	50.4
Jordan	5.2	70.3	36.3
Kenya	5.2	49.8	25.5
Latvia	4.7	69.8	32.9
Lebanon	5.3	73.0	38.5
Lithuania	4.6	71.9	33.2
Luxembourg	7.6	77.4	59.0
Macedonia	4.9	73.1	35.8
Mali	4.8	49.1	23.6
Malta	7.5	77.8	58.2
Mexico	7.7	72.9	56.0
Moldova	3.5	67.7	23.7
Montenegro	5.5	75.4	41.3
Morocco	5.6	67.6	37.9
Netherlands	7.5	78.1	58.7
New Zealand	7.4	77.6	57.8
Nigeria	6.3	50.2	31.5
Norway	7.6	78.4	59.4
Pakistan	4.3	61.9	26.5
Peru	6.0	68.9	41.3
Philippines	6.4	69.0	44.2
Poland	5.9	73.1	43.2
Portugal	6.0	75.8	45.7
Romania	5.2	70.2	36.7
Russia	4.3	66.2	28.7
Senegal	5.6	53.5	30.2
Serbia	5.1	72.4	36.9
Singapore	6.8	77.6	52.9
Slovakia	5.4	73.0	39.4
Slovenia	6.7	75.2	50.4
South-Africa	5.4	53.3	28.5
South-Korea	5.8	74.2	43.0

**Appendix A** continued

Nation	Enjoyment of life (scale 0–10)	Length of life (in years)	Happy life years
Spain	6.8	78.6	53.4
Sweden	7.7	79.4	60.8
Switzerland	8.1	79.0	63.9
Taiwan	6.2	76.4	47.2
Tanzania	3.2	47.8	15.2
Turkey	5.3	69.4	37.0
Uganda	5.1	45.4	23.3
Ukraine	3.6	68.4	24.8
Uruguay	6.7	74.4	50.1
USA	7.4	76.9	57.0
Uzbekistan	6.2	68.6	42.7
Venezuela	6.8	72.9	49.6
Vietnam	6.1	69.4	42.5
Zimbabwe	3.3	35.4	11.5

Source: World Database of Happiness, Happiness in Nations, Rank Report 2006/2

**Appendix B** Variables used in cross-national analysis

Variable name	Measurement	Source
Biological capacity	Area units per capita, for human use.	Living Planet Report 2000; table 2
Civil war	Violent conflict in nation (0 = no, 1 = yes)	Wikipedia “contemporary civil war”
Control of corruption	Perceptions of corruption (drawn from different sources), conventionally defined as the exercise of public power over private gain; ranging from frequency of ‘additional payments to get things done’ to the effect of corruption on the business environment, of measuring ‘grand corruption’ in the political arena to the tendency of elite forms to engage in ‘state capture’.	Kaufman et al. 2003, table C6
Ecological footprint	Area needed to regenerate consumed resources	Living Planet Report 2000, table 2
Economic competitiveness	Index of (1) Technology (innovation, transfer, communication), (2) Public institutions (contracts and law, corruption) and (3) macroeconomic environment (stability, credibility, government waste). Based on opinion of business leaders (survey) and economic statistics	Global Competitiveness Report 2005
Energy consumption	Giga-joules p/c	Kurian 1992 table 131
Ethnic fragmentation	Number of categories mentioned in social-demographic statistics, assuming that mentioning means relevance	Anckar et al. 2002

**Appendix B** continued

Variable name	Measurement	Source
Government effectiveness	Aggregation of subjective assessments. Combines perceptions of the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of civil service from political pressure, and the credibility of the government's commitment to policies into a single grouping. The main focus of this index is on inputs required for the government to be able to produce and implement good policies and deliver public goods.	Kaufman et al. 2003, table C3
Happy Life Years	Life-expectancy at birth multiplied by average life satisfaction on range 0–1 (combined measure of 10-step life satisfaction and 11-step best-worst life)	World Database of Happiness, Rank Report 2006/2
Integration in world system	Index of 'globalization' involving: (1) Political engagement (number of memberships in international organizations, foreign embassies, and U.N. Security Council missions), (2) Technology (number of internet users, internet hosts, and secure servers), (3) Personal contact (international travel and tourism, telephone traffic and cross-border transfers), (4) Economic integration (trade, foreign direct investment and portfolio capital flows, and income payments and receipts)	Foreign Policy, Vol. 134, 2003, 60–73
Military power	Expenditures per nation	GlobalSecurity.org
Political stability	Combination of indicators which measure perceptions of the likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent means, including terrorism.	Kaufman et al. 2003, table C2
Regulatory quality	Aggregated indicator, subjective assessments. Includes measures of the incidence of market-unfriendly policies such as price controls or inadequate bank supervision, as well as perceptions of the burdens imposed by excessive regulation in areas such as foreign trade and business development.	Kaufman et al. 2003, table C4
Technological achievement	Technology Achievement Index: (1) Technology creation (patents granted to residents, receipts of royalties and license fees), (2) Diffusion of recent innovations (internet hosts, high- and medium-technology exports), (3) Diffusion of old innovations (telephones, electricity consumption), (4) Human skills (mean years of schooling, gross tertiary science enrolment ratio).	UN-HDR 2001 table A2.1
Voice and accountability	Includes a number of indicators measuring various aspects of political process, civil liberties and political rights. Indicators measure the extent to which citizens of a country are able to participate in the selection of governments and the independence of the media. Expressed in z-scores	Kaufman et al. 2003, table C1

Data: World Database of Happiness, States of Nations. SPSS data file available on requests (Veenhoven 2006)



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