Chapter 6
USES OF THIS COLLECTION OF CORRELATIONAL FINDINGS

Intro

The usefulness of this collection can be elucidated in three ways. First, by arguing the substantive relevance of its data, in other words, *what* purposes empirical data on happiness can serve. The second way is to mention some methodological applications, *how* the data can be used. The third way is indicating the users, *who* will make use of this information.

6/1 USE FOR *WHAT*

Information about correlates of happiness is of course relevant for a better understanding of happiness and provides information for policies aiming at greater happiness for a greater number of people. The data in this collection can contribute to a better understanding of other matters as well.

6/1.1 Understanding of happiness

This data collection can improve the understanding of happiness in two ways. Firstly, it helps to assess determinants of happiness, which is required for findings ways to improve happiness. Secondly it will provide a view on the consequences of happiness, which is required for appraising the desirability of happiness.

6/1.1.1 Determinants of happiness

The inventory is first of all a tool for identifying *conditions for happiness.* It provides an overview of the factors that are statistically related to happiness and also provides access to the findings that indicate causality. Because the collection covers investigations from all over the world, it provides a basis for identifying possible universal conditions for happiness. Its scope also allows the charting variations in conditions for happiness across cultures and through time. Psychological contingencies can be made visible as well by this data-collection.

6/1.1.2 Consequences of happiness

This data-collection not only helps to identify determinants of happiness, but also inform about its *consequences*[1]; that is on the side effects of enjoying life or not. As such the data provide an empirical reference for value-orientation. If side-effects are typically negative (e.g. if happiness render passive and egoistic), that is of course an argument against the greatest happiness principle. If side-effects appear positive on a balance (e.g. if happiness make people loving and open), that pleas for greater priority to happiness[2]

[1] Data about sequel of happiness can be found in subject-category 'Life history: Later life'

[2] The research literature on effects *of* happiness is listed in the Bibliography of Happiness, subject section Consequences of Happiness

6/1.2 Understanding of related phenomena

Data on happiness can be used in many other relevance-contexts as well. Hence this data-collection has broader applications.

One application is in the study of social inequality. Inequality in life chances is sometimes measured by difference in happiness between social categories; deprivation is seen to manifest in lower happiness. In this vein, Manning Gibbs (1972) considered the emancipation of American Blacks in the post-war decade. He observed a growing difference in black- and white happiness, rather than a diminishing of the difference. The data-collection allows similar comparisons trough time, for instance comparison of differences in happiness between social classes, between males and females, and between age-categories. The general point is here that happiness is used as an *indicator* for something else. In this context, improvement or deterioration of happiness is used to assess 'adjustment' to life-change and for measuring 'effectiveness' of social programs and personal therapies. Such applications of the concept can also profit from this data-collection.

Another application is in studies that focus on 'determinants of health'. Happiness is an important determinant of health; it is e.g. a good predictor of longevity (Veenhoven 2008). Consequently, the searches for determinants of health overlaps to some extend with determinant of happiness. The general point is here that happiness often figures as an *independent variable*; a source of effects referred to as 'consequences' above. In that way the variable is also used in studies about 'resistance to stress', 'success in love' and 'political protest'. For example, some theories about political behavior hold that dissatisfaction with life makes people receptive for radical beliefs. This data-collection allows a check of the implication that radicals are typically unhappy.

A variant of this approach is the use of happiness as a *mediating* variable. For instance, the theory that happiness works as a buffer to stress.

6/2 *HOW* TO USE THIS DATA-COLLECTION

Methodologically, the data-collection can be used in three ways: for the integration of available research, for theory development and for orientation on new research. All these applications make research-effort more cumulative.

6/2.1 Use of the collection for research synthesis

Research-synthesis is about combining results of different studies on a same subject and requires considerable homogeneity in the findings to be synthesized.

6/2.1.1 Preparation for research synthesis

This collection of correlational findings facilitates the meeting of this requirement in the following ways.

Selection on concept

Meaningful research synthesis requires a clear theoretical definition of what is to be synthesized, and that the findings considered are measured using indicators that really fit that concept, rather than being called by the same name. Since measures of the same thing may still not be fully identical a detailed description and classification of measures is required to take such differences into account in later analyses. The WDH collection ‘Measures of Happiness’ provides an example of how that can be done.

Standardized description of research findings

There is no unanimity on terminology in the social sciences, neither for the words used

to denote research techniques nor for those to delineate substantive concepts. Comparability requires that all findings are described using the same vocabulary, which on its turn requires that a standard lexicon is defined. The World Database of Happiness provides such a lexicon. A glossary of the technical terms used in the WDH can be found here and in chapter 3 of this introductory text, section 3.4. For statistics, a list is found in chapter 4 of this introductory text. A wordlist for substantive concepts is implied in the classification of correlations, presented in section 5/1 of chapter 5 of this introductory text. Users can find a standard term searching on synonyms using the option 'search on keyword'.

Homogenization of statistics

Distributional findings are often presented on different scales, in the case of happiness research using verbal, or numerical response scales and scales of different length. This variation in response scales impedes comparison, e.g. if happiness is measured in one country using a choice between very happy, pretty happy and not too happy and in another country using a number between 10 (happy) and 0 (unhappy). Techniques for transforming means to a common numerical 0-10 range have been developed in the context of the World Database of Happiness, a description can be found here. Techniques for the homogenization of correlational findings can be found in introductions to meta-analysis, such as Cooper & Hedges (1994).

Computing comparable correlations often requires the use of a frequency table. When available, these are entered in an excel file and used to compute applicable statistics. These statistics are reported in the findings page and appear on the website, while a copy of the excel sheet is saved in the underlying database.

6/2.1.2 Presentation of results, using links to an on-line finding-archive

Reviews of research typically summarize the main trends in research findings in verbal statements, followed by references to publications in which such findings have been reported. Although the source publications are listed at the end of the paper, they are not easily assembled by a reader and therefore a reviewer's interpretation cannot be easily controlled.

Two technical innovations help us to deal with this problem, one is the online availability of detailed information in a finding archive, two is the change in mode of scientific publication from paper to electronic files in which hyperlinks can be inserted. Review papers can now be directly linked to particular *finding-pages.* Examples of such presentations are given below in chart 6/2.1.2a and chart 6/2.1.2b.

This way of summarizing research findings has several advantages over traditional reviews that are limited to the possibilities of printed paper. Checking with the available data is easier as the electronic links provided in the text will lead the reader directly to standardized descriptions of research findings, all of which contain a traditional reference to the original research report.

Referencing is also more complete; traditional reviews must often cite selectively, since they cannot mention all the available data in the limited space available for a printed journal article. This findings-archive method allows all research

reports to be taken into account and should avoid the danger of 'cherry picking', an inherent problem of traditional synthetic studies

A findings archive also allows more complete descriptions of findings. While traditional reviewers typically have to condense information into a few columns of a summary table, our new method allows easy computed facilitated access to much more detail on an observation in an online *finding-page*.

In short: the findings archive technique allows reviewers to make controllable statements about main trends in data without burdening the reader with too much detail, yet the reader can seek, and easily find, more detail if they wish.

6/2.1.2a Example of a review of research on economic growth and happiness in nations

There is a considerable body of research literature on the relationship between happiness and economic growth in nations, most of which has been inspired by the 'Easterlin Paradox' (Easterlin 1974), which holds that an increase in personal individual income adds to happiness, but that a rise in the national income per head does not.

By 1-10-2019, 47 research results on this subject were available in the collection of Correlational Findings, in the subject category Economic growth/decline. These finding pages contain information about the directions and strengths of the statistical relationships observed between economic growth and change of average happiness in nations. This allows the presentation of results in a stem-leaf diagram, as shown in Chart 6/2.1.2a. The numbers in this diagram denote observed correlations, which vary between +.001 and +.36. Links to online detail are embedded in each of these numbers. Using control+click the reader can open the corresponding findings page on his/her screen

At a glance one can see that economic growth typically goes with rising happiness and the few zero-correlations at the bottom of the diagram show that the Easterlin Paradox describes exceptions rather than the rule.

6/2.12b Example of a review of research on happiness and home-ownership

One of the biggest financial decisions we make in our life is to buy a house or not. There are evident advantages and disadvantages to buying or renting and the balance of these effects is likely to reflect in our happiness. So, it is worth knowing whether or not home-owners tend to be happier than renters.

By 1-1-2018, the Collection of Correlational Findings listed 75 findings on the relationships between happiness and home-ownership. These findings are presented on chart 6/2.1.2b.where positive correlations are denoted with a + sign and negative correlations with a – sign. At a glance, the reader will see that most correlations are positive, which suggests that home-ownership adds to happiness. However, positive zero-order correlations can be misleading, for instance if homeowners are more often married and their greater happiness is driven by marital status. Such spurious effects can be neutralized using multi-variate analysis. The column labeled 'partial' in Chart 6 shows the partial correlations with home-ownership that remain after control for such

variables. Most of these partial correlations are positive and also suggest that home ownership fosters happiness

Longitudinal research designs are more suited to rule out spurious correlations and can help us identify reverse causation. Three longitudinal findings are available on the topic of home-ownership and all three show, that a change to home-ownership is typically accompanied by a rise in happiness (not shown here).

Chart 6/2.1.2a

24 Research findings in correlation between economic growth and change of average happiness in nations. Presented in a stem-leaf diagram with links to on-line finding pages

+1	
+0.9	
+0.8	
+0.7	
+0.6	3
+0.5	1 8
+0.4	1 1
+0.3	1 4
+0,2	0 **1** 3 4
+0,1	**7**
+0.0	01 01 01 01 02 02 03 05 06 08 1 7 **8**
-0.1	
-0,2	
-0,3	
-0.4	
-0.5	
-0.6	
-0,7	
-0.8	
-0.9	
-1,0	

Each sign represents a correlational finding reported in the World Database of Happiness. Use Control+click to see the details.
All blue numbers link to findings that are significant at the 5%-level. Orange findings are not significant at the 5%-level.

Source: Slag (2017)

Chart 6/2.1.2b

75 Research findings on happiness and home-ownership. Presented in a table with links to online finding pages

	RESEARCH METHODS					
	Cross−sectional		**Longitudinal**		**Experimental**	
	Zero−order	Partial	Zero−order	Partial	Zero−order	Partial
Owned (vs Not)	**+** **+** **+** **+** **+**	**+** **+** +/**+** **+** + + + + **+**/+ +/− − +/**+** + **+** 0 **+** 0 0 0 0/**−** − **+** **+**				
Owned (vs Rent)	**+** **+** **+** **+** **+** ++ ++ ++ ++ ++ ++ ++ ++ + ++ + +	+/+ + + + + + + 0 +/+ + **+**/0 **+** **+**		+ + + + +		**+** **+**
Owned partially (vs not)		**−**/− +				
Owned (vs used free of charge)		**+**				
Rented (vs used free of charge)		+				
Redemption (vs used free of charge)		**−**				
Usufruct (vs used free of charge)		**+**				
Used free of charge (vs not)		+				

+ = positive correlation, significant
\+ = positive correlation, not significant
0 = direction of correlation not reported and not significant
− = negative correlation, significant

− = negative correlation, not significant
++ = positive correlations with two different measures of happiness
-/+ = positive and negative correlations obtained with different sets of control variables or measures of happiness
Al signs involve a link to a finding page with full detail in the World Database of Happiness Use control+click to view the page

Source: Veenhoven et al. (2018)

6/2.2 Theory development

This data collection also facilitates the understanding of the basic processes underlying happiness. It provides opportunities for indicative illumination and for systematic theory testing.

6/2.2.1 Inductive illumination

One way to understanding is to go through the facts and consider their theoretical relevance. This can be called a 'drag-net method'. In that metaphor, the facts stand for fish and is the net the whole of explanatory notions. This method does not only detect the findings that fit pre-existing theories; it also makes us aware of phenomena we cannot easily explain.

This collection of findings is quite suited to this method. Firstly, it provides a broader scope than separate primary studies can offer. Secondly, its 'findings' provides more condensed information than the 'observations' in any primary study. Thirdly, the collection brings unexpected findings to light, often findings that were marginal in the original investigation, but are quite telling in another light. Fourthly, the database allows a view on the wider pattern of findings. An example is that happiness appeared to be more strongly related to marriage in individualistic cultures.

An illustration of this approach can be found in Veenhoven (1984).

6/2.2.2 Deductive theory testing

Another road to understanding is to derive predictions about happiness from a theory and then test these inferences. Such tests can be performed on the findings in this collection. An example is the test of the theory that happiness is relative by Veenhoven (1991) who checked different implications of this theory on findings in this collection. In a similar way Veenhoven (2009) compared the empirical evidence for three theories on how we assess how happy we are.

Ideally one might prefer tests on primary data that are especially gathered for a particular test, but practically test on such secondary data is often the best feasible, especially when the test requires costly comparison across time and nations.

6/2.3 Orientation for new research

Above all, the collection provides an overview of the available research. In comparison with current reviews it provides a much more complete- and detailed view. As such, the collection is a useful source for newcomers to the field, who want to orientate in

relevant themes for research. Good orientation on what has already been done helps to prevent double work and sharpens awareness for possible variations. Consultation of this collection can also help to select appropriate indicators of happiness and measures of other variables. The collection presents operationalizations in much detail. That provides the interested investigator with a lot of examples and enables the selection of indicators that provides the best opportunities to compare with earlier research.

6/3 USE BY *WHOM*

This data collection is meant for the scientific community in the first place. Further it is also of interest for policy makers and the general public

6/3.1 Scientific community

In section 6/1.1 we have seen that this data collection is a useful tool for social scientists that are involved in the study of happiness. Section 6/1.2 indicated that it can also be of use for scientists in other fields.

6/3.2 Policy makers

Happiness is of relevance in various policy issues and gains an ever more prominent place on the agenda. In social policy, happiness is at least one of the goals (Veenhoven 2004). In some of the care domains it is even a quite important goal, for instance in palliative health care.

6/3.2.1 Social policy

Findings on happiness can serve social policy in several ways. First, they can help to identify pockets of dissatisfaction that are not recognized in the political process or lacking a strong lobby. An example is the massive loss of happiness due to mental illness. Findings in the subject section on current mental health show far stronger correlations than with the politically more sensitive matters of income.

Secondly, the findings provide clues about the probable effects of interventions, such as income addition, job creation and housing schemes. An example is the analysis of the effect of compulsory health insurance on the happiness of elderly in Taiwan.

Lastly, the findings on happiness bear information about the relative

effectiveness of the policy regime as a whole as can be seen in subject section on socio-economic regime in the nation..

Part of the research on happiness has been instigated for these reasons, but the use of the outcomes has been limited so far. One reason is that voiced demand still carries more weight than silent suffering. Another reason is that some policy makers are disenchanted with the results, such as with the non-relationship with income-inequality in the country. This does not mean that happiness is insensitive to all policy. The findings suggest that happiness is responsive to improvements in legal security and interest articulation. The use of happiness data for social policy is discussed in more detail in Veenhoven (2004).

6/3.2.2 Therapy

Findings on happiness can also guide therapeutic interventions at the individual level, both in curative medicine and in psychotherapy. The need for monitoring quality-of-life outcomes is now widely recognized in the therapeutic professions and has given rise to a broad stream of research, with its own journals (Quality of Life Research) and research associations (ISOQOL).

In that tradition, quality of life is typically measured using multi-dimensional inventories, that cover all the quadrants in the fourfold scheme presented in section 4.1, referred to as 'Health Related Quality of Life (HQOL). That practice devoids the findings of a clear meaning. Therefore, the field can profit very much from the selection of more focused findings in this collection, such as in the subject sections on medical treatment and psychological treatment.

6/3.2.3 Care

Happiness is a more prominent aim in the care for children, elderly and disabled persons. That goal is particularly relevant when chances for autonomy and improvement are small. Hence happiness is an important outcome variable in this trade, in institutional care in particular. At the individual level happiness can serve to assess how clients respond to the care regime. At the organizational level it informs about the performance of residential settings such as old age homes,

6/3.3 General public

Journalists often use the collection and this use will probably increase in the future. As noted above, there is an increasing demand for information about happiness for personal clarification and for orientation in lifestyle choices. That demand materializes in a continuous stream of documentaries on happiness, both ego-documents and popularizations of scientific research. An example is the website How to be Happy: 23 ways to be happier.

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