7   STRENGTHS AND WEAKNESSES
OF THIS COLLECTION OF CORRELATIONAL FINDINGS

7/1   Strengths

7/.2   Weaknesses

Like any tool, this data-collection has its pros and cons. Its qualities should be compared to alternative sources of information about research-effort in the field; that is, with narrative literature-reviews on happiness, and with data banks that allow secondary analysis of surveys that involved indicators of happiness.

7/1   Strengths

Broad overview
This collection provides first of all an *overview* of the available research-findings on happiness. It covers more publications than any review-study at this moment. Although various data-archives involve a lot of information on happiness as well; these systems do not provide a comparable overview as yet. Data-archives provide good access to large-scale surveys. This specialized collection also involves many smaller studies, among which highly relevant experimental studies and small-scale follow-ups.

Conceptually specific
The data-collection is based on an explicit definition of happiness and a consecutive selection of studies. This greatly improves the possibilities for comparison and interpretation. Most literature-reviews on in the field use more diffuse conceptions. Data-archives typically provide no conceptual pre-selection at all.

Well-structured
The findings in this collection are presented in an organized way. Not only are the findings rubricated by subject-matter, but within subject-categories they are organized in such a way that indications of causal effects come to the attention and that variants of the same are systematically distinguished. See the introduction to chapter 4.
   This pre-arrangement is a great help for a fruitful research synthesis. It prevents much of the confusion that currently clouds the field. Some of the available literature-reviews also emphasize these distinctions but apply them only illustratively. Data-archives do not involve any such theoretical pre-organization.
        Likewise, the presentation of the findings facilitates *comparison across nations and time*. In each subject-category, the findings are ordered by nations and in

each set of nations by year of investigation. This is a great help for comparative analysis. Some literature-reviews also compare across time and borders on some subjects. However, such presentations are incidental rather than systematic. Data-archives provide good opportunities for comparative analysis, but do not provide the user with a pre-organized presentation for that purpose.

Detailed information on electronic findings pages
The collection presents data with *much detail.* Each finding is reported in a separate mini-abstract, which involves information about 1) measurement (of both happiness and the correlate), 2) population, 3) sampling, 4) time and 5) statistics. Eventual elaborations are reported in detail as well. Moreover, the mini-abstracts involve page-reference to the original reports. In this respect the collection differs markedly from current literature-reviews, that rather report the pattern of findings as perceived by the reviewer. In principle, data banks can provide even more detail. However, accessibility is often problematic.

Use of links to on-line finding pages allows condensed review reports
The on-line availability of electronic findings pages allows for a new technique in the reporting of synthetic studies. As shown in section 6 /2.1.2 of this introductory text, many findings can be condensed in a few tabular overviews, with details given in links to finding pages in the on-line findings archive.

7/2   Weaknesses

Many studies left out
One of the strong points marks also a limitation; the rigorous *selection* of happiness measures produces a homogenous data-collection but requires on the other hand that several interesting studies be left out. This is for instance the case with studies that used Diener's Satisfaction With Life Scale (SWLS). That scale was not accepted as a valid indicator of happiness, because one of its items taps something slightly different. The scale has been used in a lot of studies that are otherwise quite acceptable. Selectivity has its price.

Limited comparability of correlates
Though the collection is quite homogenous with respect to happiness, there is a lot of *variability in the correlates* it lists. The variety of correlates is managed to some extend by the detailed subject-classification, which distinguishes conceptually similar chunks of correlates. Yet within the subject-categories there is still a lot of difference in measurement. For instance, 'physical health' has been assessed in quite different ways and differences in measurement limit possibilities for comparison.

Limited comparability of statistics

Differences in statistics used limit comparison as well. If the association between health and happiness is expressed in Gamma in one study and in a Pearson-correlation in another, we can often not establish whether the relationship is stronger in the former study than in the latter. Sometimes, reports present frequency-tables on the basis of which we could compute comparable statistics, but often such information is not available. Still, this collection is superior to current literature-reviews in this respect. Literature-surveys typically ignore measurement differences. This collection helps at least to acknowledge the problems. The very detail about measurement and statistics in this collection makes these limitations so apparent. Problems of this kind play generally less in secondary analysis. Indicators used in large-scale survey-programs are mostly reasonably homogeneous and there is no problem with statistics.

Another limitation is in the nature of the statistical analyses. Most of the findings in this collection are *zero-order* correlations. Zero-order correlations have the advantage that they are mostly well comparable. However, a disadvantage is that zero-order correlations may be spurious, and for that reason not adequately reflect the true relationship between happiness and the correlated variable. Ever more studies deal with that problem by performing controls for spurious distortion, mostly by computing partial correlations or multiple Beta's. These controls are reported in the excerpts as well, next to zero-order r one or more multiple order Beta's. Yet the control-variables used are typically not the same across studies. The multiple-order findings are therefore less well comparable. This problem arises in literature reviewing as well; it is only less apparent in that case. In secondary analysis the problem can be solved by computing comparable multiple correlations afterwards.

Loss of contextual information

The *presentation of findings* involves limitations as well. The collection lists research-findings by subject. That means that the results of a study are cut to pieces. As a result, much contextual information gets lost. For instance, if a study compared the effects on happiness of change in income and change in marital status, that difference will not be easily visible, because the findings are categorized under different headings. In the case of path-analytic studies this problem is solved by presenting the path-diagram with each variable.

Entry of findings laborious

The entering of research findings in the collection of correlational findings takes considerable time, on average about 3 hours per finding. When the time for gathering eligible studies and system maintenance is taken into account, the time-investment is about 5 hours per correlational finding. This is the price of the above-mentioned strengths, and in particular of the detailed description of findings. This means that entry of the 20.000 correlational findings now available in this collection has required some 100.000 hours of work, that is, about 7 full-time work-years. With the limited funding available for research synthesis in general and happiness in particular this could only be done with the help of volunteers.

Collection not complete

A last thing to mention is that this data-collection is not complete. Firstly, it is unlikely that the literature-search was hundred percent successful. We probably failed to trace relevant reports in other languages than English, Dutch and German. Secondly, the reports located are not all excerpted as yet. To date (June 2020) some 2000 eligible studies are waiting for entry.

We plan to get rid of that backlog in the following ways: 1) share the work with external research associates, 2) recruit sponsors for keeping particular sections in the collection up to date and 3) enter studies for pay, and 4) apply for research grants, now that the subject of happiness has been established academically.