Explorations of welfare and well-being
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Introduction

The premiss behind all the empirical analyses in this book is that individu­als who claim to be happy in an interview are happy. Self-reported levels of happiness are taken to be meaningful and comparable across individuals in the same language community. ³

This assumption, which is the defining feature of the Leyden method which originated in the early seventies at the University of Leyden and started with Van Praag (1968, 1971), gives us a powerful tool of analysis. By analyzing what influences self-reported happiness, we can get an idea as to the relative importance of economic, social, psychological and environmental factors. It should then be possible to find out how much money a good family life is worth, how much money a sunny day is worth, how much happier a poor man would be when given more money and how much unhappier a rich man would be if he is taxed more. In a sense, the utilitarian ideal of devising policies which make as many people as possible happy comes within reach when we take respondents at their word. Precisely such analyses are performed in this book.

The assumption that individuals can be trusted when answering ques­tions about their level of happiness is still contested in economics: ‘ac­tions speak louder than words’, seems to be the Leitmotiv of economists who assume that only choices can reveal what makes individuals happy. Even though Tinbergen, Frisch, Sen, Cantril, and many other distinguished social scientists have argued for direct measurement of happiness, many economists still think that talk is cheap.

Much of the scepticism of these economists derives from the uncer­tainty about the meaning of the term ‘happiness’. In order to meet this standard critique, a particular stance, adopted from one of the theories in

³The terms happiness, well-being, life satisfaction, and general satisfaction are used interchangeably as an evaluation of life as a whole, whilst recognising that this is not the case in all the literature on the subject. The terms welfare, monetary utility, finan­cial utility, and financial satisfaction all correspond approximately to the notion of satisfaction with one’s financial situation. Where the analysis requires a distinction, this is indicated.
the psychological literature about the meaning of self-reported happiness, is adopted in this book. The interpretation of happiness followed is that 'satisfaction with life as a whole', which is the actual term mostly used to denote happiness in questionnaires, can be understood as a weighted stream of momentary evaluations. A momentary evaluation is then the evaluation an individual gives of the experiences of a moment. From experimental research by psychologists it seems that individuals do evaluate their situation constantly in terms of positive/negative, good/bad, etc. This enables them to react quickly to experiences which make them unhappy. When a respondent then answers the question how satisfied he is with his life as a whole, he adds up all the momentary evaluations he has made and those he expects in the (near) future into a composite number. The momentary evaluations of the past are weighted by memory: events further back in the past have much less weight than those in the present. Experiences that are associated with extreme pleasure or extreme distress count higher than experiences that prompted 'average' evaluations. These memory weights do not necessarily imply that an individual distorts the actual levels of satisfaction that he has experienced and will experience: remembering events is a consumptive activity, which means that those events remembered more often are more important for the satisfaction stream of an individual than other events. Although we do not measure momentary evaluations and hence cannot empirically investigate this interpretation, it does help to clarify the meaning and relevance of self-reported levels of happiness analyzed in this book.

Viewing self-reported satisfaction levels as weighted streams of momentary evaluations also allows an interpretation of partial satisfaction levels, such as the satisfaction of an individual with his income, his work, or his family life. The extent to which an individual is satisfied with his job will for instance be the weighted average of those remembered moments which are highly affected by a job. This is likely to mean that the remembered moments spent on a job will weigh more heavily than other moments for job-satisfaction. The extent to which an individual is satisfied with his marriage will largely depend on the remembered moments spent with the partner. Some partial satisfactions will overlap, i.e., will both count some remembered moments as relevant, whereas other will not. The satisfaction with life as a whole, also termed well-being, is arguably the closest to the 'true' degree of happiness an individual enjoys because all remembered moments are equally relevant for life as a whole.

Satisfaction with life is now extensively studied in the psychological literature: Veenhoven's rapidly expanding 'bibliography of happiness' contains nearly 3000 studies on the determinants of happiness. Amongst
economists too, the analysis of the determinants of happiness is taking off (see e.g. Clark and Oswald (1996), Gershuny and Alpin (1985)). An overview of this literature is given in the handbook edited by Kahneman, Diener and Schwartz (1998), which includes a chapter summarizing the Leyden literature by Van Praag and Frijters (1998). This book tries to demonstrate that the analysis of satisfaction variables is meaningful, yields new insights into the economic system and provides a powerful policy tool.

Much of the Leyden literature is concerned with the determinants of satisfaction with income, also termed welfare. This literature is reviewed in chapter 1. Chapters 2-4 contain empirical analyses of the determinants of welfare which draw on this literature.

In chapter 2 we use the concept of welfare to define subjective poverty: following the work of Goedhart et al. (1977) and Hagenaars (1986), subjective poverty is defined as a situation of a low welfare level, i.e., a low level of income satisfaction. For the period 1991-1995, the levels of subjective poverty in Russia and some former republics of the USSR are analyzed and contrasted with the outcomes when other definitions of poverty are used. It is shown that subjective poverty has decreased slightly from a very high level in 1991 to a somewhat lower, but still very high level of some 70% of households in 1993-1995. It turns out that the young and educated have benefited most from the changes. It is argued that the high levels of subjective poverty can be explained by real hardship and by unfavorable comparisons (most Russians compare themselves to the few very rich Russians and hence believe they are doing much worse than average).

These empirical analyses also revealed that the measurement of income was very difficult in Russia. Individuals did not reveal the income they obtained from illegal activities or hid the true income they received in their main job out of fear of the tax authorities. The value of the goods and services obtained from bartering was also not revealed by the questionnaire. Hence, in chapter 3, we analyze a question specifically designed to find out to what extent individuals are hiding their actual income levels from the interviewer. We use a question asking them about the income they would have to be paid to stop all their current activities. The answer should approximate the total value of their current activities. We find that it is likely that an individual’s reported income reveals only about 40% of the total value of his activities on average. This enormous under-reporting of income, which is recognized as a problem in many Eastern-European countries, probably influenced the results of the previous chapter, although levels of poverty remain very high even when we allow for under-reporting of incomes.

In chapter 4, we analyze to what extent climate variables influence wel-
fare and well-being in Russia. We constructed climate equivalence scales and calculated the material and non-material costs of climate circumstances. By simulating several possible future scenarios, we found that Russian welfare is likely to increase if global warming takes place, provided of course that all the influences not considered in the analysis are unimportant.

In chapter 5, the determinants of satisfaction with life as a whole are analyzed by examining the determinants of several partial satisfactions. We obtained a *structure of well-being* by analyzing the effect of exogenous variables on satisfaction with life via partial satisfactions. With the use of the results in chapter 5, we were able to say which aspects of life benefit from a higher income, and which aspects of life do not. In a similar manner, we could trace the effects of age, education, and children. This in turn enabled us to compute shadow prices of other variables which take the specific circumstances of the individual into account. For instance, the effect on well-being of having children is found to depend on whether individuals are in a steady relationship, on whether there are other adults in the household, and on the income of the household. This in turn means that the shadow price of children will differ according to the stability of the relationship, whether the children live in multi-adult households, and will vary with income. One could base child-allowance schemes on these shadow-prices if one wants to compensate households for having children.

In chapter 6, some of the psychological literature that takes self-reported satisfactions as a stream of momentary evaluations is reviewed. The insights gained are used to analyze the question whether individuals try to maximize their satisfaction levels. This question is at the heart of the debate on the usefulness of satisfaction questions in economics: if individuals do try to maximize their satisfaction levels, then satisfaction levels are what economists term *utility*, i.e., 'the thing whose maximization leads to choice behavior'. As utility is a concept used in many theoretical and empirical analyses in economics, the possibility that self-reported satisfaction levels are empirical measurements of this concept seems worth exploring. The empirical analyses do give some support to the hypothesis that individuals change the circumstances in those areas of their lives that they are unsatisfied with, tend to find only those things important that they are satisfied with, and remember only those things that they were satisfied with, which are all consistent with the hypothesis that they are trying to maximize satisfaction levels. However, the evidence is not very strong as most choices of individuals in the Russian and German panel data sets used are not explained. This may simply reflect the possibility that circumstances change quickly and hence the year-to-year data sets we use may not be able to give
more significant results, which would mean that respondents would need to be more frequently interviewed for a proper test of the hypothesis that individuals try to maximize satisfaction. Indeed, the findings of Suh et al. (1996) suggest that individual’s satisfaction answers are hardly influenced by events of more than a couple of months ago. Therefore, the results are encouraging in the sense that the direction of influences is as would be expected when individuals try to maximize their satisfaction with life as a whole.

In the concluding chapter 7, a short review is given of some current philosophical and practical problems with the use of satisfaction analyses for public policy.
Introduction