THE ORIGINS OF HAPPINESS

The Science of Well-Being over the Life Course

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PART III. SO WHAT?

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"*I can't wait to grow up and be happy.*"

Introduction: The New Paradigm

All great truths begin as blasphemies.

—George Bernard Shaw

In April 2016, the German chancellor, Angela Merkel, launched a big national consultation. It was called "What Matters to Us?" Was she mad, or are we actually quite confused about what matters most to us and what real human progress would look like?

Money is a very visible indicator, and until recently many people would have given it pride of place. But now, worldwide, people are demanding a better concept of progress. They are rejecting wealth and income as the overriding goals for policy development—and for personal lifestyles. And they are turning instead to the much broader idea from the eighteenth-century Anglo-Saxon Enlightenment: that we judge our progress by how much people are enjoying their lives.

This noble and humane ideal has been a central strand in modern Western civilization for over two hundred years. And it has profound implications for how we should live our own lives, and for how our policy makers should make their choices. For individuals it provides the ethical principle that we should create as much happiness in the world as we can, and as little misery.[1] And for policy makers it becomes the principle that they should create the conditions for happy and fulfilling lives. In fact, as Thomas Jefferson

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once said, "The care of human life and happiness . . . is the only legitimate object of good government."[2]

We agree with him. But how to implement this objective? Until recently it was not easy. There was no agreed way of measuring whether people were enjoying their lives, and there was even less knowledge about what conditions would help them to do so. But now all that is changing. The last forty years have seen a burgeoning new science of "subjective well-being." On the one hand, this has shown that in many countries, including the United States and West Germany, people get no more enjoyment from life than forty years ago or more.[3] On the other hand, the science tells us a great deal about what can actually be done to increase well-being.

The main purpose of this book is to set out that knowledge as clearly as possible and to lay out in quantitative terms what is known about the causes of well-being. This is crucial for us as individuals—and also for policy makers.

Imagine a policy maker trying to allocate extra resources between youth training or mental health. Or the chief executive of an NGO choosing the balance between care of the elderly or support for young mothers. How can such choices be made in a rational way? Clearly there has to be some way of comparing the benefits of each alternative, using some common measure of benefit. Only if this is done can the policy maker attempt to generate the maximum total benefit from the available resources.

Until recently the recommended measure of benefit was the amount of money people would be willing to pay for the outcome. This may make some sense for some types of expenditure, but it could never make sense for much of public expenditure—on health care, elderly care, child protection,

law and order, parks and the environment, and welfare payments. Indeed one major reason why these activities are undertaken by the state is that individual choice would not always produce the most efficient or equitable outcomes.[4] For health care many countries have for some years used nonmonetary measures of benefit, like Britain's Quality-Adjusted Life Years (QALYs).[5] But everywhere the key issue is: What is the best measure of the quality of life?

Measuring Happiness

In our view we should evaluate people's happiness as they themselves evaluate it. People are often asked, "Overall, how satisfied are you with your life these days?" They answer on a scale of 0–10, where 0 means "not at all satisfied" and 10 means "extremely satisfied." Or they are asked to make a mark on a line running from 0 to 10—which gives very similar results.[6] In many countries the question has been asked in unofficial surveys for up to fifty years. But now it is asked of large samples in regular official statistics in most advanced countries.[7]

When people answer this question, they are evaluating their own overall well-being. That is why we like this question. But well-being is often measured in other ways. One approach is to try to catch people's mood—their current hedonic feelings of enjoyment or discomfort. This approach is necessarily limited to a specific, and usually short, period of time.[8] But it is extremely useful in illuminating the quality of life as it is experienced moment by moment.[9] A third approach is to ask people how worthwhile they consider the things they do in their life—the measure of so-called eudaimonia. These

measures are interesting, but we prefer life-satisfaction as our measure of well-being for a number of reasons.

First, it is comprehensive—it refers to the whole of a person's life these days. Second, it is clear to the reader—it involves no process of aggregation by researchers. Third, and most important, it is democratic—it allows individuals to assess their lives on the basis of whatever *they* consider important to themselves. It does not impose anybody else's views on what emotions or experiences are valuable. This is particularly important if we want policy makers to use these results. In a democracy politicians should not make judgments about what is good for people—they should create the conditions where people are satisfied with their lives.

Increasingly, policy makers feel comfortable about this approach to their role. After all, enlightened policy makers have for years been asking citizens how satisfied they are with their public services. From there it is a smallish step to ask how satisfied they are with their lives as a whole. In fact, policy makers would be well advised to do this, since our analysis of European elections over the last forty years shows that the life-satisfaction of the population is the best explanation of whether the government gets reelected. In fact, as Table 0.1 shows, life-satisfaction predicts better than any economic variable.[10]

But how reliable is the measure? Do different people use the scale in the same way when they answer the question? To some extent they must do so because, as the book will show, we can predict a person's measured life-satisfaction with some accuracy using a whole range of relevant factors.[11] Equally, life-satisfaction is itself a good predictor of many outcomes—not only voting for the existing government, but also, for example, longevity.[12]

Table 0.1. Factors explaining the existing government's vote share (partial correlation coefficients)

Life-satisfaction	**0.64**
Economic growth	**0.36**
Unemployment	**–0.06**
Inflation	**0.15**

Can we also use life-satisfaction when we measure the well-being of children? Clearly the quality of life they experience is intrinsically as important as that experienced by adults (and it is even more important if we also include its effect on the resulting adult). But children are less able than adults to make judgments about their experience. That is why younger children are not asked questions about life-satisfaction. They are however asked batteries of questions about their mood and feelings.[13] Similar questions about the child's mood and feelings are asked of their parents and teachers. So we aggregate these answers as our measure of child well-being.

Thus, to summarize so far, we are interested, for all individuals, in their well-being over their lifespan. In adulthood that is measured by life-satisfaction, and in childhood by mood and feelings.

Causes of Happiness over the Life Course

Having measured happiness, the next key step is to explain it—to understand why some people flourish, while others languish. The main purpose of this book is to set out a comprehensive map of the causes of well-being—in a novel way.

Putting it bluntly, most existing well-being research focuses on only one cause at a time (often with some controls) and shows that it influences well-being in a statistically significant way. Not only that, but well-being is generally measured in different ways in different studies.

Our approach is different. First, we use only one measure of well-being, so that we can unambiguously compare the effects of different factors. And, second, we estimate the effect of all these factors simultaneously, so that we can really isolate the effect of changing each one of them on its own. This is really crucial because most policies are targeted at specific variables, like income or health. To know the effects of changing any one of these, we will often want to assume that the others remain constant.

So our analysis will show the relative importance of the different factors within one single framework. This is important for us as individuals—and for policy makers. Once policy makers have identified key areas of concern, they should of course undertake controlled experiments of new policies, and such experiments are discussed in Part III of the book. But, before that, we need a model of how our well-being is determined over the course of our lives. We need to answer questions like:

- Which dimensions of childhood are the more important—intellectual, behavioral, or emotional?
- Which aspects of life should be targeted, at what ages?

Our model of life (excluding old age) is described somewhat crudely by Figure 0.1. An individual is born to parents who have given characteristics—like income, parenting

Family and schooling	Child outcomes	Adult outcomes	Adult life-satisfaction
Income Parenting Family break-up Mother's mental health Schooling	Intellectual Behavioral Emotional	Income Qualifications Employment Family Crime Physical health Mental health	Life-satisfaction
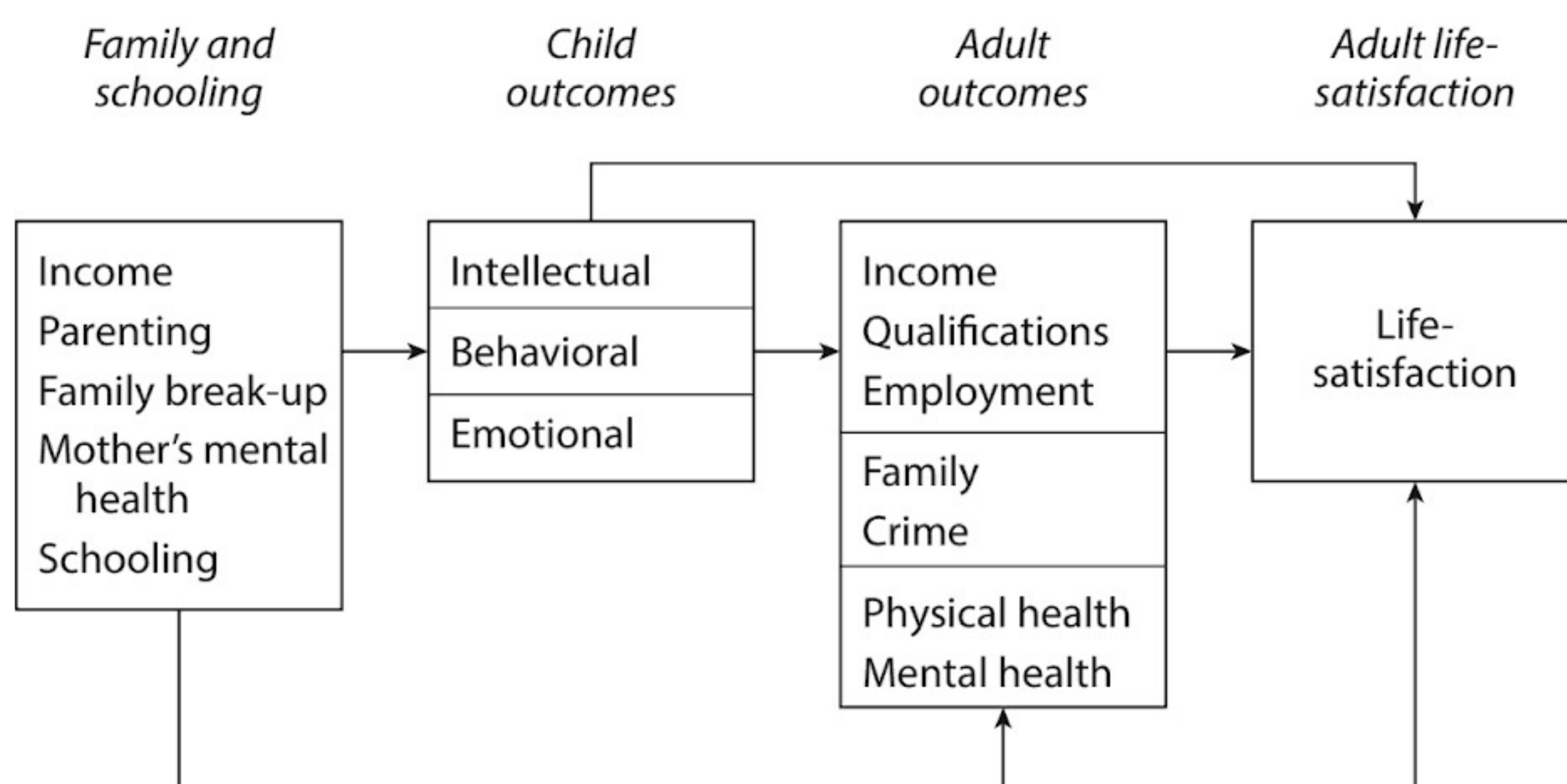
Figure 0.1. Determinants of adult life-satisfaction

skills, a harmonious home, and good mental health. And the child is then educated in schools that do or do not promote well-being. These influences (plus the genes) then determine the way the child develops over three main dimensions—intellectual, behavioral, and emotional. (The emotional dimension is also the way we measure child well-being.) We call these dimensions of development "child outcomes." Emotional development and behavior we measure at age 16, but we measure intellectual development by the highest qualification ever obtained. The child then develops into an adult, with many new dimensions of success—income, employment, family formation, noncriminal behavior, and health (both physical and mental). And these "adult outcomes" then determine the person's life-satisfaction.

This description of life corresponds to the central horizontal arrows in the graph. However, all earlier stages of life also continue to exert direct influences on later life, as shown by the other arrows in the graph. Each stage of life is determined by everything that preceded it.

If we are interested in affecting life-satisfaction, we want to know how we could affect it by intervening at different stages of life.

- We could intervene in *adulthood*, in which case we want to know how altering adult outcomes affects life-satisfaction, holding constant everything that went before;
- we could intervene on *child outcomes*, in which case we want to know how altering them affects life-satisfaction, holding constant family and schooling;
- we could intervene on *family or schooling*.

To answer these three questions we need to estimate the three corresponding relationships:

(1) how life-satisfaction *is affected by* adult outcomes, given the child outcomes and family/schooling;
(2) how life-satisfaction *is affected by* child outcomes, given the family/schooling;
(3) how life-satisfaction *is affected by* family/schooling.

The other interesting relationships are those that explain adult outcomes and child outcomes (including child well-being):

(4) how adult outcomes *are affected by* child outcomes and family and schooling;
(5) how child outcomes *are affected by* family and schooling.

Evidence on all these relationships is invaluable in suggesting which areas we should consider for new policy development aimed at improving adult or child well-being.

But to evaluate a specific new policy we need to conduct a proper controlled experiment. This experiment will normally tell us only the short-run effect, so the model is also useful in enabling us to simulate the longer-term effects that would be likely to follow any short-run effect.

This Book

So in this book our prime aim is to provide quantitative evidence about relationships (1) to (5)—and much else besides. The evidence we use is international and comes from many countries, including especially Britain, the United States, Germany, and Australia. Britain is especially rich in data about how people develop over their lifetimes and provides us with "birth cohort surveys" that have followed children born in Britain in 1970 and 1991–92.[14] In addition many countries have for decades conducted "household panel" surveys, which follow people from around the age of 15, on a year-by-year basis (Britain, Germany, and Australia).[15] We use all these surveys and other international data.[16] There is online material that includes details of all the surveys and questionnaires used and also provides the complete tables corresponding to every single table and figure in the book.[17]

In terms of structure, the first chapter sets the scene with an overview of the whole life course, showing what matters more and what matters less. The rest of the book is in three distinct parts.

- Part I is about *adulthood*. We ask how much each separate adult outcome matters for happiness. We also ask "Do people adapt to it?" and we ask "Do

people mainly compare this outcome with that of other people?"—both crucial questions if we wish to increase the amount of happiness in the world. We also ask "How much do social norms matter, and other people's behavior?" And we ask "What outcomes of childhood most influence the resulting adult?"

- Part II is about *childhood* itself. How do parents affect their children's happiness, behavior, and academic performance? And what is the impact of schools and teachers, compared with parents?

- Part III shows how all this information can be fed into *policy making*, and why we need a totally new way of making policy. The last chapter summarizes our conclusions.

Cautions

Our aim is ambitious—it is to revolutionize how we think about human priorities. Inevitably the findings at this stage are approximate. But it is better to be roughly right about what really matters than to be exactly right about what matters less. Our findings should therefore be judged not by comparison with a state of perfect knowledge but with the prevailing ignorance.

This said, the whole book is subject to certain cautions. First, the aim is of course to show how much something affects happiness—to measure a causal relationship. And causal relationships are most easily established by controlled experiments where the "something" is varied and

the result observed. But we have few such experiments in all social science and even fewer on happiness. So in this book we rely on naturalistic evidence, subjected to multiple regression analysis. But we still use the language of causality. We say that something "affects" happiness by some specific amount. This makes for easier reading, but the reported result is neither more nor less valid than the equation from which it comes.

Second, all the "effects" are averaged across people, even though they are certainly different for different people (for some people larger and for others smaller). Moreover most of the equations are broad-brush linear equations without interactions—they are early overall maps of a new and largely unmapped territory. In particular, we say little about male-female differences, partly because most of the equations are remarkably similar for men and women. But, for those who wish to explore this issue, we provide in the Online Materials the full tables for Chapter 1 separately for men and women.

Third, there are many important issues for which life-course surveys are not very helpful. These include the environment and housing, and also differences across ethnic groups where the sample sizes are generally too small. We do not address any of these issues. And fourth, this book is about developed countries only.

Where we use the word *happiness*, we always mean life-satisfaction (for adults) or emotional health (for children). Most of the effects we show are quite small, but this does not mean they are unimportant. If we could raise the life-satisfaction of humanity by 1 point (out of 10) in the next twenty-five years that would be a massive rate of progress.

Conclusion

Is any of this remotely useful? Can we really persuade policy makers to focus on the life-satisfaction of the people?

The answer is surely Yes. Already the OECD urges governments to have as their goal the well-being of their people, and some governments use well-being as a criterion for policy making.[18] But most policy making worldwide still proceeds by a series of ad hoc arguments, with no attempt made to make one argument commensurate with another. At one time Margaret Thatcher attempted to establish wealth creation as an overreaching criterion in Britain. But this did not work because no one believed that the main objective of health care, or child protection, or elderly care, or law and order, or parks was to increase wealth. People had some wider, fluffier concept of what things mattered, but no way to compare them.

Today well-being research offers real evidence to fill that vacuum. It is early days yet, and the numbers in this book are offered to stimulate further refinement rather than as final answers. But no one can doubt that they offer a significantly different perspective from traditional beliefs.

Can they actually be used to evaluate policies? Again the answer is Yes. When existing methods of cost-benefit analysis were first proposed sixty years ago, they seemed impossibly ambitious. But, within the limits to which they apply, they have been constantly refined. As a general approach they are now unquestioned. The same will happen to policy appraisal based on well-being. It will eventually become totally accepted as the standard way to evaluate social policies, and much else besides. And hopefully experimentation will

become the standard prelude to policy change. The consequences will be massive.

As Angela Merkel said "What matters to people must be the guideline for our policies."[19] That requires evidence from well-being research, and policy makers brave enough to apply it. If that happens, we can surely build much happier societies.
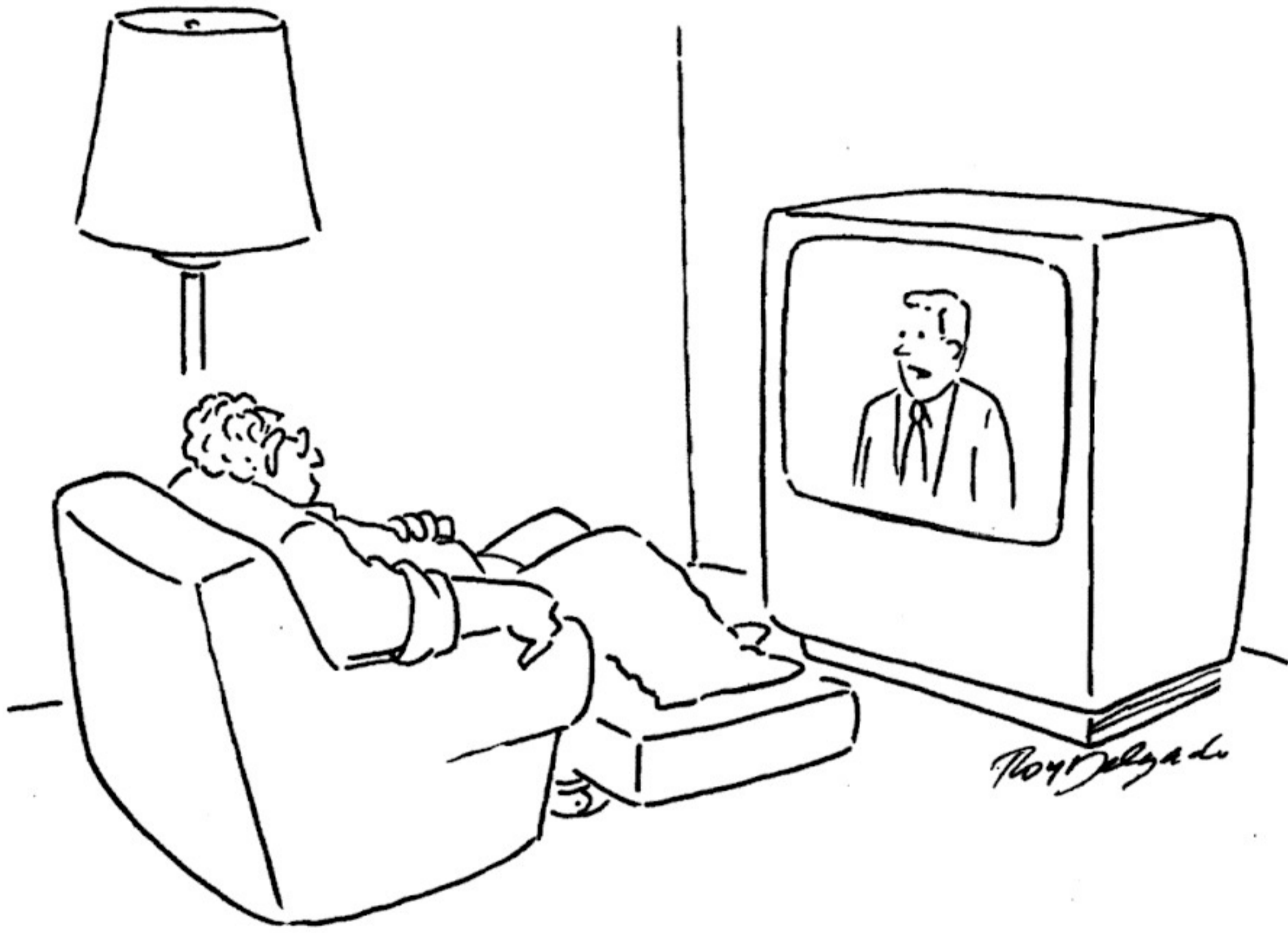
" *Money was down again in relation to love and happiness.* "

1 Happiness over the Life Course: What Matters Most?

All human life is here.

—*News of the World*

The central aim of this book is to supply a perspective on what makes people happy—to make it possible to compare the importance of any one factor with any other. So, before we look at each factor in detail, let us try to see the wood for the trees—to discover what matters more and what matters less.

In this chapter we shall estimate the five sets of relationships discussed in the Introduction, using only two of our surveys. We shall first estimate relationships (1) to (4), using the British Cohort Study data (BCS) on children born in 1970. Then we shall estimate relationship (5), using data on the British cohort born mainly in the county of Avon in 1991–92.[1] These are of course results for Britain, but, as we shall see in later chapters, they are typical of what is found across the advanced world.

The analysis in this chapter is purely cross-sectional, but we discuss panel estimation at length later on. (In panel estimation all effects are smaller, but the ranking of factors is generally similar.) Further explanation and discussion appears in later chapters. At this point the key lesson is the power of these studies to shed a completely new perspective on human life.

the coefficients in an alternative version of equation (1) in which all the variables are "standardized"—that is they are divided by their standard deviations.[5] The standardized regression equation is now

$$\text{Life-satisfaction} = (\beta_1 \times \textit{Income}) + (\beta_2 \times \textit{Education}) + \text{etc.,} \quad (2)$$

where all the variables are italicized to show that they are standardized.

As we have said, these β-coefficients are useful because they tell us how important the different factors are in explaining the overall variation in life-satisfaction. In fact, if the variation in life-satisfaction is measured by its "variance," we can split up the explained variance exactly into the sum of the squared β-coefficients plus some other terms.[6]

In some parts of the book we shall show α-coefficients and in others β-coefficients, as appropriate.[7] When we show β-coefficients, we shall always indicate this in the table heading. If we have not shown it, this means that the regression is based on natural units (i.e., it shows α-coefficients). All of this is explained more fully in online Annex 1.

Every coefficient estimate is only approximate, but the true value is 95% likely to lie within two standard errors (s.e's) of the coefficient estimate. So the standard errors are shown in brackets after most of the coefficients. When any coefficient estimate has over 90% probability of being different from zero, the coefficient is printed in bold.[8] Whenever we report an estimated equation, the results of the equation appear as a single vertical column of numbers.

Improving Adult Happiness

So what can we say about what determines the life-satisfaction of an adult? We begin with relationship (1), which includes the "proximate" determinants, as well as the more "distant" ones. In Figure 1.1 we focus only on the co-efficients on the "adult outcomes," in order to see what can be done to improve life-satisfaction once someone is already an adult. (We turn later to what can be done when people are children.)

The dependent variable is life-satisfaction. We begin with economic influences. As Figure 1.1 shows, the logarithm of equivalized household income has some effect on life-satisfaction—similar in Britain to that found in most other countries. But it explains under 1% of the overall variance of life-satisfaction in the population, while all the factors we can identify together explain around 15% of the variance. The direct influence of educational qualifications is smaller still, though they do of course have further indirect influence, for example, through their effect on income. As important as income or education is whether or not you are unemployed.

We turn next to behavior. Being partnered makes a big difference. Equally, criminal behavior (measured by criminal arrests since 16) clearly leads to social exclusion and lower life-satisfaction.

Finally comes health, which involves mental as well as physical health. Mental illness is a specific diagnosable condition. It is one of many factors that can produce low life-satisfaction. They are not the same thing. For example women have on average more well-being than men but more mental illness. The most convincing measure of

	β	(s.e.)
Income	**0.07**	(0.01)
Qualifications	**0.02**	(0.01)
Not unemployed	**0.08**	(0.01)
Non-criminality	**0.06**	(0.02)
Partnered	**0.17**	(0.01)
Physical health	**0.06**	(0.01)
Emotional health (lagged)	**0.18**	(0.01)
	$R^2 = 0.147$	
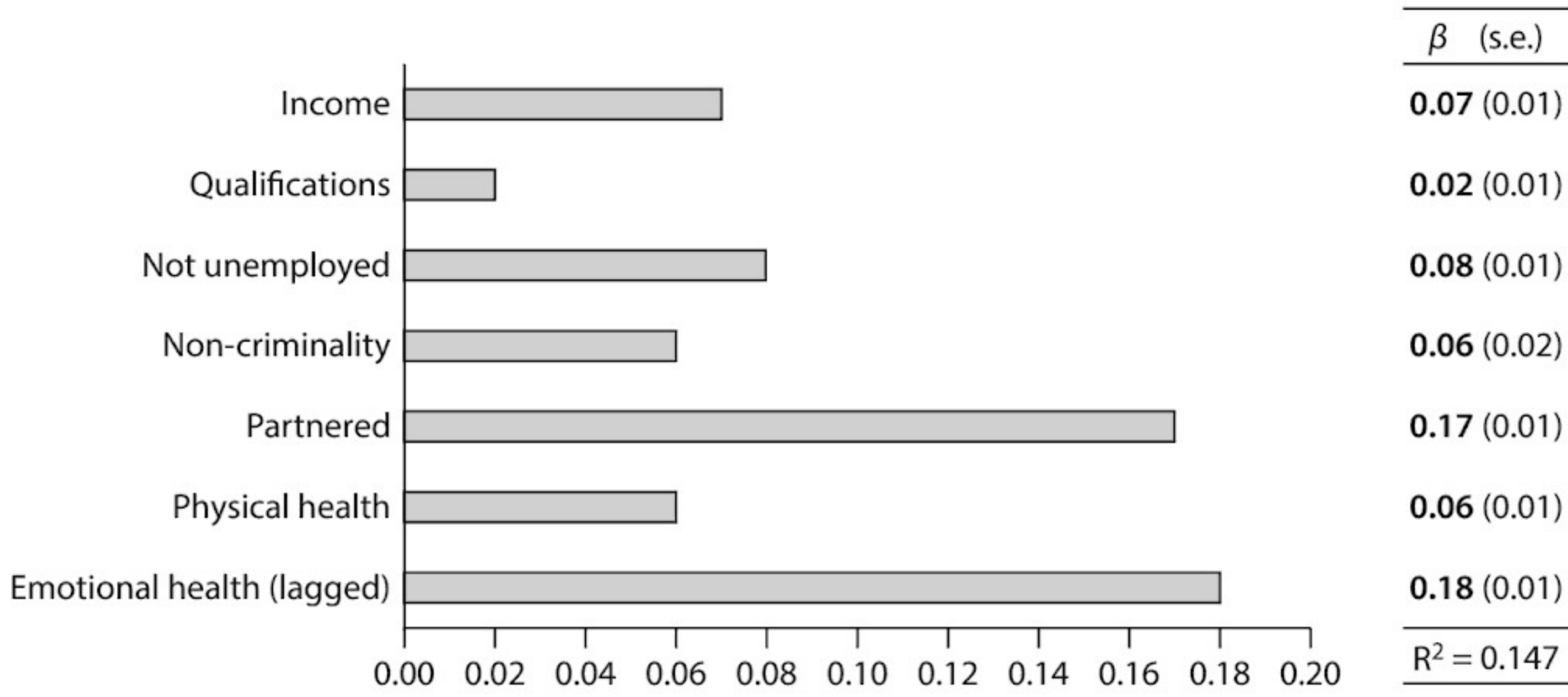
Figure 1.1. How adult life-satisfaction at 34 and 42 is affected by adult outcomes at these ages (British Cohort Study)

mental illness is one based on an actual diagnosis (and this is the measure that we mainly use in Chapter 6). However in the British Cohort Study we have to rely on 24 self-reported answers to questions. This is a weakness, and we therefore lag this measure (using the answers the individual gave to these 24 questions at ages 34 and 26) to remove the simultaneous effect of temporary mood on reports of mental health and life-satisfaction. Even so, the estimated effects of mental health are large and similar to the estimates in Chapter 6.[9] Moreover they are, both here and later, larger than the explanatory power of physical health, as measured by the number of health conditions the person is experiencing.

So how can policy makers influence these proximate determinants of well-being? Clearly policies directed at adults are important—policies on poverty, adult education, employment, crime, family support, and health. But another vital, and complementary, approach is to intervene earlier, in childhood, in order to improve the later outcomes. This

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Available at http://cep.lse.ac.uk/origins/onlinematerial.pdf

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