

# **Happiness and Public Policy**

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LSE Health and Social Care Discussion Paper Number 14

First published in March 2005 by:  
LSE Health and Social Care  
The London School of Economics and Political Science  
Houghton Street  
London WC2A 2AE

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British Library Cataloguing in Publication Data  
A catalogue record for this publication is available from the British Library.  
**ISBN [0 7530 1836 5]**

## **Introduction**

Between the 8th and 11th September 2004, LSE Health and Social Care hosted the 5th European Conference on Health Economics. The conference included presentations on all aspects of health economics, including financing and resource allocation, economic evaluation, econometrics in health economics, incentives in health care, equity in health and health care, outcomes evaluation, pharmaceutical economics, social care and mental health economics. The present publication is based on the plenary address by Professor Richard Layard, on the subject of happiness.

Professor Layard is a member and founder of the Centre for Economic Performance at the London School of Economics. In 2000, he became a member of the House of Lords. He has written widely on unemployment, inflation, education, inequality and post-Communist reform. He was an early advocate of the welfare-to-work approach to unemployment, and co-authored the influential book *Unemployment: Macroeconomic Performance and the Labour Market* (OUP 1991).

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# Happiness and public policy

I'm a real outsider here. I'm no health economist, nor am I an expert on happiness. But I have been studying it for the last 3 years and this has turned me into a real missionary. It seems to me that, if our real objective was the happiness of society, we'd be doing all kinds of things differently. So I want to discuss first what we know about happiness, and then how that should affect public policy, including policy on health.


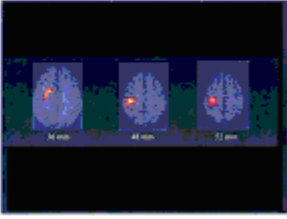
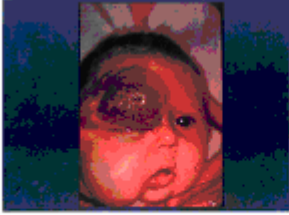
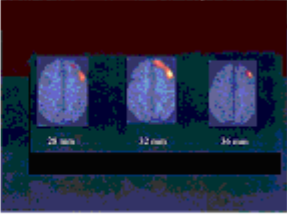
## 1. What we know

### 1.1 *Happiness is measurable and is a dimension of all our experience*

So happiness is an instantaneous feeling. If you are happy you feel good and would be happy for things to continue that way. If you are unhappy, you feel bad and you want things to change. There are all sorts of good feelings and all sorts of bad feelings just as there are all kinds of noise. But we can compare the loudness of a clarinet and a pneumatic drill, and so too we can compare the pain of toothache or a stomach ulcer. In addition to this, good feelings drive out bad feelings and vice versa so that over time within an individual good and bad feelings are very strongly negatively correlated.

Until recently we could only investigate feelings by asking people questions – questions about positive and negative affect. But in the last 15 years neuro-science has identified the regions in the brain associated with positive and negative affect. The regions are both of them in the pre-frontal cortex somewhat above and in front of the ear. Positive affect is experienced on the left side and negative affect on the right. So here examples of the change in brain activity picked up by PET scans where the blood flow is traced because it carries radio-active isotopes. See Figure 1.

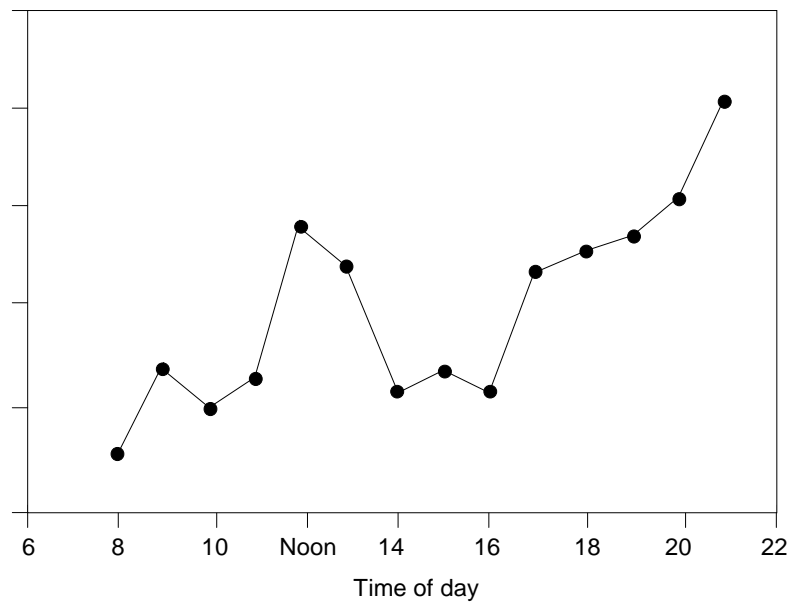
**Figure 1 The brain's response to two pictures**

	Picture	Brain response
<b>Happy</b>		
<b>Sad</b>		

This neuroscience is extremely important, because it enables us to reject the idea that what people say about their feelings is purely subjective – in the sense that we have no idea whether two people are using the words in the same way as each other. We now know that broadly speaking, people do use the words in the same way. We can ask two people to say how happy they are, and we can also use electroencephalography (or EEG) to measure their left and right pre-frontal activity. People where the left side predominates are broadly speaking those who report being happy. You may also know about a fascinating piece of pain research which applied the same hot pad to the legs of different people. The people reported very different levels of pain but these differences accurately reflected their different levels of cortical brain activity (Coghill et al). Reverting to happiness, there is also a high correlation between whether people report themselves as happy, whether their friends report them as happy and whether independent observers assess them as happy. So happiness can clearly be measured across people as well as over time.

Happiness of course fluctuates over the course of the day. Here is some average data drawn from a sample of 900 Texan working women. See Figure 2.

**Figure 2 Average happiness at different times of day**



That's just some fun and what policy should worry about is of course the whole of waking experience. So that's my first point, happiness is a single dimension of all experience and it can be measured in principle and increasingly in practise.

## **1.2 *The function of happiness***

On the whole we seek to be happy, not in the short run but in the longer run – and with some qualifications to do with altruism. Why were we programmed that way? Because at the same time we were programmed to obtain happiness from things which improved our inclusive fitness in the terms of natural selection. What we liked (sex, food, cooperative endeavour) was good for our survival, and, because we did what we liked, we survived – or rather we grew from 10,000 hunter gatherers to 6 billion today – an extraordinary triumph over other species, all of it driven by the pursuit of happiness. It is because the pursuit of happiness is so central to our being that it makes sense to define the good society as the happy society. But I shall return to that later.

Let me mention in passing that happiness could barely have done the trick as a motivational device if at the same time it was bad for our health. But of course it is not. You probably know the story of the 180 young novices who in 1932 had to write

essays about why they wanted to be nuns. As part of this, they were asked to write a short autobiographical sketch. The essays have since been independently rated by psychologists to show the amount of positive feeling which they revealed. And these ratings have then been compared with how long each nun lived. Remarkably, the amount of positive feeling which a nun revealed in her twenties was an excellent predictor of how long she would live.

Happy people tend to have more robust immune systems – and lower levels of stress-causing cortisol. If artificially exposed to the flu virus, they are less likely to contract the disease. And they are more likely to recover from major surgery. If you take the 750 actors and actresses who were ever nominated for Oscars, we can assume that before the award-panel's decision the winners and losers were equally healthy on average. Yet the winners got such a morale boost from the consequences of winning that they lived an extra 4 years on average, compared to the losers.

### **1.3 *So how has happiness been doing? Not too well***

The story is similar in Britain, where happiness has been static since 1975 and (on flimsier evidence) is no higher than in the 1950s. A similar story holds in Japan. In continental Europe, where regular data only begin in 1975, the position is slightly more encouraging. In many countries there is a slight upward trend in happiness, especially Italy, but there is a fall in Belgium. Overall, the change in happiness is small relative to the huge increase in incomes.

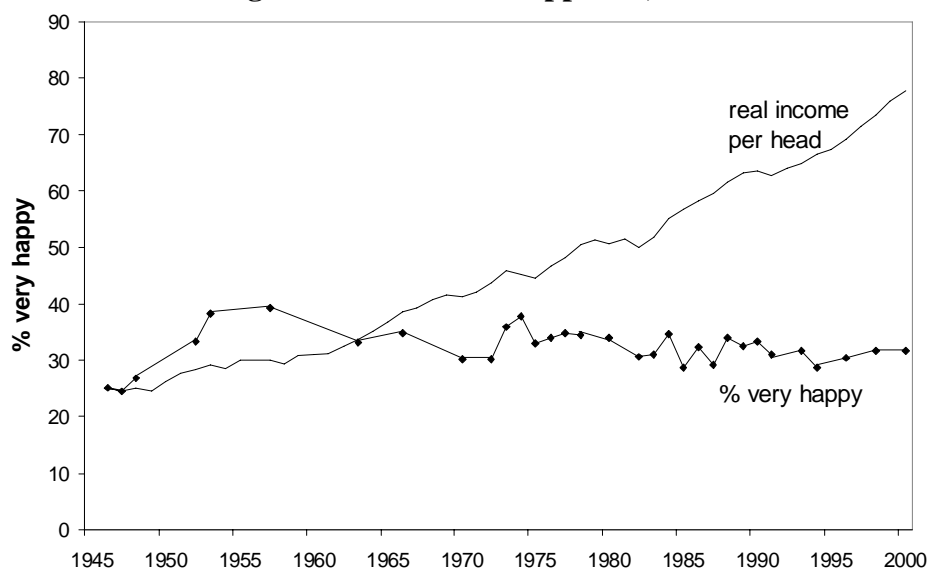
These findings are surprising since in any given society richer people are substantially happier than poorer people. (See Table 1)

**Table 1 Happiness according to income position, US  
(percentage of each group of correspondents)**

	US		Britain	
	Top Quarter	Bottom Quarter	Top Quarter	Bottom Quarter
Very happy	45	33	40	29
Quite happy	51	53	54	59
Not too happy	4	14	6	12
	100	100	100	100

As the table shows, some 45% of the richest quarter of Americans are very happy, compared with only 33% of the poorest quarter. These figures have barely changed in the last thirty years. So the richest quarter have roughly doubled their living standards but they have become no happier. The poor have also become richer, but no happier. In other countries the story is similar. The overall inequality in happiness has also been remarkably stable in most countries.

**Figure 3 Income and happiness, US**



So here is the paradox. When people become richer compared with other people, they become happier. But when whole societies become richer, they do not become happier. There are two reasons for the paradox. The first is social comparisons.

People compare their income and their spending with other people. In a given situation, one person who becomes richer becomes happier. But if everyone becomes richer, much of this gain is cancelled out. We now have half a dozen micro studies which show how social comparisons affect happiness. Let me mention simply the work of my colleague Niall Flynn who has shown that even at a given point in time your actual income has a smaller influence on your happiness compared with what you perceive to be your position in the income distribution. All this provides good supporting evidence for Michael Marmot's argument that status affects your health – it does so mainly by affecting your happiness.

From a public policy point of view social comparisons are of course extremely important. For we have here a classic instance of negative externality. If I become richer or buy a better car or give better parties, this reduces the satisfaction which others get from a given income. The natural approach to this problem is corrective taxation. If you had not thought of that, you should now immediately revise upwards your view about the optimal rate of tax.

The same conclusion follows when we consider the other factor at work over time, which is habituation. If you raise your living standard this year, you find next year that you somehow **need** that extra bit of comfort. You have raised the norm against which you compare your current experience. Robert Frank has called this a negative externality. It is a problem because this year you fail to foresee how next year you will have habituated to your extra spending. This addictive effect of spending again calls for a corrective tax. And the effect of corrective taxes is of course to make people work less hard and preserve their work-life balance. Does George W. really want everyone to work harder?

If income has this limited ability to satisfy once you are at Western standards of living, what are the main sources of satisfaction? (See Table 2)

**Table 2 Factors affecting life-satisfaction**

<b>Satisfaction with</b>	<b>Beta coefficient</b>
Family life	.19
Financial situation	.17
Job or housework	.15
Community and friends	.15
Health	.12

**Source:** US General Social Survey. Individual data, 21 years.  
Analysis by Niall Flinn

Let me show you a standard analysis in which life-satisfaction is regressed on your satisfaction with the different domains of your life. These are beta-coefficients. In these analyses family life always comes high. You may be surprised to see financial situation coming so high, but this is not the same as income. This reflects both perceptions of relative income and also the ratio of financial commitments to income. The next two variables are, like family life, aspects of a person's social relationships – his social engagement through work and through friendship. Finally, health. A lowish beta coefficient because the overall variation in health is fairly small, but crucial of course when ill-health sets in.

But before I come on to health I want to show you a remarkable analysis by John Helliwell in which he explains the variation in average life satisfaction and suicide rates across countries. (See Table 3)

**Table 3 Explaining national differences (beta coefficients)**

	<b>Life satisfaction</b>	<b>Suicide rate (with signs changed)</b>
Divorce rate	-.21	-.50
Unemployment rate	-.15	-.05
Trust in other people	.25	.24
Membership of vol. Orgs	.14	.17
Quality of government	.67	.14
Belief in God	.32	.48
R <sup>2</sup>	.80	.57

**Source:** Helliwell (2003)

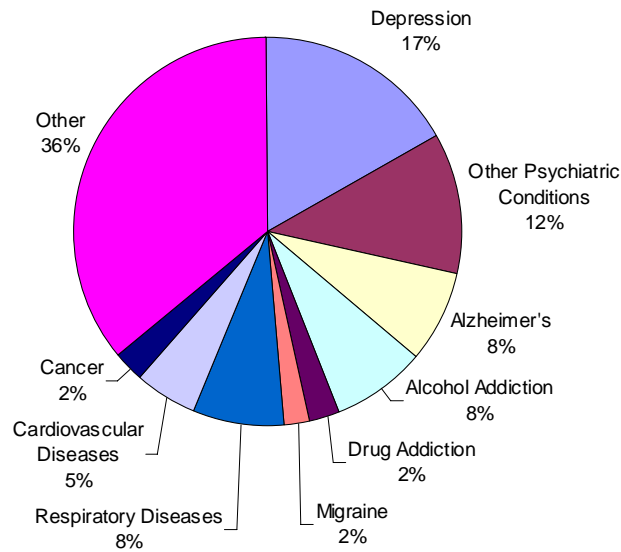
The factors at work closely match the factors discussed earlier. Life expectancy does not affect current happiness, which is to be expected, and current health is probably too difficult to measure to appear in the regression. It is however striking that per capita income which is easy to measure does not show up.

There is not time to reflect at length on the implications of these findings for public policy. But there is one general point. An economic policy say on migration affects not only income (favourably), but also family and community life (probably unfavourably). So we should be really careful about favouring dynamism because it raises income without counting the social costs. Moreover any issue can only be appraised properly by a team that includes psychologists and sociologists as well as economists.

## **2. Health**

So let me move on to health. What are the main dimensions of health which affect a person's happiness? Alex Michalos finds that by far the most important dimension is mental health. In a number of studies he included as explanatory variables the 8 standard dimensions of the SF-36, the Medical Outcomes Study Short Form, i.e. physical pain, mobility, mental disturbance and so on. Mental health was always the biggest single influence and often the only dimension whose measured effect was significant. So let me talk about mental health for some minutes. Its importance in psychological surveys is of course completely consistent with the findings of the WHO Burden of Disease calculations. See Figure 4.

**Figure 4 Causes of disability  
(USA and European Union)**



These show that nearly half the disability from disease arises from mental illness or closely related conditions.

Because of the shame of it, the prevalence of mental illness is largely hidden. But here are some basic figures from household surveys in the US, which correspond closely to those in Britain and continental Europe. (See Table 4)

**Table 4 Percentage experiencing illness, US**

	<b>Any mental illness</b>	<b>Major depression</b>
In lifetime	33	15
In one year	22	6
In one month	15	3

**Source:** Surgeon-General, etc

**Note:** Schizophrenia 1%, manic-depression 1%

At any time about 15% of the population are suffering from some specific mental illness, and 3% from a major disabling depression.

So I thought it would be interesting to ask the question: Which is the greater cause of human misery: poverty or mental illness? (See Inbox 1)

**Inbox 1**

**Mental illness and poverty**

H = happiness

M = malaise (caseness index, 24 questions)

Y = income per adult

$$\begin{aligned} H &= -.28M + .07Y \\ M &= .07Y \end{aligned}$$

I took the British National Child Development Study data when the cohort were 33, and I regressed happiness on malaise and on income per adult. Malaise came through as far more important than poverty, even after allowing for the effect of poverty on malaise as shown in the second equation.

Now of course the fact that something is a problem does not mean we should devote huge efforts to it, unless these are likely to achieve results. Until 1950 there was no effective treatment for mental illness. But now we have drugs and psychological therapies which can achieve real results. If we take people who go into major depression, double-blind controlled trials show that about 60% of them will come out of it within 4 months as a result of drugs or once weekly CBT. After that the risk of relapse is greater for drugs, unless people keep on taking them. But if people have had 16 weeks of therapy, or drug treatment which continues, three quarters of them will avoid further depression over the next two years. The cost of either of these treatments is around £1000.

But how many of those currently suffering from clinical depression are in treatment? Under half, and under 10% have seen a psychiatrist. In Britain under 5% have seen a psychologist. This is simply not how we treat any other serious medical condition and it reflects the fact that in every country the status of psychiatry and psychology

still fail to repeat the huge improvements made over the last 50 years. Money tells the tale. If we take the **total** burden of disease including death, a quarter is attributed to mental illness (WHO figures). Yet in the US only 7% of health expenditures are targeted at mental illness, and in Britain only 13%. And the share of public research expenditures is even less, at 5%.

If reducing misery and increasing happiness is our goal, we should be giving much more priority to mental health. The British government now includes mental health in its list of top priorities, and since 1999 there has been substantial improvement in provision as there has in the NHS generally. But the share of spending going on mental health has not risen, for one simple reason that primary care trusts decide the pattern of spending on secondary services and their top priority is to reduce waiting times for first consultant appointment. One way to counter that would be add a target for waiting list for psychological treatment. That said, if lots more money was available, the shortage of psychiatrists and psychologists would soon become the binding constant. It is not good supposing this supply problem will be dealt with through decentralised market mechanisms. In the 1990s when people realised there were not enough doctors in general to provide an adequate NHS, a quantitative national plan was made for increasing the total number of doctors. We need a similar plan now for increasing the number of psychiatrists and even more psychologists over a 10-year period.

We shall not get a proper mental health service unless we now write down what kind of service we would like in say 10 years time. This would include the notion that patients could choose their treatment – when we know that huge numbers would choose psychology. In the short term the government has been quite right to deal with gross shortages by giving short courses to all kinds of mental health workers. But if I have a major depression I want to see a specialist and so would any sensible person.

### **3. The Greatest Happiness and QALYs**

Let me return to broader issues and end with some thoughts on utilitarianism and QALYs. Fortunately health economics has been captured by utilitarianism in a way that has happened nowhere else in public policy analysis. By utilitarianism I mean the view that it is the Greatest Happiness that matters. I think the view is right, because happiness is unique among human objectives in that it is self-evidently good. If we were asked why it was important, we could give no further reason – it just obviously is. That is because of the way we are programmed that I described earlier.

By contrast if we are asked why autonomy is good, we could give some excellent reasons – especially that people feel better when they have control over their lives.

However I want to add two qualifications to simple utilitarianism. First we should not simply add up utilities; we should give extra weight to improving the welfare of those who are most miserable. Second, there is the problem of changes in population, including changes in life expectancy. I do not believe our objective is to maximise the amount of good feeling on the planet. The reason happiness matters is that, once people have been born, happiness is what they desire – that and long life. So I agree with Bentham that there is no need for public policy to influence the number of births, except where externality or ignorance is involved. As regards long life, this is good because existing people want it.

So how should we measure the unhappiness associated with different forms of disease? The QALY? As an outsider I find the current British method of measuring the quality of life associated with different diseases very strange. Various objective characteristics of the disease are set out by doctors and then members of the general public say how they would feel if they had such an experience. Surely we ought rather to study directly the unhappiness which sufferers actually experience. As Daniel Kahneman has argued, experienced utility should be the basis of public policy rather than anticipated decision utility, which is often unrealistic. To give one extreme example of human fallibility a sample of people were first asked their social security number and

then asked how many doctors there were in California. There was a significant positive correlation between the two answers.

For this reason Michael Marmot, Jane Wardle and Andrew Steptoe are planning together with our LSE group to evaluate the actual affective state of out-patients suffering from heart, cancer and breathing problems and also depression. The approach will be the method of reconstructing the previous day, episode by episode, that has been developed by Daniel Kahneman and his colleagues. One key issue that this study has to address is the problem of comparing physical and mental pain. We clearly cannot have a fully rational health policy unless we can do that. It is not easy. If we manage it, it will be highly relevant to the allocation of resources to mental health.

I have ranged quite widely. I have claimed that happiness can be measured, but that it is not rising. This is because for our society as a whole extra income is relatively unimportant compared with better human relationships and better health, especially mental health. Even in health policy, relationships are crucial and the efforts of the Canadian authorities to increase satisfaction with health services has shown how much weight people attach to how they are treated as compared with outcomes.

If we want a happier society, we have to focus increasingly on how we treat each other in inter-personal relationships, rather than on economic dynamism or objective outcomes of one kind or another. This is particularly important for Britain and America where, unlike Continental Europe, levels of trust have halved in the last thirty years. My own hope, which I push in my forthcoming book, is that our whole society will follow the health economists in adopting the Greatest Happiness, each person counting, as the rule for public policy and for private morality. If that is our criterion of success, we can only hope to achieve it, if we also internalise it in each of us as our guiding principle in life.