The idea that Government policy should be focused more explicitly on promoting happiness – or well-being, the two terms are used interchangeably - has been gaining support.   For example, in the UK in April 2011 the Office for National Statistics began to include subjective well-being (happiness) monitoring questions in their regular Integrated Household Survey to capture what people think and feel about their own well-being.   This was in response to a public consultation on the issue of measuring happiness/well-being launched by Prime Minister David Cameron in November 2010.

Proponents of this view argue that happiness indicators, based on surveys which purport to measure how happy people feel, have stagnated over decades. And the key reason, they argue, is because governments have paid far too much attention to maximizing a narrowly-defined materially-based measure of economic welfare, Gross Domestic Product[1], rather than a more holistic indicator of welfare based on happiness, or well-being.   This premise is clearly false.

One of the most disturbing tendencies in the happiness literature is the belief that experts know better what is good for people. Better not just than elected politicians, but better than the voters themselves.   So, for example, Derek Bok, a former President of Harvard, states in his book *The Politics of Happiness* that 'people are surprisingly bad judges of what makes them happy'.   The implication is that decisions on policy can safely be left, indeed they *ought* to be left, to the so-called expert, armed with a clipboard and some multiple regression analysis.

The main purpose of this chapter is to illustrate important points which we can learn from the experience over more than half a century of trying to measure and control GDP. The scholars who first measured GDP realised from the outset that it had serious limitations. Indeed, that there is no unique, scientifically correct way of measuring it. The same point applies to the happiness data, yet it is scarcely recognised by the proponents of happiness-based policies.   Despite the serious limitations of the GDP data, little time was lost by governments in trying to predict and control the future path of GDP. Gordon Brown's notorious statement, when he was British Chancellor of the Exchequer, that he would 'abolish boom and bust,' was merely one example of a whole litany of attempts since the Second World War to engineer misguided policies based on this belief. The same holds true of the happiness data, where identical arguments on both the ability and desirability of predicting and controlling it are being made.

Economics has undoubtedly been important in post-war political life not just in Britain, but across the Western world as a whole. But Bill Clinton's famous aphorism, 'It's the economy, stupid!', has not always been a decisive factor in determining the outcome of elections. Indeed, despite the benign world economic environment which coincided with the Clinton Presidency - reasonable growth of GDP, rising employment, low inflation – his own Democratic Party lost the election in 2000.   In Britain, the Conservatives under Margaret Thatcher were re-elected in 1983 with an increased majority, despite the 1980-82 recession being the deepest since the Second World War, in which unemployment rose from around 1 million to over 3 million. With the much less charismatic John Major in charge, the Conservatives won the 1992 General Election following the recession of 1991-92, but were overwhelmingly defeated by Tony Blair in 1997 after several years of very strong

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[1] Gross National Product (GNP) is sometimes used instead, particularly in America. There are some marginal differences between the two concepts which are not in practice important, the two measures are very similar, especially in terms of growth rates over time

economic growth from 1993 onwards, accompanied by sharp falls in unemployment, inflation and interest rates.

So, despite the straw man erected by well-being advocates, politicians *do* exhibit concerns over a wide range of issues where GDP is not the immediate focus. For example, in many European countries at the moment, both the level of future immigration and the degree to which existing immigrants ought to integrate with their host cultures are very live issues which no serious politician can afford to ignore. Business leaders may attempt to turn the matter into a purely economic one, arguing that immigration helps them, but this is certainly not how it is seen by large sections of the European electorates. Crime is another topic of perennial interest to voters. Its relative importance fluctuates over time, but again politicians respond by either trying to shape or appease the prevailing public mood. It is always an issue which they must address.

Yes, economics and economic policy matters to voters, but so do other issues, and it is wholly misleading to suggest that policy is focused solely on the maximization of GDP, or indeed that it is given far too much weight compared to other policy objectives.

Even under the control of Gordon Brown, a politician who would have been perfectly at home as Commissar of the Five Year Plan in the old Soviet Union, grinding out endless and meaningless statistics on tractor production, the British Treasury placed great emphasis on this point. The official British government guidelines on policy appraisal, the Treasury's *Green Book*[2], clearly states: 'wider social and environmental costs and benefits for which there is no market price also need to be brought into any [policy] assessment' and that the inclusion of 'non-market impacts is a challenging but important element of appraisal, and should be attempted wherever feasible'.

GDP as a concept does not capture these wider costs and benefits. But this is not because economists are so stupid or narrow minded as to ignore them. The simple fact is that GDP was never intended to include them in the first place. The purpose of inventing and constructing the so-called national accounts, in which GDP is a key feature, was precisely to measure the value of the output of an economy, as far as possible using market based prices to do so.

Simon Kuznets was a highly original economist who did distinguished work in a number of areas and received the Nobel Prize in 1971. He was the seminal figure in working out how to measure output, GDP, in a systematic way some three decades previously. He and his colleagues knew at the time that there was more to life than the workings of a market oriented economy. In his Nobel lecture[3], for example, Kuznets specifically discussed the social implications of growth and argued that: 'Many of these are of particular interest, because they are not reflected in the current measures of economic growth; and the increasing realization of this shortcoming of the measures has stimulated lively discussion of the limits and limitations of economic measurement of economic growth'.

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[2] Her Majesty's Treasury (2003), *Green Book: Appraisal and Valuation in Central Government*, available on the Treasury website
[3] S. Kuznets, (1971), 'Modern Economic Growth: Findings and Reflections', Nobel Prize Lecture available at: www.nobelprize.org/nobel_prizes/economics/laureates/1971/kuznets-lecture.html

GDP was measured in the first place because at the time output was by far the most serious concern of policymakers. Specifically, they were focussed on the massive collapses in economic activity which took place in the Great Depression in the early 1930s. In the recent popularly styled Great Recession, output fell by some 3 per cent in America and 5 per cent in Germany. There is a widespread perception that things were pretty bad. But in the 1930s, GDP collapsed by nearly 30 (thirty!) per cent in both, and nearly one in every four men was unemployed.

There was a pressing need to provide policy makers with information on what was happening to output. So the specific focus was on measuring output in economies in which activity mainly took place in markets. Even then, many sectors were not part of an explicit market, including most of the public sector, with defence being a prime example. How do we measure the output of our defence forces, when we simply cannot trade them in a market and see what they are worth? Gradually over time, international conventions have emerged on how to deal with these problems. They do not avoid the problem that there is a certain degree of arbitrary judgement involved, but there is now a broad consensus on how to deal with such issues.

The question of measuring non-market output is conceptually different to that of happiness and well-being, but it is often confused with them in practice. Namely: Should we, and if so how, extend the concept of GDP to include more 'non-market' factors? Here again, economists have not been the laggards, but have been at the very forefront of the debate. As long ago as 1971, for example, the distinguished American economists Bill Nordhaus and James Tobin constructed estimates of GDP which took into account environmental factors. Intriguingly, their title was 'Is Growth Obsolete?[4]'. So perhaps there is nothing new under the sun after all!

A wide range of further adjustments to the basic measure of GDP have been suggested, such as weighting income by the degree of inequality, deducting the value of 'bads' such as time spent commuting, valuing work in the house, and so on. Whilst the possibility of obtaining a consensus on whether and how to value such things is somewhat higher than it was 40 years ago when Nordhaus and Tobin first wrote, any such adjustments inevitably involve a fairly high degree of arbitrary judgement. GDP, for all its faults, has a clear theoretical basis and, for the most part, an unequivocal meaning.

The happiness/well-being movement goes far beyond tinkering with what is and what is not included in GDP, even when the adjustments might be substantial. It suggests replacing it altogether with a measure which purports to describe not the material prosperity of a population, but its happiness.

Surveys on the levels of happiness reported by individuals have been carried out over a few decades in most Western countries. The recorded levels of happiness fluctuate from year to year, but in general there is no trend, either up or down. Over the same period, average material standards of living, measured by real GDP per head, have shown a very clear upward trend.

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[4] William D. Nordhaus & James Tobin, 1971. "**Is Growth Obsolete?**," Cowles Foundation Discussion Papers 319, Cowles Foundation for Research in Economics, Yale University

This finding is repeated endlessly and appears to have made an impression on many people. We see the level of happiness over time rumbling along showing no trend. By contrast, there is GDP per head bounding ahead, soaring into the stratosphere. As a result, many people believe that 'money does not buy you happiness'.

Time series data do indeed appear to show that nations do not get happier over time as they get richer. In contrast, happiness is positively correlated with individual income within a given country at any point in time; the rich generally report greater happiness than the poor. This, the so-called Easterlin paradox, named after the doyen of happiness studies, Richard Easterlin, is also discussed at length in the happiness literature. An implication which is widely drawn is that if we do not get happier as we get richer, this effect must be due to the pernicious psychological effects of inequality.

These findings are used to recommend 'progressive' policies in the name of equality, such as progressive tax rates and wealth redistribution. Thomas D Griffith, for example, in the *Boston College Law Review*[5] stated that 'happiness research is consistent with the strongest justification for adopting a progressive tax structure'. This may be thought an obscure journal, but a Google search of the phrase 'Griffiths progressive taxation' yields 91,900 sites and the article has generated a large literature. In the UK, the New Economics Foundation is one of many bodies which base their calls for higher, more progressive taxes on the 'science' of happiness. Richard Layard, one of the leading academic proponents of happiness, argues that progressive taxation will make society unequivocally better off from the perspective of happiness[6].

The fact that measured happiness has not increased over decades is viewed by some commentators as indicating a flaw in our society which must be corrected through government intervention. Happiness supporters believe that they occupy the perceived moral high ground as a result of such findings. As a result, it appears to them that increasing happiness is a self-evident good, to which only the most irredeemable misanthrope could object.

But we can also compare measured trends in happiness over time with factors other than income. Here, for example, is happiness and real public expenditure in the UK from 1979 to 2010. These factors are measured on quite different scales, so to make the comparison of their progress over time easier to see, the values of each of them in 1979 have been set equal to 100. This does not mean that they were in any sense the same in that year, it is just a useful and standard way of comparing two series over time which are naturally measured in different units.

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[5] Thomas D. Griffith, 'Progressive Taxation And Happiness', *Boston College Law Review*, 2004
[6] Richard Layard, *Happiness: Lessons from a New Science*, Penguin, 2005

Happiness and Public Expenditure in the UK 1979-2010
1979 indexed at 100 for both variables
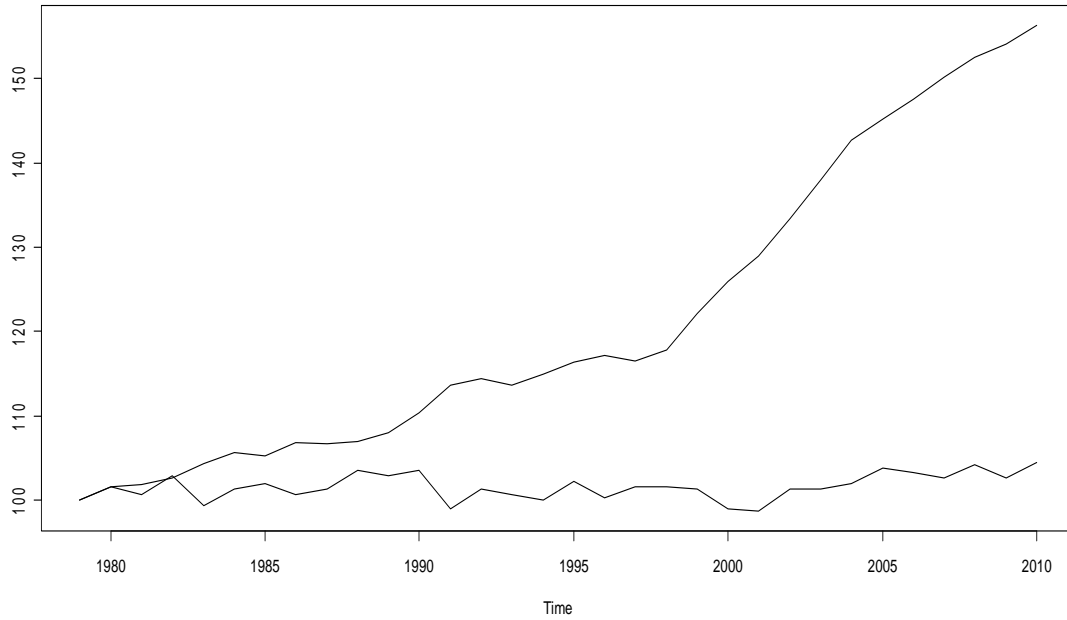
Figure 1 *Happiness and real Public Expenditure in the* UK *1979-2010, both variables set equal to 100 in 1979 in order to facilitate comparison of their subsequent movements*
[**nb note to editor: I can supply the data so the chart can be done to look much better**]

And here is happiness and the degree of inequality (using the standard concept of the Gini coefficient to measure the latter), again with both set equal to 100 in 1979.

Happiness and Inequality in the UK 1979-2010
1979 indexed at 100 for both variables
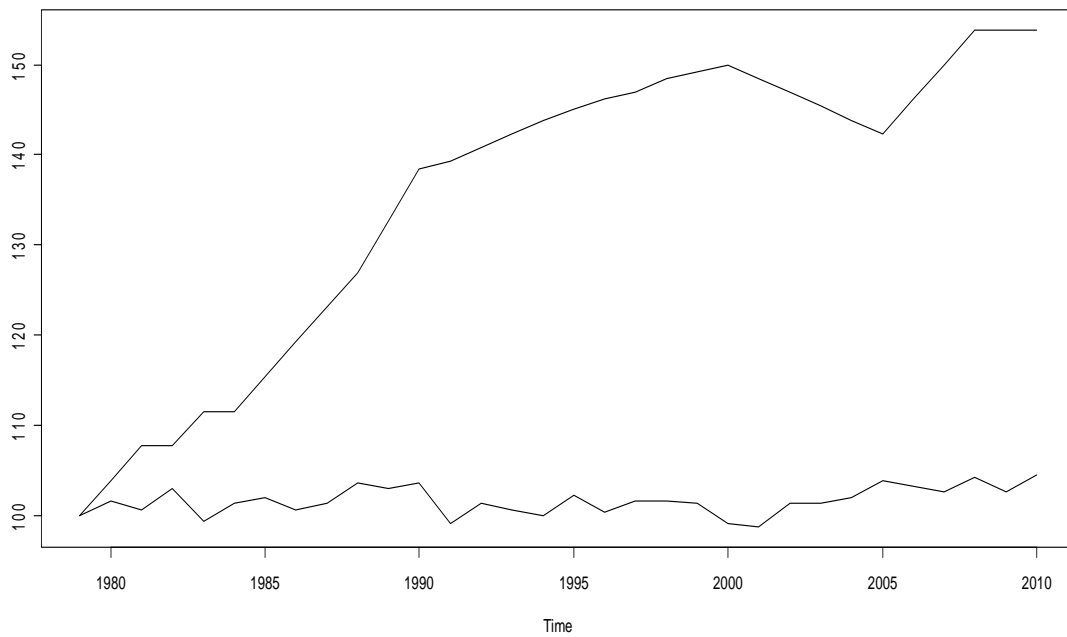
Figure 2   *Happiness and Income Inequality in the* UK *1979-2010, both variables set equal to 100 in 1979 in order to facilitate comparison of their subsequent movements*

If rising GDP has no effect on happiness, as is alleged, what do we conclude from these two charts[7]? Increasing public spending in real terms (i.e. after allowing for inflation) by some 60 per cent has made no difference to the well-being of the nation. So presumably we should not be interested in increasing public expenditure, using exactly the same argument which is used in the context of GDP and happiness. Further, we should be indifferent to rising income inequality, because this appears to have no effect on happiness.

The basic message of the two charts, it should be said, is not confined to the UK but is qualitatively similar across many Western countries. And this lack of correlation extends to a wide range of variables. For example, using UK data from 1973 onwards, there is no correlation between self-reported life satisfaction and either real current public expenditure or lower hours of work. In the US, life expectancy for whites rose from 71.7 years in 1970 to 78.4 in 2007 (the latest year for which estimates are available). For blacks, the increase was even higher, from 64.1 to 73.6, representing not merely an absolute rise, but a narrowing of the gap with whites. Gender inequality as measured by the median earnings of women compared to men has fallen sharply. In 1970, women earned 59.4 per cent of men, rising to 77.0 per cent in 2009. Yet there was no correlation between happiness and any of these improvements.

We could indeed conclude from this flat trend that attempting to improve the human lot through *any* policy – not just through pursuing economic growth - is entirely futile. Alternatively, we could conclude that happiness data over time shows little movement because it does not have much meaning. The evidence points to the latter.

There are very good reasons why happiness measured in this way is flat. When happiness is measured, people are asked to register their level of happiness on a scale of *n* categories (e.g. 1 = 'not happy', 2 = 'fairly happy' or 3 = 'very happy'). These numbers are then averaged over the population to gain an overall happiness score. Discrete categories mean that people have to undergo large discrete change in their happiness in order for this to be registered by the indicator; and once they have reached the top category they officially can't experience any further increase in their happiness. As a consequence, noticeable changes in average happiness can only come about through substantial numbers of people moving category.

As a general rule, if the happiness of 1% of the population (net) increases enough for them to place themselves in the next category, the average happiness score increases by 0.01. For example, happiness surveys on a 3-category scale in the US typically yield an average happiness of about 2.2. In order for the measure to undergo a 10% increase, 22% of the population would have to undergo a substantial enough increase in their happiness for them to shunted up to the next category. Any happiness-inducing event would have to be of long duration, not be offset by countervailing trends

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[7] Invoking multiple regression rather than simple correlation does not affect the message here

in society, and be produced by the kind of benefit which is not quickly adapted to, in order for it to be perceptible in the data over time[8].

It is very difficult to think of a set of circumstances in which 22% of the population would find themselves moving from, say, 'fairly' to 'very' happy over the space of a few years. It is therefore not surprising that we observe average happiness to be sluggish compared to other social or economic indicators such as GNP.

Furthermore, *by construction*, the happiness data can exhibit no indefinite trend. As individuals answer a survey in which they are asked to state their own level of happiness on an n-point scale, the data is therefore bounded between one and n. Over any particular short period of time, an apparent trend either up or down might exist, but by definition it cannot persist. In contrast, at least as it is presently defined, real GNP can exhibit no upper bound. Indeed, for the past 200 years it has shown a persistent trend increase.

This difference in the trends, or lack of them, in different data series does, incidentally, raise very serious theoretical problems about interpreting any sort of correlation, simple or multiple, between variables such as happiness which have no trend by construction and others which do such as GDP. The technical mathematical level of these concepts is high, with Clive Granger and Robert Engle winning the Nobel Prize in economics for their contribution. Interested readers are referred in the first place to the Wikipedia entry on 'cointegration[9]'.

More subtle recent work is in fact suggesting that there is a clear and positive connection between life satisfaction and income, and that there appears to be no cut-off point to this. Satisfaction continues to grow with higher income even at very high levels. Even though the extra satisfaction gained per unit of additional income, becomes smaller as income rises, it is nevertheless an increase.

Daniel Kahneman is a psychologist who was awarded the Nobel Prize in economics in 2002 for his work on how people actually behave rather than how they are assumed to do by economic theory. His colleague at Princeton, Angus Deaton, is a former President of the American Economic Association. In 2010, they published a paper in the *Proceedings of the National Academy of Science[10]* which distinguishes two aspects of well-being. First, life satisfaction, defined as the thoughts which people have about their life when they think about it. Second, emotional well-being, which refers to the emotional quality of an individual's everyday experience, the frequency and intensity of emotions such as joy, anger, sadness. They analysed a database containing 450,000 responses by Americans to a range of questions.

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[8] These points were made by Helen Johns in a mathematical supplement to H. Johns and P. Ormerod, 'The unhappy thing about happiness economics', *Real-World Economics Review*, 46, 139-146, 2008. Johns also makes the point that for the US data, the sampling error of the data is comparable to or larger than any movement in the indicator caused by real changes in average happiness
[9] http://en.wikipedia.org/wiki/Cointegration

[10] D Khaneman and A Deaton, 'High income improves evaluation of life but not emotional well-being', *PNAS*, 2010, www.pnas.org/cgi/doi/10.1073/pnas.1011492107

The results of Khaneman and Deaton are striking. Life satisfaction is unequivocally related in a positive way to income, but emotional well-being is not. Deaton had previously challenged the 'happiness' consensus of a lack of connection between well-being and GDP in a paper published in the leading *Journal of Economic Perspectives* in 2008[11]. He showed, using data from countries around the world, that life satisfaction continued to rise with income, in a similar way to the one he reported subsequently with Khaneman.

The widespread view, based upon looking at charts of data over time and backed up by fairly simple statistical analysis, that there is no connection between GDP and happiness over time appears to be challenged by these recent studies which take a more sophisticated analytical approach. GDP does appear to continue to have wider value as an indicator of a successful society, over and above its direct purpose of measuring material prosperity. As an aside, for this point is dealt with in other chapters in this volume, there has long been a view that it is only *above* a certain level of income that individuals and societies can really begin to flourish, to enjoy the full fruits of civilisation. For example, Aneurin Bevan, the left-wing Labour politician who founded the National Health Service in 1948, was fond of stating 'Freedom is the by-product of economic surplus'.

Neither the recent empirical evidence nor the more general philosophical considerations have prevented happiness advocates from continuing to insist that a single measure of happiness should be the only way of evaluating policy and progress. This is despite the fact, already noted, that the way in which the aggregate happiness indices are constructed means that there is not only by definition an absolute upper limit to the value they can take, but that it requires major shifts of attitude by large numbers of people to make any appreciable difference to the index.

The problem is not merely that this lobby wants to replace GDP with a happiness index. It is the belief that by measuring happiness, it then becomes subject to prediction and control by policy makers. Claims are made that the drivers of aggregate happiness, the factors which cause the index to move, are well understood and therefore should become the levers of policy.

The happiness literature contains very little firm evidence on the factors which seemingly cause happiness. The ones which are best established in the literature are those which have a more traditional orientation in policy terms, such as being married or having a religious faith. But curiously, we rarely see happiness experts vigorously promoting these as aims of policy.

Of course, it is always possible that further research will provide stronger and more settled evidence on the factors which generate movements in the overall measures of happiness. However, we might usefully reflect on the experience of GDP in this respect.

The immediate motive for constructing estimates of GDP was, quite simply, to provide more information on what was happening to output, by far the most important aspect of domestic policy at the time. Once armed with this data, however, it was quite natural for researchers to begin to investigate whether relationships could be discovered which enable us to understand why GDP

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[11] A Deaton, 'Income, health and wellbeing around the world: evidence from the Gallup world poll', *Journal of Economic Perspectives,* 22, 2008

moved as it did over time. And these could then be used for prediction – for example, would there be another recession next year – and policy control – if a recession is predicted, by changing policy now can we can prevent it from happening?.

Indeed, very quickly, models of the economy appeared, based on relationships estimated by techniques drawn from the new science of econometrics, the application of statistical theory to the particular technical issues raised by economic data. Lawrence Klein was an American economist and econometrician who was awarded the Nobel Prize in 1980 for his pioneering work in this field. As early as 1947, he published an econometric model of the United States economy with the title 'The uses of econometric models as a guide to economic policy'[12]

So the process of measuring the economy metamorphosed almost overnight into the desire to use these measurements to predict and control it, exactly as is the case with happiness today.

Enormous optimism was expressed about these possibilities, despite the salutary experience of the spectacular failures of forecasts carried out in the summer of 1945 for the rest of that year and for 1946. Klein himself documented the errors in an article in 1946[13]. Unemployment, for example, had been forecast to be 8 million but was only three million. But he argued that output could be predicted much more accurately, and that the correct application of econometrics to this data meant that 'we can look forward to much better results in the post-transition period'.

Over 60 years on, we have a massive literature on all the nuances of economic forecasting, spanning a wide range of statistical techniques and economic theories, far more sophisticated that the highly innovative but rather crude methods of Klein in the 1940s. But it is no exaggeration to say that no progress has been made in the accuracy of forecasts. At key times, the onsets of booms or recessions, forecasts prove just as inaccurate as they were in 1945. The *Bank of England Quarterly Bulletin* in October 2008, for example, shows that the consensus forecast for UK and US GDP growth in 2009 in January 2008 was for positive growth of 2.0 and 2.7 per cent respectively. As late as August, the forecasts were still for positive growth, despite the fact that by then both economies were in recession and output was already falling! The actual outturn for 2009 was negative growth of 3 per cent in America and 5 per cent in Britain. There are many such examples.

It is not just that we cannot predict the economy with any reasonable level of systematic accuracy. We still have no consensus as to what the drivers of GDP are, and therefore what the effects of any particular policy might be, even in a qualitative sense. At the time of writing, for example, one school of thought, of which Joe Stiglitz is a prominent member, believes that more fiscal expansion is required to revive growth in the American and European economies. Another school, in which Robert Barro is prominent, maintains that fiscal expansion will actually lead to lower economic activity. Both Stiglitz and Barro hold the Nobel Prize in economics.

Of course, the fact that economics has made little or no progress in its ability to predict and control the macro economy does not necessarily mean that the same fate awaits the happiness index and its

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[12] LR Klein, "The uses of econometric models as a guide to economic policy," *Econometrica*, 15,.1947*,* 111
[13] LR Klein, 'A post-mortem on transition predictions of national product', *Journal of Political Economy*, 1946, LIV, 289-307

devotees. However, changes in both real GDP and happiness over time share a deep common feature. Namely, that they are, across the Western world as a whole, scarcely indistinguishable from purely random series. There is a small amount of pattern, of potential information, in the US GDP data, but it is small. And more generally theses data series are dominated by random noise rather than by any consistent 'signal'.

This has a critical implication. It is simply not possible to obtain systematically reliable predictions of aggregate happiness indices, any more than it is for GDP[14]. We cannot predict with accuracy the next shake of a true dice, and neither can we do so for happiness. Further, any statistical relationship which purports to identify the drivers of happiness (or GDP) over time will be essentially illusory, despite whatever statistical validation tests are applied to the sample data, and will break down and cease to be valid. This is not merely a theoretical point. It is the entire experience of the history of macroeconomic modelling.

Indeed, government attempts to increase measured happiness, rather than making life better for us, may well actually do the opposite: create arbitrary objectives which divert civil service energies from core responsibilities; give many people the message that happiness emanates from national policy rather than our own efforts; and create pressure for Government to appear to increase an indicator which has never before shifted systematically in response to any policy or socio-economic change.

These are exactly the mistakes of the target-driven mentality which has come to pervade the British public sector. We should learn from these rather than replicate them.

More sinisterly, the happiness view of the world has tendencies which are inherently anti-democratic. The expert with his or her clipboard and regressions *knows* better than ordinary people themselves what makes them happy. By this presumption of knowledge, local democratic or individual decisions can be over-ridden with a clean conscience. Not all decisions are made at the Department for Motherhood and Apple Pie, so a happiness objective glosses over the very real "tough choices" which policy-making entails.

GDP is not an all-encompassing measure of welfare; it simply measures the size of the economy. There are many things important to our wellbeing which are not captured by it. Those things need to be sustained by a strong civil society and a democratically-accountable, well-run government. If we cannot make convincing cases for them without 'scientific proof' that they make people happy, we are totally morally adrift. Government does not fail because it does not measure happiness. It fails when its energies are misdirected on the basis either of poor quality information or of the false presumption of knowledge by would-be central planners.

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[14] Interested readers are referred to P Ormerod and C Mounfield, 2000, 'Random matrix theory and the failure of macroeconomic forecasting', *Physica A*, 280, 497-504