Is the concept of "wellbeing" useful for policy-making?

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1. Introduction

I want to be clear from the outset. I am very sceptical about the use of well-being in policy-making. But before I go into the reasons why I think this, I would like to make a few preliminary points.

- scepticism about well-being does not mean that the holder of this view is automatically a fanatical believer that, for example, maximising GDP is all that matters or that we should revive Victorian workhouses for the poor.

GDP is an important indicator of welfare and correlates with a whole range of desirable outcomes such as longevity. However, it is far from being perfect. This was acknowledged from the very outset of empirical estimates of its size being made. The driving force behind the measurement of the size of the economy was the Harvard economist Simon Kuznets, awarded the Nobel prize in 1971.

But the originators of GNP never insisted that this was the *only* way of measuring an economy. In his Nobel lecture[1], 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'.

- politicians of all parties already take into account a broad range of factors when they are making decisions. They are not simple GDP maximisers and they do not need the nebulous concept of 'well-being'.

Indeed, The official government guidelines on policy appraisal, the Treasury's *Green Book*[2], clearly states that: "wider social and environmental costs and benefits for which

[1]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

[2] Her Majesty's Treasury (2003), *Green Book: Appraisal and Valuation in Central Government*, available on the Treasury website

there is no market price also need to be brought into any [policy] assessment" and that "the valuation of non-market impacts is a challenging but important element of appraisal, and should be attempted wherever feasible".

- In a sense, my task has already been carried out for me by Paul Dolan at Imperial. With colleagues, he has carried out a major survey of well-being research for what was DEFRA, and published in the February 2008 *Journal of Economic Psychology*.

They write: "One very firm conclusion that can be drawn from our review is that the existing evidence base [for well-being] is not quite as strong as some people may have suggested….This, in addition to lack of clear evidence on causality, makes it difficult to make clear policy recommendations at this stage[3]". I agree with this very much.

- Finally, by way of preliminary, I want to trespass on the second point of this seminar 'is there a popular alternative to increasing consumption? This is relevant because a key argument in the other side, as it were, of this debate, is the lack of correlation over time between well-being and GDP/consumption.

The short answer is 'yes'. Further, it has been popular for a very long time. The benefits of higher productivity can be taken in two ways. At the ends of the spectrum, we can either continue to work the same amount of time and take higher income, or we can keep income the same and work less.

In practice, we see a mixture of the two. Table 1 shows annual growth rates in annual hours worked and real GDP per capita taken from Maddison[4].

Table 1 Annual growth rates, annual hours of work and real per capita GDP 1870-1938 and 1938-1992

	1870-1938		1938-1992	
	Hours	Real GDP	Hours	Real GDP
US	-0.4	1.5	-0.5	2.4
Germany	-0.4	1.7	-0.7	2.5
UK	-0.4	1.0	-0.8	1.8

The expansion of leisure over a lifetime has of course been much greater, with the working lifetime falling over this period from approximately 12 until 70 (or death) to 18 until 60.

2 Time series data

[3] P Dolan, T Peasgood and M White (2008), 'Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being', *Journal of Economic Psychology*, 29, 94-122

[4] A Madison, (1995), *Monitoring the World Economy 1820-1992*, OECD, Paris

The finding that, in the developed world, well-being over time is not correlated with real GDP per head[5] is repeatedly endlessly. It appears to impress many people. A very important reason for this is that it can be demonstrated in a very simple chart. We see the level of happiness over time rumbling along showing no trend. In contrast, there is GDP per head bounding ahead, soaring into the stratosphere. Surely this proves the point?

Yet this is a wholly spurious chart, and it is essential to drop all reference to this finding in any serious discussion of well-being:

- By construction, the happiness (well-being) data can exhibit no trend in the long-run. 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 zero and n. Because of this, in statistical terminology, the order of integration of the series is 0. 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 GDP can exhibit no upper bound. Indeed, for the past 200 years it has shown a persistent trend increase. This series does not therefore have the same order of integration as the well-being data. In fact, we know that its order of integration is 1.

This means that we have to exercise extreme caution in drawing any inferences from the correlation, or rather the lack of it, between time series data on well being and real GDP. In general, we can effectively draw no implications from such evidence[6].

- This lack of correlation extends to a wide range of variables, a fact which attracts far less publicity. Indeed, if we were to attach any import to the correlations, we

[5] The seminal article is R.A. Easterlin (1974), 'Does Economic Growth Improve the Human Lot?' in David, P.A. and Reder, M.W. (eds), *Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz*, Academic Press, New York, USA

[6] R.F. Engle and C.W.J. Granger (1987), Co-Integration and Error Correction: Representation, Estimation, and Testing, *Econometrica*, 55:251-276. Under special assumptions about the noise in any two stochastic processes, this may not be true JL McCauley, KE Bassler and Gh Gunaratne, (2008), 'Integration I(d) of Nonstationary Time Series: Stationary and Nonstationary Increments', http://www.unifr.ch/econophysics

For example, using UK data from1973 onwards, there is no correlation between well-being and either real current public expenditure or lower hours of work. In the US, life expectancy for whites rose from 72.0 years in 1972 to 78.0 in 2003. For blacks, the increase was even higher, from 64.6 to 72.7, 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 1972, women earned 58 per cent of men, rising to 75 per cent in 2003. Yet there was no correlation between well being and any of these improvements.

In fact, there is not even a correlation between the dramatic rise in inequality in the United States and well-being.

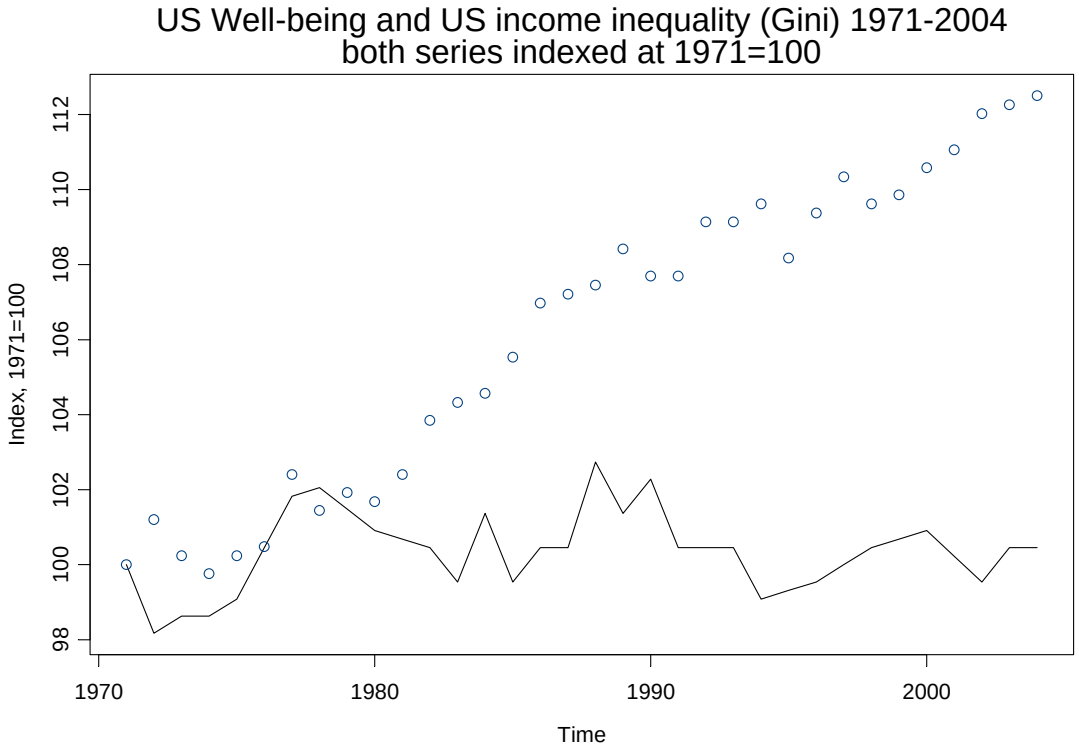

Figure 1 *US well-being and Gini coefficient 1971-2004, both indexed at 1971=100. Solid line is well-being, dotted line is the Gini coefficient*

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This chart seems to rather undermine the emphasis which prominent 'happiness' advocates place on the adverse effects of inequality. Most emphatically, this is not to say that inequality may very well have adverse effects on individuals. There are much more soundly based scientific findings which show this in areas such as health, for example.

Here is a clear case where the concept of well-being confuses rather than clarifies the issue.

- The lack of correlation over time – although it cannot be stressed too strongly in the light of the discussion above that we cannot really draw conclusions from this – between well-being and real income is frequently explained as being due to the 'hedonic treadmill'.

According to this, the fact that happiness does not increase with economic growth is because people quickly get used to the higher living standards which economic growth brings, to the extent that they are constantly in need of another 'fix' to maintain happiness levels.

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Easterlin, the doyen of happiness studies, in a 2003 survey[7] concluded that individuals in general *do* adapt to changes in their monetary circumstances. Interesting evidence which he cites includes two of his own papers. These show that when asked how happy they were five years ago, people on average systematically understate their wellbeing at that time. In other words, the happiness levels of individuals are tracked over time, and although on average there is no upward trend despite increases in real incomes, at any point in time individuals contradict their own previous statements and consider that they were less happy five years ago.

While it is reasonable to suggesting that the relentless pursuit of material possessions might not be the route to happiness, the 'hedonic adaptation' argument assumes that something is not worth doing if the pleasure or interest which it initially stimulates cannot be sustained. But this is the norm, not the exception, in a vast array of human experiences. The fulfilment of many aspirations and ambitions at some point no longer engenders the same excitement that was once expected by the person wishing for them. The fact that the emotions which spur people to achieve aspirations may eventually wear off or be superseded is not an argument for not doing them; they are stages leading onto better things, and they have impacts on other people - in other words, they have a value beyond the transitory emotional state of the protagonist.

[7] R.A Easterlin, (2003), Explaining Happiness, *Proceedings of the National Academy of Sciences*, 100(19):11176-11183

- If a time series measure of well-being were to become used as a basis for policy, governments would succumb to an irresistible urge to try to influence its level.

In such circumstances, it would be essential that the data should contain real information. Unfortunately, this is not the case, in two ways. First, time series well being data in the UK is indistinguishable from a purely random series. The autocorrelation function is flat and has no statistically significant individual values. In turn, this implies that it not possible to carry out systematically accurate forecasts of this variable[8]. So members of a Well Being Policy Committee charged with keeping well-being above a certain level, for example, would have a sinecure. They might just as well shake a dice to make forecasts as carry out any serious analysis.

Second, we do not know what variables have influenced in a systematic way the movements in well being over the past. Note that even if we did, this would still not imply that the series could be successfully predicted. The variables which exercised a systematic influence would themselves have to be capable of prediction[9].

- If time series data is going to continue to be used in any way, then the survey should be augmented as suggested by Baumol and colleagues[10]. They suggest that well-being surveys should be asked prospectively. In other words, to ask if people would be happier if they had more income in the future, even if everyone else also enjoyed the same increase

3 Cross sectional/panel data

The use of what is known as panel, or longitudinal, data is recognized in statistics and econometrics as offering methodologically the best way of dealing with this issue. Panel data combines both cross-sectional data and time-series data. So such a data set will have information about individuals at a point in time, and it will also follow such individuals through time. It is not a panacea, but is thought to be the best way of approaching the inherently challenging problems of causality.

There is now a large literature on, for example, the physiological and psychological benefits of marriage. Married people show better physical health, longevity, psychological health, and reported happiness. A valuable survey of these findings is contained in Wilson and Oswald[11].

[8] If the series exhibited long memory, this would not necessarily be the case. But *many* more data points are required before it could be established whether the data exhibit long memory.

[9] For a discussion of these issues in the context of GDP, see for example P. Ormerod and C. Mounfield, (2000), Random Matrix Theory and the Failure of Macro-economic Forecasting, *Physica A*, 280:497-504

[10] WJ Baumol, RE Litan, CJ Schramm, (2007), *Good Capitalism, Bad Capitalism*, Yale University Press

[11] CM Wilson and AJ Oswald, (2005), 'How does marriage affect physiological and psychological health? Evidence for longitudinal studies', *Dept of Economics University of Warwick Discussion Paper*

This survey only considers results which are obtained from the analysis of panel data. They reference no fewer than 95 papers drawn from a variety of disciplines. The results are striking:

- Marriage makes people far less likely to suffer psychological illness
- Marriage makes people live much longer
- Marriage makes people healthier and happier
- Both men and women benefit, though some investigators have found that men gain more
- These gains are not merely because married people engage in less risky activities
- Marriage quality and prior beliefs can influence the size of the gains.

Moreover, not only are the benefits confined to those who are married rather than co-habiting, but they are large. In terms of health, for example, the longevity effect of marriage may even offset the consequences of smoking.

So, in so far as policy conclusions can be drawn at this stage of happiness research, they imply increased support for marriage, reductions in incentives to single parents, and the promotion of faith schools.

However, even results such as these do not escape the difficult problem, which is general to many empirical issues in economics, of dis-entangling the causality between two factors, in this context marriage and well-being. Marriage may promote wellbeing but, equally, individuals who are prone for whatever reason to exhibit high levels of wellbeing may be more likely to become married (for example, they presumably make more attractive potential mates).

4 Some other issues

- There are two questions routinely faced by policy appraisal which well-being economics is yet to address. The first is the question of inter-temporal allocation of resources and occurrence of the benefits brought about by policies. The second is the question of assessing trade-offs between the outcomes of different policy options.

Policies have different timescales and different start dates. For example, a policy-maker may have two alternative policies, one of which will start yielding benefits straight away, the other of which will start yielding higher benefits five years from now. Policy appraisal has to make an explicit choice about which of these is preferable, based on assumptions on whether we prefer to have our benefits upfront or delayed; in other words, it has to take inter-temporal preferences into account.

Well-being economics is at too early a stage to have thoroughly developed techniques to

deal with inter-temporal choices.

Furthermore, there are no clues of how the magnitude of effect is to be traded off with duration. There is no discussion of whether a policy which makes 1 per cent of people happier over ten years is better than one which makes 0.5 per cent of people happier over twenty years. It may seem slightly ridiculous to even discuss figures in this manner, but these are the kind of decisions which need to be informed by a measure of welfare.

More generally, well-being does not avoid the need to consider trade-offs. Indeed, some of its protagonists appear to believe that all that is required for policy appraisal is the requirement to show that some scheme or other will make people happier. Obviously, this view of the world neglects entirely the key issue of trade-offs.

- Giving unhappy people the message that they are entitled to be happy without any effort on their own part will not make them happy.

- if the state struggles to be held to democratic account for its current responsibilities, the last thing it should do is ambitiously expand them.

In 1944, Friedrich Hayek predicted that as the state expanded its responsibilities, it would become sclerotic and exceed its capacity to respond to people's demands and aspirations. As a result, they would become disillusioned with democracy and calls would be made for decisions to be "taken out of politics" and placed in the hands of experts.

This seems to be a pretty accurate description of events since 1944. The aspiration that governments should promote something as complex as well-being is likely to provide a further twist to this disillusionment.

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