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Pursuing Rising National Well-being: A Sisyphean Challenge?

Saamah Abdallah, Centre for Well-being at nef

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new economics foundation

3 Jonathan Street

London SE11 5NH

United Kingdom

Telephone: +44 (0)20 7822 6300

Facsimile: +44 (0)2078206301

E-mail: info@neweconomics.org

www.neweconomics.org

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Summary

“The creators of subjective well-being indicators can assist policymakers when their measures have been shown to be sensitive to changes in circumstances.”

Ed Diener (2005)

If we are to measure well-being as part of a new measure of progress, we need to be sure that our indicators can actually change over time. There are theoretical reasons which make it unwise to simply assume this: amongst them the idea that happiness levels are mostly genetic and people adapt to different situations, but also the idea that our happiness is relative to others in our society. A recent paper by Professor Angus Deaton (2011) of Princeton University suggests that advocates of well-being measurement should be more cautious. Using data from the USA over the period of the financial crisis, he shows that changes in question order have had a bigger effect on reported well-being than the biggest economic crisis since the Great Depression, and that subsequently, policy makers should not look to well-being data as a reliable indicator of a nation's progress. In particular he notes the lack of an effect of unemployment rates on well-being averages.

If Deaton is right about the lack of a fall of well-being during the recession, and Richard Easterlin (1974) is right about the lack of an *increase* of well-being since the 1950s, then might the use of well-being indicators as measures of progress lead us into a Sisyphean nightmare?¹ Constantly attempting to raise well-being, but never being able to? That is the topic of this paper, which will review Deaton's position, before responding with discussion and evidence from other papers.

Deaton makes some excellent points, and the impact of question order is something that should not be under-estimated. But rather than see it as a strike against the use of subjective well-being measures, it should rather be seen as a part of a lesson on when they might and might not be useful for monitoring changes over time.

Ultimately, Deaton is right to caution governments against expecting large rapid changes in reported national average well-being as a result of changes in economic conditions. But this does not detract from the value of measuring well-being for the following reasons:

- Large changes can occur at the national level, but they take time, and sometimes a long time.
- A large part of the value of well-being data will be in the possibility to disaggregate it across different population groups, and, ideally, into different aspects of well-being, and to use it to explore the drivers of well-being.
- Economic factors are not the only ones to determine well-being. The data show that social factors are more important.

A little recession never hurt anyone?

Professor Deaton is not a subjective well-being sceptic. He has published many papers on the topic, including with key advocates such as Daniel Kahneman. As such, his 2011 paper on the financial crisis in the US deserves considerable attention.

¹ Sisyphus was a Greek king condemned to perpetually pushing a rock up a hill, only to find it roll back down again.

The paper looks at how well-being in the US, as assessed by questions in the Gallup-Healthways Well-Being Index,² has not gone down by as much as one would expect from the financial crisis and recession, and that the largest changes in reported well-being are to do with measurement error and the media. In particular, he highlights that the large increase in unemployment in the country (from 4.8 per cent to 10.6 per cent) has not contributed to a large decline in well-being.

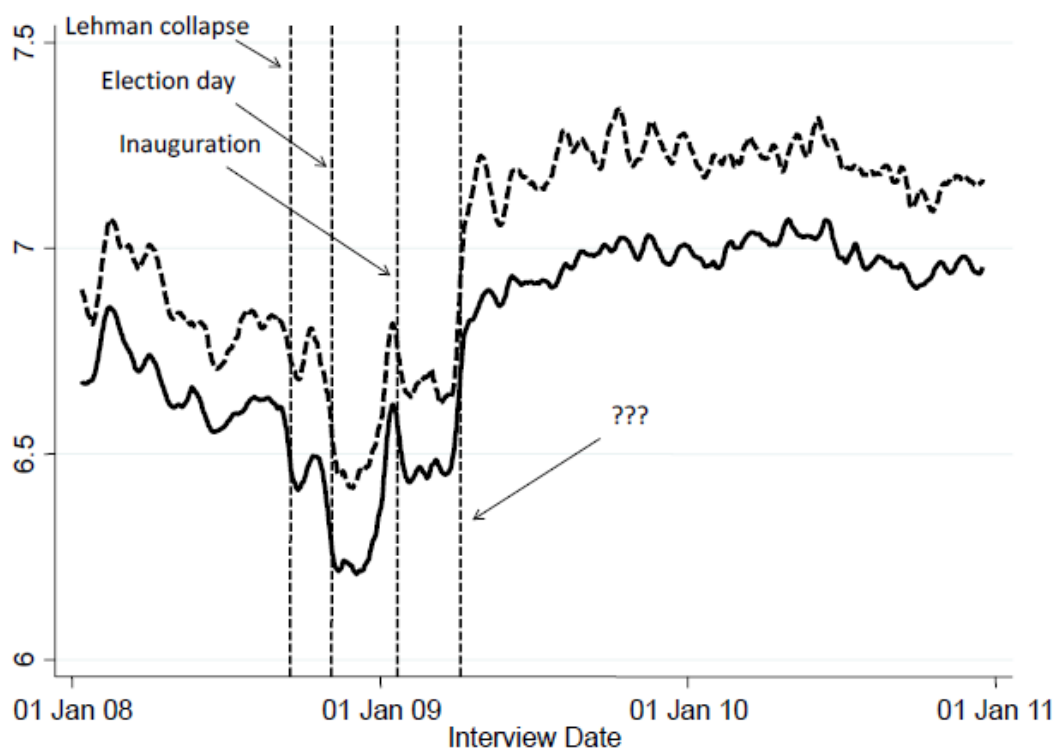
Deaton does not subscribe to the idea that an individual's well-being never changes over the long-term, what has been called 'set-point theory' or 'hedonic adaptation'. Section 2 of his paper argues that, whilst this may be the case for hedonic measures of well-being (focusing on happiness), evaluative measures are affected by circumstances and *can* change over time.

Rather, he highlights that the changes to well-being that are caused by economic events such as being made unemployed, whilst large at the individual level, are very small at the national level, and argues that well-being 'measures are unlikely to be useful for monitoring average well-being over time'.³

Question order effects

In particular, Deaton contrasts these small changes to the big changes seen for unimportant reasons. In Figure 2 of his paper (Figure 1 below), changes in well-being (measured using the ladder of life) for all adults are shown with the thick line, with those for over 60s shown with the broken line.

Figure 1: Figure 2 from Deaton (2011)



² <http://www.well-beingindex.com/>

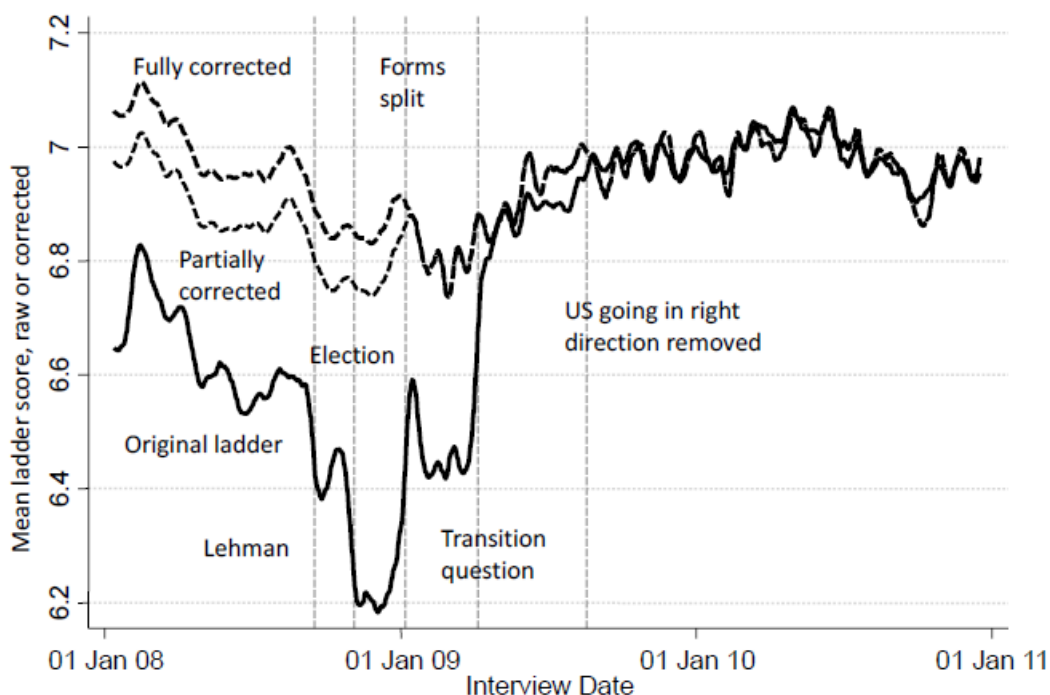
³ Deaton (2011) 'Recent development in measuring well-being in the United States' Presentation at Conference 'Two years after the Stiglitz-Sen-Fitoussi report: What well-being and sustainability measures', Paris, October 2011. Available at: <http://www.oecd.org/dataoecd/36/61/48919745.pdf>.

The paper finds a decline in well-being since the start of 2008, but that the biggest single change in the time series happens on 6th April 2009, a date which cannot be associated with any particular social, political or global event. This increase of about 0.3 points, he then explains by way of question order effects. Before this date, the well-being questions were immediately preceded by a series of questions related to politics. After this date, a 'buffer' question was introduced between the political questions and the ladder-of-life item. The implication is that asking people to reflect on politics, a topic that many people dislike, brings them down and leads to lower reported evaluations of life.

Fortunately, however, as Deaton reports, Gallup were well aware of this question order effect and a split ballot technique and some use of other data in the survey allow Deaton to make estimates for life evaluation for the period prior to 6th April 2009 that are compatible with the data after this date.

These estimates reveal that well-being has indeed fallen somewhat as a result of the recession, and has not yet fully recovered, as shown in Figure 4 from Deaton's paper, shown here in Figure 2 (one should look at the top broken line).⁴

Figure 2: Figure 4 from Deaton (2011)

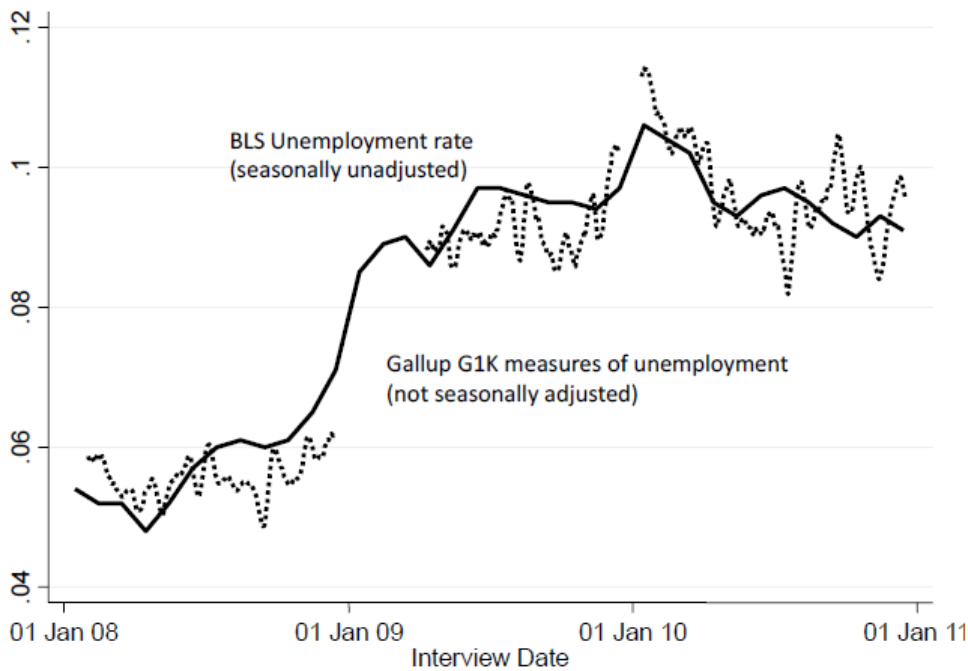


⁴ It is important to further bear in mind that the starting point of this series, early 2008, itself represents a low point in well-being in the USA. The General Social Survey, which if anything, is likely to be *less* sensitive than the ladder-of-life scale given that it uses a three-point happiness index, records that average well-being fell 19% from 2006 to 2008, to its lowest point since 1972 (see Dutta & Foster, 2011, for figures). Scrutiny of the raw data from the Survey, available online, shows that all the interviews contributing to this low 2008 figure took place before the collapse of the Lehman Brothers on the 15th September, most of them (75%) having been completed by June 2008. In other words, the impact of the recession first hit home *before* stock markets collapsed and unemployment rose.

Stocks, unemployment and income – what drives well-being decline?

Having dealt with question order effects, Deaton then looks to what did drive changes in well-being over the three years of the data he has available. Pitting stock prices (as measured by the S&P 500), against mean income levels and against unemployment rates, he finds that the strongest predictor of reported well-being at both the monthly and daily levels is stock prices ($t=7.2$ at monthly level, $t=11.4$ at daily level). In other words, it is not the fact that unemployment has more than doubled that has reduced well-being, but rather the rough and tumble of the stock market. Comparing Figure 4 above with Figure 9 from Deaton's report, which shows unemployment rates (here Figures 2 and 3 respectively), reveals that the patterns are quite distinct.

Figure 3: Figure 9 from Deaton (2011)



Deaton's conclusions

Deaton argues that the lack of a strong impact of unemployment on national well-being is actually not that surprising. Unemployment may have doubled in the US during the recession, but this only directly affects $1/20^{\text{th}}$ of the country's population. As a result, the large impact on well-being for becoming unemployed for any given individual is diluted by 19 individuals for whom no change in employment status occurred.⁵

Of more concern to Deaton is the close correlation between well-being and stock prices. After all, most people do not have shares and are certainly not directly affected by share price falls – why should their well-being change? Deaton suggests, and we would broadly agree, that the correlation is due to the fact that both the stock market and reported well-being are driven to a large extent by the mood of the nation, and that that mood is strongly shaped by the media. A particular gloomy day in the newspapers would lead to fears that would both lower reported well-being and stock prices.⁶

⁵ Though, we will later note studies which show that it is not only the unemployed that are affected by unemployment.

⁶ Actually, this interpretation is probably a simplification. Looking at the data for stock prices and well-being, it appears that subjective well-being *predicts* future stock prices, meaning that it is the national mood, as assessed by subjective well-

For Deaton, this conclusion is disturbing. If reported well-being is determined by frivolous factors such as the media and St. Valentine's Day, how can we use it to inform policy?

"In a world of bread and circuses, measures like happiness that are sensitive to short-term ephemera, and that are affected more by the arrival of St Valentine's Day than to a doubling of unemployment, are measures that pick up the circuses but miss the bread." (pg. 51)

National Subjective Well-Being: A Big Indicator

Deaton's analyses are a sober warning about the difficulties in using well-being data to understand a country's progress. In particular, short term changes in mean reported well-being figures, could be as misleading as quarterly GDP figures as measures of how we are doing. However, this by no means should be understood as a negation of the possibility of using well-being data at all. Rather, it reveals three lessons related to the 'size' of average reported life evaluation as an indicator.

More than the economy

The most important lesson concerns *what* life evaluation questions actually measure. Deaton concludes with two lines which make it clear what he believes well-being indicators *should* measure:

"The correlation with the [stock] market reinforces that even at best, the well-being measures are not measuring current well-being, in the sense of today's level of real income..." (pg. 47)

*"There are serious problems in using well-being measures for tracking the performance of the **economy** over time."* (pg. 49, our emphasis)

But these problems are perhaps not so surprising. Advocates of well-being indicators have highlighted that one of the main strengths of such indicators is to go *beyond* economic factors. In particular, as we have known for a long time, it is *social* factors that are the biggest determinant of reported well-being (e.g. Diener *et al.*, 1999; Diener & Seligman, 2002; Blanchflower & Oswald, 2004; Helliwell & Putnam, 2004). Above a reasonable income level, income itself does not appear to have much effect on individual well-being (Woodward & Abdallah, 2011). So far, as a result of the current economic crisis, it will only have been a minority of Americans who have gone below that level. It is true that *loss* of income may have an impact on well-being, but the timing of this impact is more to do with fear of the loss, than the loss itself, which relates to the final lesson on time, below. Day-to-day changes in actual income associated with a recession are therefore not likely themselves to lead to marked and clearly timed declines in *mean* well-being for the nation.

Disaggregation

Of course the fact that aggregate figures haven't moved much is not the end of the economic story. It is true that even in the worst of times, phenomena such as rising unemployment tend to affect a minority of the

being which determines what happens with stock prices a few days later. But that is an issue for a different paper.

population. Similarly, there are policy shifts which might affect minorities such as elderly people, the disabled or ethnic minorities. However the point is policy makers need to be alert to changes in well-being in different groups, not just the population as a whole. The fact that well-being has fallen more amongst the poorest in the US is of particular concern, given that they already had the lowest levels of well-being.

Disaggregation can also be understood in terms of disaggregating into different aspects of well-being. The evidence in the following section will show how doing this can sometimes increase sensitivity.

Time

The final lesson that should be learnt concerns timeframes. Changes in well-being from day-to-day may be meaningful, and one should not deny the fact that the media can influence people's mood. It is probably the general mood of the nation that initially brought down national average well-being in 2008 before the markets collapsed.

However, it seems likely that the main drivers, and the policy levers influencing these, will have most impact on general well-being indicators over the long term. The studies reviewed in the second half of this paper suggest this, and this is what one would expect: large sustained changes of national averages for life evaluation or life satisfaction will only occur with large changes in conditions – changes in lifestyle, social networks and culture, sustained changes in economic and political conditions. These things take time. Even focussing on the economic sphere, consumption patterns do not map directly onto income patterns. For some people, savings or family ties can protect them from the shocks of job loss. The increase in the poverty rate in the US from 12.5 per cent in 2007 to 15.1 per cent in 2010 is terrible news, but it shows that only 1 in 40 Americans has actually fallen into poverty as a result of the recession.⁷ This shift compares, for example, to a decline in poverty rates from over 20 per cent in the 1960s.

Similarly the non-pecuniary harm that unemployment is known to cause (Winkelmann & Winkelmann, 1998), for example in terms of self-esteem and social networks, may not strike home so quickly. There is also evidence that the harmful effects of unemployment continue beyond the period of being unemployed (Clark *et al.* 2001).

One would expect that, if the recession were to continue, throwing more people into unemployment and poverty, and other non-economic factors did not compensate for this harm, a more robust decline in well-being would become visible over time, one where the daily turbulence caused by the media would come out in the wash.

Human experience is a complex thing, and one cannot expect to find a simple and systematic lagged relationship between real world phenomena and reported well-being. Sometimes, people's well-being will fall (rise) in anticipation of an event that they fear (look forward to), and sometimes their well-being will only fall (rise) once the harm (benefit) of such an event fully sets in. One should be wary of this when looking at fine-scale time resolution data.

⁷ <http://www.census.gov/hhes/www/poverty/data/historical/hstpov9.xls>; downloaded 22nd October 2011.

Tales of well-being from the past

Deaton's paper shows the minimal impact of the 2008 recession on reported well-being in the US over a three-year period. It is perhaps worth bringing together some past work where world conditions and phenomena *have* affected well-being over time.

Other studies of unemployment rates

Several studies have claimed to find evidence that unemployment rates predict average national well-being (Di Tella *et al.*, 2001, 2003, 2009; Wolfers, 2003; Blanchflower, 2007). These studies have pooled data on well-being from multiple countries and over several years, and carried out large-scale regressions whereby unemployment rates have been found to predict levels of well-being, independent of whether the respondents themselves are unemployed.

Deaton, in his paper, mentions these papers, but appears unconvinced by them on account of the fact that data from several countries have been pooled together – a so-called 'time-series cross-section' (TSCS) study. It is true that these studies leave open the possibility that the relationships they find between unemployment rate and well-being may be more due to cross-national variation rather than change over time. Rafael Di Tella (personal communications) argues that the use of country dummies avoids this possibility, and statistical methodology papers support the idea that, in TSCS studies, the effects of slowly changing variables such as unemployment tend to be absorbed into country dummies (or fixed effects):

“Although we can estimate [a model] with slowly changing independent variables, the fixed effect will soak up most of the explanatory power of these slowly changing variables. Thus, if a variable . . . changes over time, but slowly, the fixed effects will make it hard for such variables to appear either substantively or statistically significant” (Beck, 2001, pg. 285).

In other words, a dependent variable must have a very strong effect on the independent variable over time to emerge as significant in such methodologies. However, this does not close the door to the possibility that the change over time is doing *all* the work. Indeed, Di Tella *et al.* (2001) explicitly tested whether *change* in unemployment rate predicted well-being and found the effect to not quite be significant.

An appropriate test would be to conduct Di Tella's analyses, and others like them with all variables (and fixed effects) included *except* unemployment rate; then again with unemployment rate included, and see whether the coefficients for the country dummies decline from one regression to the next. If they do, then that suggests that some (though this will not define how much) of the variance picked up by the unemployment rate term is cross-sectional.

Having said that, a recent paper has found significant *change* in unemployment terms, above and beyond the unemployment rate itself (Helliwell & Huang, 2011). The study used the same raw data as Deaton (the Gallup survey), and found effects for several measures of well-being, including the ladder of life.

Deaton did not carry out this particular analysis (incorporating *change* in unemployment rate), but the main reason for the difference in results is more likely to do with spatial and temporal resolution. Whereas Deaton

maximised temporal resolution, looking at change from day to day and month to month, Helliwell and Huang focus on spatial resolution, using unemployment rates at the county level (there are 3,141 counties in the US), and leaving temporal resolution at the quarterly level. As a result, they are able to capture the different patterns that take place across the US, whilst smoothing over the ups and downs in the well-being data that we have seen are likely to be caused by media events. This means there is no actual inconsistency in the results.

Unemployment rates and the employed

Another paper which focused on a single country also appears to show a clear relationship between well-being and unemployment. Figure 4 shows the uncanny relationship between unemployment and life satisfaction found in Germany using the GSOEP (German Socio-Economic Panel) from 1984 to 2004 (Leuchinger et al., 2008).

Figure 4: Life satisfaction of 18-65 year olds working part-time or full-time in West Germany. Reproduced with permission from Leuchinger et al. (2008).



The authors report a correlation of $R=0.45$ ($p<0.05$). While this finding is less convincing than analyses which control for other potential explanatory factors, it is indicative of a strong relationship. Furthermore, it should be highlighted that this data *excludes* data from the unemployed themselves – the changes in life satisfaction are amongst the employed population. The argument made by the authors is that rising unemployment causes fear and insecurity in the working population.

GDP and life satisfaction

The relationship between GDP and life satisfaction has been debated since 1974, when Richard Easterlin published his seminal paper on the topic and the Easterlin Paradox was coined. The debate intensified with the publication by Betsey Stevenson and Justin Wolfers (2008) of a paper which set out to refute Easterlin's claim that well-being does not increase with GDP in wealthy countries. The debate is still ongoing, but there are two findings relevant for this paper that both sides agree on. Firstly, Easterlin and Angelescu (2009) have 'conceded' that well-being does indeed vary with GDP in the short-term, i.e. that short-term fluctuations in

GDP are associated with fluctuations in well-being.⁸ This is consistent with the findings Stevenson & Wolfers (2008a) highlight on the GDP output gap.

Secondly, that there are different patterns for different nations. Whilst life satisfaction has increased significantly in some countries, such as Denmark and Italy, it has decreased in others, such as Belgium (Stevenson & Wolfers, 2008a). Easterlin (2009) himself recently published a paper exploring the 'V-shaped' pattern of well-being in Central and Eastern European countries as they transition from communism to capitalism, with consequent falling and rising GDP.

Whilst these results may or may not allow academics to be certain that GDP growth leads to increasing well-being, they do show that countries' national averages can change significantly over time.

Democracy, freedom and life satisfaction

A related set of findings appears in a paper by Ronald Inglehart and colleagues (2008). They use data from the four waves of the World Values Survey to create a structural equation model whereby social liberalisation (tolerance of outgroups), democratisation and economic development (as measured by GDP growth), lead to increases in sense of freedom which in turn increases subjective well-being.

The study found that these relationships were stronger when the country began the time series at a lower starting point in terms of the independent variables, highlighting the idea that economic development is beneficial in terms of well-being for poorer countries, but not so for wealthier ones.

It also highlights the value of exploring subjective indicators other than general ones such as life satisfaction – in this case, sense of freedom.

Inequality and well-being

Another important economic indicator is inequality. Authors such as Richard Wilkinson & Kate Pickett have highlighted the negative impacts of economic inequality on well-being (2009) using cross-sectional data. Oishi and colleagues (2011) have taken the step of converting this cross-sectional finding into a longitudinal one, by studying changes in inequality and well-being in the US from 1972 to 2008 using the General Social Survey. On average Americans were happier in years with less income inequality.

The authors go on to demonstrate that it is the lower income groups for which this effect is seen and that the relationship is explained by positing a pathway through sense of fairness and trust in others. These further findings, together with feasible theoretical explanations for the link, and cross-sectional evidence of a relationship between inequality and well-being (e.g. Winkelmann & Winkelmann, 2010), give reason to believe that what this paper has found may not be simply correlation, but indeed causation.

Well-being inequality

Another way of understanding how economic conditions might change well-being in a nation is to look at inequalities in well-being itself, rather than the mean. Stevenson & Wolfers (2008b) have demonstrated that, whilst mean well-being has not increased in the US from 1972 to 2006, *inequality* in well-being has substantially fallen. Interestingly, they find that this process

⁸ Note that what is 'short-term' in that context (i.e. year-on-year changes in GDP) is actually more like medium-term in the context of this paper, where short-term refers to day-to-day or month-to-month changes in well-being.

has not been dependent on decreasing *income* inequality. The authors argue that non-pecuniary factors have been instrumental; further evidence that subjective well-being is measuring something more than just income.

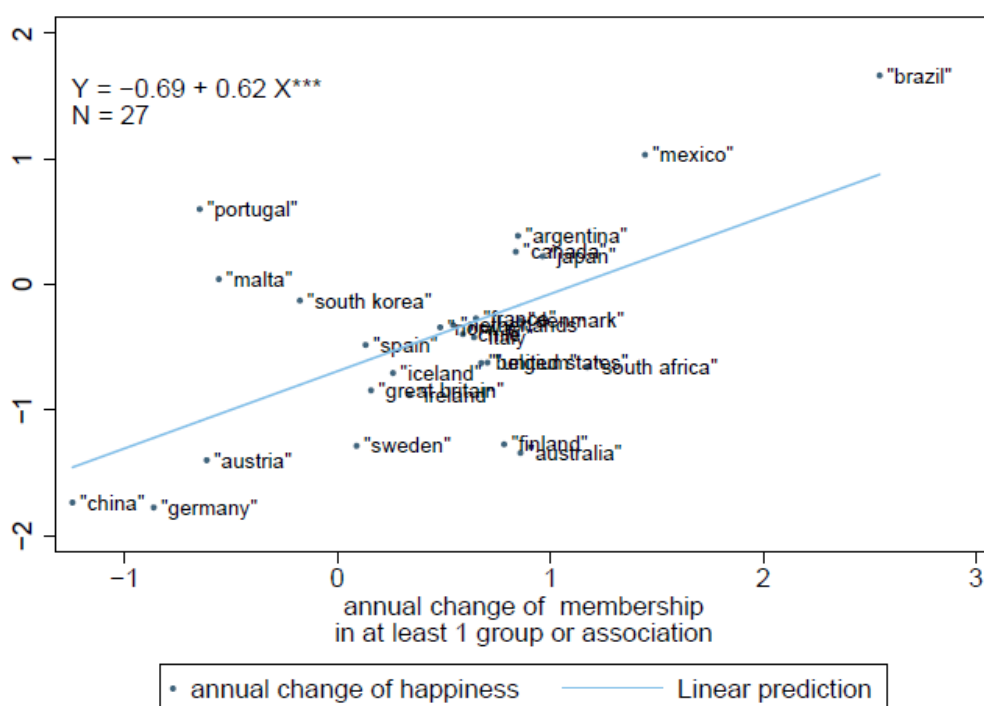
The same paper also reports on differential patterns of change over time for different gender and ethnic groups. For example, whilst the situation for non-whites appears to have improved since the 1970s, with substantial increases in well-being, women have seen their well-being falling significantly in comparison to men.

Social capital and well-being

We have already noted how social factors have been found to be the most important determinants of well-being. Unfortunately, likely due to a lack of data on social capital, we are only aware of one paper that has explored how these factors determine well-being over time. Stefano Bartolini and colleagues (Bartolini & Bilancini, 2010; Bartolini & Sarracino, 2011), have studied multiple data sources including the US General Social Survey, the German Socio-Economic Panel, and the four waves of the World Value Survey to show that it is changes in sociability (the quantity or quality of social relationships) that determine the long-term trends in well-being.

Figure 5 shows the data for 27 countries, plotting the change in well-being for each country over the four waves against the change in group membership, as an indicator of sociability. There is a strong correlation between the two (R=0.55).

Figure 5: Annual change in group membership against annual change in happiness, from World Values Survey, for 27 countries. Reproduced with permission from Bartolini & Sarracino (2011).



Bartolini & Bilancini use a 'happiness accounting' methodology developed by Di Tella and MacCulloch (2008) to understand how changes in sociability predict changes in well-being in the US and Germany over time. Happiness accounting involves calculating beta coefficients for known predictors of well-being (e.g. income, unemployment, etc.) using micro-level data, and then calculating how changes in these predictors over time *should* have affected average well-being in a country.

When Di Tella & MacCulloch (2008) apply this methodology to data for Europe and the US, they find the accounts don't add up. Whilst changes in the predictors of well-being should have meant an *increase* in well-being over time (from 1975 to 2007), the actual trend was one of decline. They posit that there must be some unidentified variable reducing well-being over time.

Bartolini & Bilancini's paper in essence identifies this variable as sociability. Incorporating this variable into 'happiness accounting', their prediction for well-being change for the US comes within 25 per cent of the actual decline found from 1975 and 2004: far better than Di Tella & MacCulloch's prediction which did not include sociability as an independent variable.

Importantly, they claim this finding leads to the following explanation of the Easterlin Paradox: *Ceteris paribus*, economic growth *would* have increased well-being in the US. However, this economic growth has come at the same time as a decline in social capital – Indeed Bartolini has argued that the two trends are linked (Bartolini & Bonatti, 2008). This decline in social capital counteracts the benefits of economic growth.

Conclusions

These tales of well-being from the past show that, far from being an insensitive static variable, average well-being for a nation (typically assessed in terms of life satisfaction or reported happiness) *can* change and can change in ways that are consistent with cross-sectional evidence on the determinants of well-being. Well-being *does* appear to rise with rising income, in some contexts, as well as with improving political conditions, whilst it falls in the face of rising inequality and unemployment, as well as in the face of declining social capital. To date, the evidence suggests that these effects are best observed over a matter of years, rather than days or months.

The studies also underline the three lessons noted following our analysis of Deaton's paper.

Firstly, one must look to more than economic variables to understand changes in well-being. Data on social capital is severely lacking, but the evidence we do have, as reviewed by Stefano Bartolini, provide at least part of the solution to the much-pondered Easterlin Paradox: it seems to be the fall in social capital in the US that has neutralised the benefits that one might have expected as a result of economic growth, leading to a seemingly flat trend over time. The collection of data on social capital, therefore, will play a central role in the understanding of new well-being data generated by National Statistics Offices (NSOs).

Even when it is economic variables that are under the microscope, one cannot expect to be able to interpret them in terms of simple pecuniary effects. The evidence from Leuchinger *et al.* (2008; see also Clark *et al.*, 2010) suggests that the direct effect of being made unemployed on relatively few people (around 6 per cent of the working-age population in the case of Deaton's analyses) is not going to have the biggest impact on the national average for well-being. It is the *fear* of unemployment and its impacts on the population as a whole which will have that impact. The relationship between this fear and the actual unemployment figures (produced and reported several months after the event) will be complex and may vary from society to society. It is reasonable to suppose that in the

US for example, the general mood of the media as reflected in stock market prices is an important mediator, hence the tight correlation with these prices noted by Deaton. It is important to recognise that this fear cannot be dismissed as part of the ‘circus’ of life – the need for security is, according to psychologists past and present, a basic human need (Maslow, 1943; Kasser, 2009).

Because of this, secondly, policy-relevant changes in well-being become more evident when one ‘zooms out’ on the time axis, so as to look at changes over years, rather than days or months. NSOs will need to bear this in mind when collecting data, so as to avoid the events of single days or even weeks distorting results for an entire year. (This is not to say that the changes found by the Gallup-Healthways Well-Being Index from day to day are not valid in their own terms – there is no reason to doubt that the people interviewed genuinely felt down on certain days because of the news they had read that morning, or felt happy because St. Valentine’s Day was approaching. Neither of these factors determine the income they receive that day, but they do form real phenomena that affect their lives in the short term).

Lastly, headline average figures for nations can be unpacked so as to reveal immensely rich data on the well-being of different groups and on well-being inequalities. NSOs should make sure that these disaggregated figures are available, whilst policy makers and those seeking to influence policy should not neglect to look at them. Disaggregation also applies to the concept of well-being itself. As well as headline figures for ‘overall’ well-being, data is needed on aspects of well-being such as feelings of autonomy, trust and relatedness. Sometimes, it is here that changes in well-being resulting from policy shifts will be first seen.

Deaton expresses concern that well-being measures may focus on the circus of life rather than the bread. He is right that national measures based on the mean response from the entire population may not assess the poorest’s access to bread all that well. But we have other objective measures to assess poverty. Well-being measures will help us assess not just the circus, but also the relationships, the job, the sense of autonomy and security, and the sense of trust.

And, to the extent that we can work to improve conditions in all these areas, then the pursuit of rising well-being does not appear to be a Sisyphean task.

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References

- Bartolini S and Bonatti L (2008) 'Endogenous growth, decline in social capital and expansion of market activities' *Journal of Economic Behavior and Organization* **67**:917–926.
- Bartolini S and Bilancini E (2010) 'If not only GDP, what else? Using relational goods to predict the trends of subjective well-being' *International Review of Economics* **57**:199-213.
- Bartolini S and Sarrocini F (2011) 'Happy for how long? How social capital and GDP relate to happiness over time' *Quaderni del dipartimento di economia politica e statistica*, 621.
- Beck N (2001) 'Time-series-cross-section data: What have we learned in the past few years?' *Annual Review of Political Science* **4**:271–93.
- Blanchflower D (2007) 'Is unemployment more costly than inflation?' *National Bureau of Economic Research* working paper 13505.
- Blanchflower D and Oswald A (2004) 'Well-being over time in Britain and the USA' *Journal of Public Economics* **88**:1359–1386.
- Clark A, Georgellis Y and Sanfey P (2001) 'Scarring: The psychological impact of past unemployment' *Economica* **68**:221-241.
- Clark A, Knabe A and Ratzel S (2010) 'Boon or bane? Others' unemployment, well-being and job insecurity' *Labour Economics* **17**:52-61.
- Deaton A (2011) 'The financial crisis and the well-being of Americans' Hicks Lecture, Oxford, May 2011.
- Diener E (2005) 'Guidelines for National Indicators of Subjective Well-Being and Ill-Being' *SINET*, November 2005, 4-6.
- Diener E & Seligman M (2002) 'Very happy people' *Psychological Science* **13**:81–84.
- Diener E, Suh E, Lucas R and Smith H (1999) 'Subjective well-being: Three decades of progress' *Psychological Bulletin* **125**:276-302.
- Di Tella R, MacCulloch R and Oswald A (2001) 'Preferences over inflation and unemployment: evidence from surveys of happiness' *American Economic Review* **91**:335–41.
- Di Tella R, MacCulloch R and Oswald A (2003) 'The macroeconomics of happiness' *Review of Economics and Statistics* **85**:809–27.
- Di Tella R and MacCulloch R (2008) 'Gross national happiness as an answer to the Easterlin Paradox?' *Journal of Development Economics* **86**:22-42.
- Di Tella R and MacCulloch R (2009) 'Happiness, contentment, and other emotions for central banks' in C Foote, L Goette & S Meier (eds) *Policymaking insights from behavioral economics*, Federal Reserve Bank of Boston, 311–66.
- Dutta I and Foster J (2011) 'Inequality of Happiness in US: 1972-2008' University of Manchester Economics Discussion Paper Series EDP-1110.

- Easterlin R (1974) 'Does economic growth improve the human lot? Some empirical evidence' in David PA and Melvin WR (eds) *Nations and households in economic growth* (Palo, Alto, CA: Stanford University Press).
- Easterlin (2009) 'Lost in transition: Life satisfaction on the road to capitalism' *Journal of Economic Behavior & Organization* **71**:130-145.
- Easterlin R and Angelescu L (2009) Happiness and growth the world over: time series evidence on the happiness-income Paradox, IZA DP no. 4060
- Helliwell J and Huang H (2011) 'New measures of the costs of unemployment: Evidence from the subjective well-being of 2.3 million Americans' *National Bureau of Economic Research* working paper 16829.
- Helliwell J and Putnam R (2004) 'The social context of well-being' *Philosophical Transactions of the Royal Society of London, Series B* **359**:1435-1446.
- Inglehart R, Foa R, Peterson C and Welzel C (2008) 'Development, freedom, and rising happiness' *Perspectives on Psychological Science* **3**:264-285.
- Kasser T (2009) 'Psychological need satisfaction, personal well-being, and ecological sustainability' *Ecopsychology* **1**:175-180.
- Leuchinger S, Meier S and Stutzer A (2010) 'Why does unemployment hurt the employed? Evidence from the life satisfaction gap between the Public and the Private Sector.' *The Journal of Human Resources* **45**:998-1045.
- Maslow A (1943) 'A theory of human motivation' *Psychological Review* **50**:370-396.
- Oishi S, Kesebir S and Diener E (forthcoming) 'Income inequality and happiness'
- Stevenson B and Wolfers J (2008a) 'Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox' *Brookings Papers on Economic Activity*, Spring, 1–87.
- Stevenson B and Wolfers J (2008b) 'Happiness inequality in the United States' *Journal of Legal Studies* **37**:S33-S79.
- Wilkinson R and Pickett K (2009) *The Spirit Level: Why Equality is Better for Everyone* (London: Penguin Books).
- Winkelmann L and Winkelmann R (1998) 'Why are the unemployed so unhappy? Evidence from panel data' *Economica* **65**:1-15.
- Winkelmann L and Winkelmann R (2010) 'Does inequality harm the middle class?' *Kyklos* **63**:301-316.
- Wolfers J (2003) 'Is business cycle volatility costly? Evidence from surveys of subjective well-being' *International finance* **6**:1–26.
- Woodward D & Abdallah S (2012) 'Why We Need a "Plenty Line"' Soon to be available at <http://www.globaltransition2012.org>.