

Inequalities in wellbeing

Challenges and opportunities for research and policy

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Summary

While important progress has been made on wellbeing and its application to policy, the study of *inequalities* in wellbeing is woefully underdeveloped. In this paper we argue that advocates for the use of wellbeing in policy should pay more attention to inequalities in wellbeing.

Without such a focus, the wellbeing agenda may miss the opportunity to promote social justice, and could risk increasing inequalities in wellbeing.

When thinking about inequalities in wellbeing, it is useful to distinguish between two different measures:

- **Inequalities between population groups**, for example the difference in average wellbeing between men and women, or those with a high income or a low income.
- **Inequality in overall wellbeing in the population**, without consideration of any other variables such as income or ethnicity. This could for example be a measure of the wellbeing score of the top 10% versus the bottom 10% of the wellbeing distribution.

While there has been some important research already conducted, there are significant gaps and potential methodological challenges. We therefore propose the following next steps for research on wellbeing inequalities:

- **Further exploration of possible methodological challenges in the measurement of wellbeing inequality.** This should include exploration of ‘bounded scale effects,’ as well as how cultural response biases may affect cross-national comparisons of wellbeing inequality.
- **Further analysis of the drivers of inequality between groups.** Although there is a solid body of work on which groups in the population have higher or lower wellbeing, there is very little research on the drivers of these differences. For example, it is unlikely that the gap in wellbeing scores between ethnicities is due to cultural differences alone. A better understanding of the social and cultural factors driving these inequalities could inform policy.
- **Review and synthesise existing studies of the drivers of wellbeing inequality** in light of methodological limitations, and to identify policy-relevant conclusions.

The paper aims to be the start of a conversation, and we warmly invite ideas, criticisms and suggestions of other areas for focus.

The case for a focus on inequalities in wellbeing

What matters more: the greatest overall happiness, or the happiness of the greatest number? This question has concerned philosophers for centuries. Most famously utilitarianism, which traditionally dictates that public policy should be decided based on which action creates the highest aggregate happiness, has been criticised precisely because of its inattention to the distribution of happiness.¹

While people may differ in opinion about how much equality should be prioritised, most people would agree that it is somewhat important: the vast majority would be uncomfortable with a system of slavery, for example, which justified slaves' suffering on the basis that was outweighed, numerically, by the added happiness they would provide for everyone else.

A parallel question has occupied economists: should the economy be geared towards creating greater overall wealth, even if some people are very rich while others have much less, or towards a more equitable society? How one answers this question rests not only on empirical disputes of economic theory, but also on one's underlying ethical values and forms the foundation of much political and social debate.

It is therefore somewhat curious that the movement in recent decades towards using wellbeing as a primary policy goal has, so far, had so little to say on inequalities in wellbeing. On picking up a research paper or a policy report describing policies for increasing wellbeing, it will almost always describe ways to increase *average* population wellbeing, giving little or no attention to who is likely to win and who is likely to lose from a given intervention.

We suggest that this needs to change.

Most policy interventions involve winners and losers. Even cases which seem not to have explicit losers often use resources that could have been directed towards other interventions which might have had more benefit for certain groups. By focussing on increasing wellbeing without asking 'whose wellbeing?' the wellbeing agenda could risk increasing inequalities.

One such example occurred recently in the debate over the third runway at Heathrow. In June 2015 Howard Davies's Airport Commission included an analysis by consultants PricewaterhouseCoopers (PwC) examining evidence that taking flights for holidays or family visits is good for wellbeing.

As NEF pointed out at the time,² this analysis failed to take account of the impact on the wellbeing of those living in the flight path and those of future generations affected by climate change. But it also failed to consider that those taking flights were already likely to have higher incomes and therefore, on average, higher wellbeing. An analysis which took these factors into account may well have found that a third runway would have increased inequality in wellbeing across the population.

By focussing on increasing the wellbeing of an already privileged minority, the PwC example is perhaps atypical and easily criticised. Nevertheless, it is symptomatic of a wellbeing agenda which fails to hold distributional issues at its heart. Without a closer focus on inequalities, wellbeing could fail to achieve the social justice that so many proponents of wellbeing hope to promote.

One of the strongest findings from the wellbeing literature so far is the diminishing returns on income: an extra £100 for someone very wealthy is likely to have little effect on their wellbeing, while an extra £100 for someone living in poverty will improve their wellbeing much more.³ Such conclusions point towards the benefits of reducing income inequality, not just from the perspective of fairness but also of efficiency in wellbeing terms.

Evidence such as this could suggest that a wellbeing frame for policy making naturally leads to socially equitable outcomes. However, the Heathrow example above suggests that we should avoid such complacency: specific attention on wellbeing distribution is also needed.

There are other reasons, too, why a focus on wellbeing inequalities may be beneficial.

There is an increasing literature on how personal wellbeing can contribute to other outcomes which are important to policy makers, such as increasing productivity, reducing unemployment, and reducing poor health.^{4 5}

One could reasonably theorise that many of these outcomes might be more likely to occur when those with poor wellbeing increase their wellbeing, rather than improvements for those who are already doing well. If so, focussing policies and resources on improving the wellbeing of the less happy might have more impact than increasing the happiness of the already happy.

Unfortunately, we don't yet know whether or not this is the case – research explicitly measuring the distribution of wellbeing would be needed to answer this question.

Governments may also be interested in reducing inequalities in wellbeing for the sake of security and social harmony. The 'discontent' theories proposed by Tullock

and Gurr suggest that people are more likely to rebel if there is a large gap between the happiness of the most and least well off.⁶

So far, the relative inattention to inequalities in wellbeing has led to a common perception of the wellbeing agenda as synonymous with a traditional, distribution-blind utilitarian approach to policy making. But there is no reason why this needs to be the case.

Encouragingly, there are signs that inequalities in wellbeing are beginning to be considered in the policy and political arena. Earlier in 2015, The Happiness Institute, a Danish think tank, published a ranking of countries by wellbeing inequality, rather than the usual average wellbeing on which league tables are generally constructed.⁷

Baroness Claire Tyler, co-chair of the All Party Parliamentary Group for wellbeing economics also recently suggested that a 'focus on reducing wellbeing inequalities may well be the best way to realise our aspirations for liberty, equality and community.'⁸ And last year, former UK Cabinet Secretary Lord Gus O'Donnell, challenged wellbeing researchers to undertake a major exploration of inequalities in wellbeing, calling for 'a Piketty of wellbeing'⁹ (referencing the recent seminal book on economic inequality by Thomas Piketty).

What do we mean by inequalities in wellbeing?

There are at least two ways in which to examine inequalities in wellbeing.

Inequalities between population groups

The first is the difference in average wellbeing scores between population groups. For example, lower income groups almost always have lower wellbeing than higher income groups, and ethnic minorities tend to have lower wellbeing than others.

These differences between groups can be quantified allowing us to compare how different countries are doing on inequalities between groups, observe how these inequalities change over time and how they are affected by policy changes.

Inequality in overall wellbeing in the population

The second approach involves looking at the distribution in overall population wellbeing, without consideration of any other variables such as income or ethnicity. This is a measure of the overall distribution throughout the whole population. In this way, it is akin to measures such as income ratios or the Gini coefficient which is often used to measure inequalities in income.

What do we mean by wellbeing?

Wellbeing can be defined as the extent to which an individual or group experiences their life as going well, based on experiencing positive emotions, functioning well and meeting basic psychological needs. The studies described in this paper use a range of measures, including overall evaluations of life, happiness or positive feelings. However, in many cases wellbeing is measured as life satisfaction – people’s answer to questions such as ‘overall, how satisfied are you with your life nowadays?’ on a scale of 0-10.

How is Britain doing?

When looking at the inequality in overall wellbeing, the UK is more equal than the European average. The graph below compares countries according to an inequality measure called the mean pair distance.

The mean pair distance is a calculation of the average difference in life satisfaction score between two randomly selected respondents, where 0 is complete equality and higher numbers indicate higher inequality. It is one way of measuring inequality in wellbeing.

On this measure, the UK ranks 12 out of 29. This is similar to its position for average life satisfaction, where it ranks 11 out of 29.

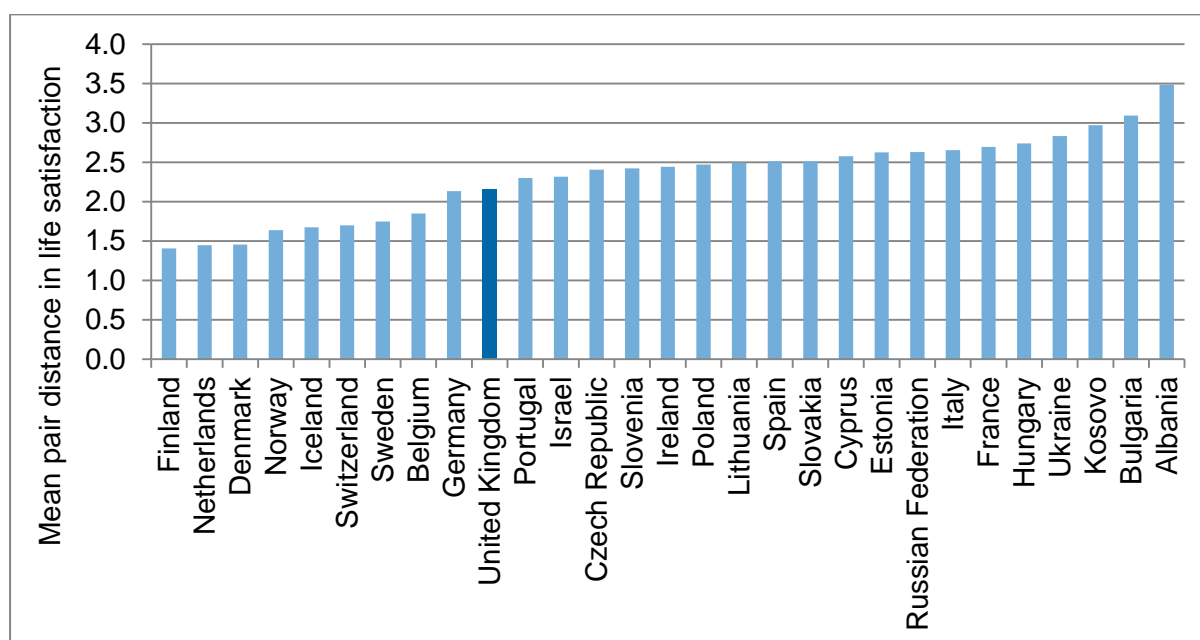


Figure 1 Wellbeing inequality in Europe, 2012. European Social Survey, round 6, 2012

Looking back over time since 2002, there has been some variation in this score for the UK: dipping in 2004 and 2006, and then rising again in 2009 and 2010.

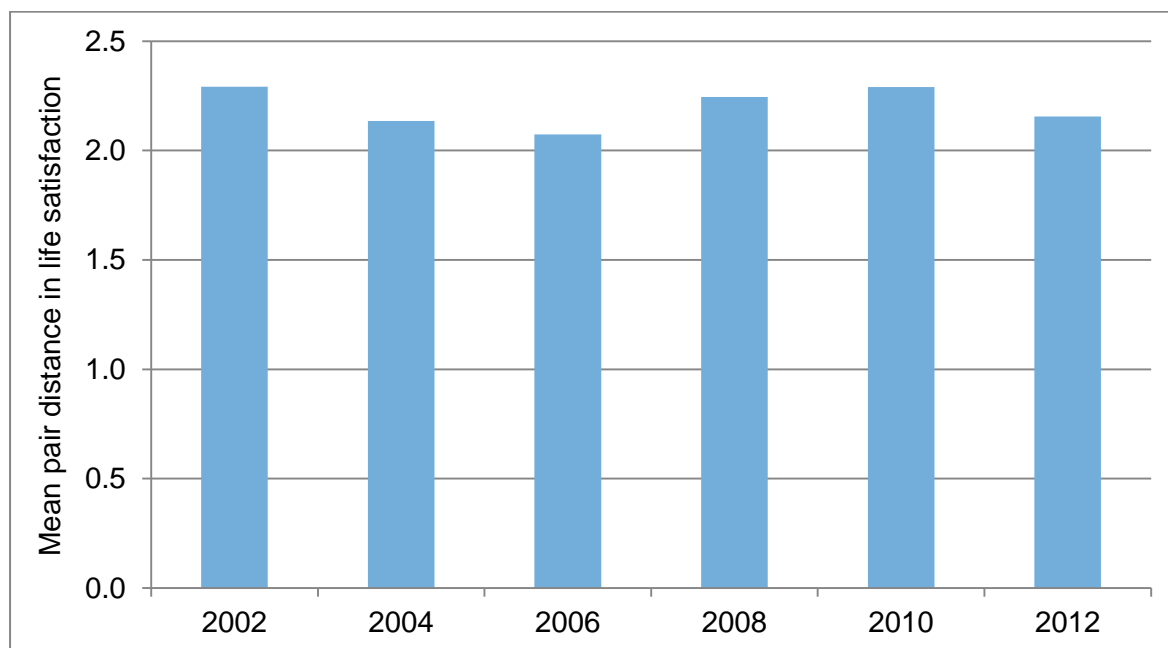


Figure 2. Wellbeing inequality in the UK. European Social Survey, rounds 1-6, 2002-2012

The state of the evidence: what do we know so far?

Although research in wellbeing inequalities is still lagging behind research on average wellbeing, some findings are beginning to emerge from the research.

Inequalities between population groups

There is extensive research describing differences in wellbeing between population groups. Key findings which have emerged are:^{10 11 12}

- Lower income groups, and lower education groups have lower average wellbeing than higher income and education groups.
- Studies from the UK and the US have found that many ethnic minorities have lower wellbeing than the rest of the population.¹³ This holds even after controlling for other factors, such as income or education. However, it is unclear whether this is applicable across other countries.
- Different age groups seem to have different levels of wellbeing. This generally takes a U shape: the lowest life satisfaction occurs in middle age, between about 35 and 50, with higher levels of wellbeing at younger and older ages.
- The picture for gender is mixed; men have higher wellbeing in some countries, and women in others, with some countries showing no difference at all.

Such differences in wellbeing could be dismissed: after all, policy makers cannot change people's ethnicity or age, so what use is it to know that these characteristics are important to wellbeing?

Firstly, it is not necessarily the case that it is the demographic characteristic *per se* which effects wellbeing. An obvious example might be ethnic minorities, where racial discrimination may in fact be the root cause of observed differences in wellbeing.¹⁴ It is also reasonable to assume that the varied results for gender across different countries are socially rather than biologically determined.

So, while policy can't change the demographics of the population, it might be able to affect the policies which determine the life chances of different demographics.

The evidence suggests this may be possible. For example it is notable that inequality in wellbeing by gender differs significantly between countries: men are happier than women in Russia, but women are happier than men in the USA, while in Latin America, there is virtually no difference between genders.^{15 16} Such variation suggests that wellbeing differences between genders are likely to be socially rather than biologically determined.

Unfortunately, however, the vast majority of studies in this area are merely descriptive. Only a small subset has explicitly examined drivers of inequalities between groups, or the effects of policies to reduce them.^{17 1819} Further research into this area may prove to be particularly fruitful.

Secondly, simply knowing about these inequalities can help policy makers to direct resources or attention towards those with lower wellbeing. For example, it is often assumed that older and younger people are most vulnerable, and should receive particular policy attention.

However, looked at in wellbeing terms, it is people in middle age who are struggling most.²⁰ This suggests policy makers could think harder about how to support the wellbeing of this age group.

Inequality in overall wellbeing in the population

Compared to the burgeoning academic literature on average wellbeing, the research base on overall inequality in wellbeing is embryonic. Nevertheless, there has been some important work carried out, both describing wellbeing inequality as well as exploring its drivers.^{21 22 23 24 25 26 27} Initial findings suggest a number of associations:

- Higher GDP seems to be associated with lower wellbeing inequality, at least in rich countries.^{28 29}
- Better governance seems to be associated with lower wellbeing inequality, at least in rich countries. Governance indicators measuring the quality of regulation, voice and accountability, government effectiveness, control of corruption and political freedom have been found to be associated with lower wellbeing inequality, although this does not hold in poorer countries.^{30 31}
- In rich countries, higher levels of government consumption and transfers and subsidies seem to be associated with lower wellbeing inequality, although again, the association does not hold in poorer countries.³²
- One study found that higher inequalities in health may be associated with higher inequalities in wellbeing.³³
- There are mixed results on the role of economic freedom in relation to wellbeing inequalities, varying according to the indices of economic freedom used, the inclusion of rich or poor countries, and the wellbeing measures used.^{34 35}

Below, we will explore two aspects of the research agenda so far which bring to light interesting and challenging issues:

- The association between average wellbeing and inequalities in wellbeing, and the possible methodological challenges this relationship exposes
- How wellbeing inequalities relate to economic inequalities

The association between average wellbeing and wellbeing inequality

One of the strongest findings from the research so far is the negative association between average wellbeing and equality in wellbeing: countries with less wellbeing inequality generally have higher average wellbeing.^{36 37 38} This relationship is shown in the graph below.

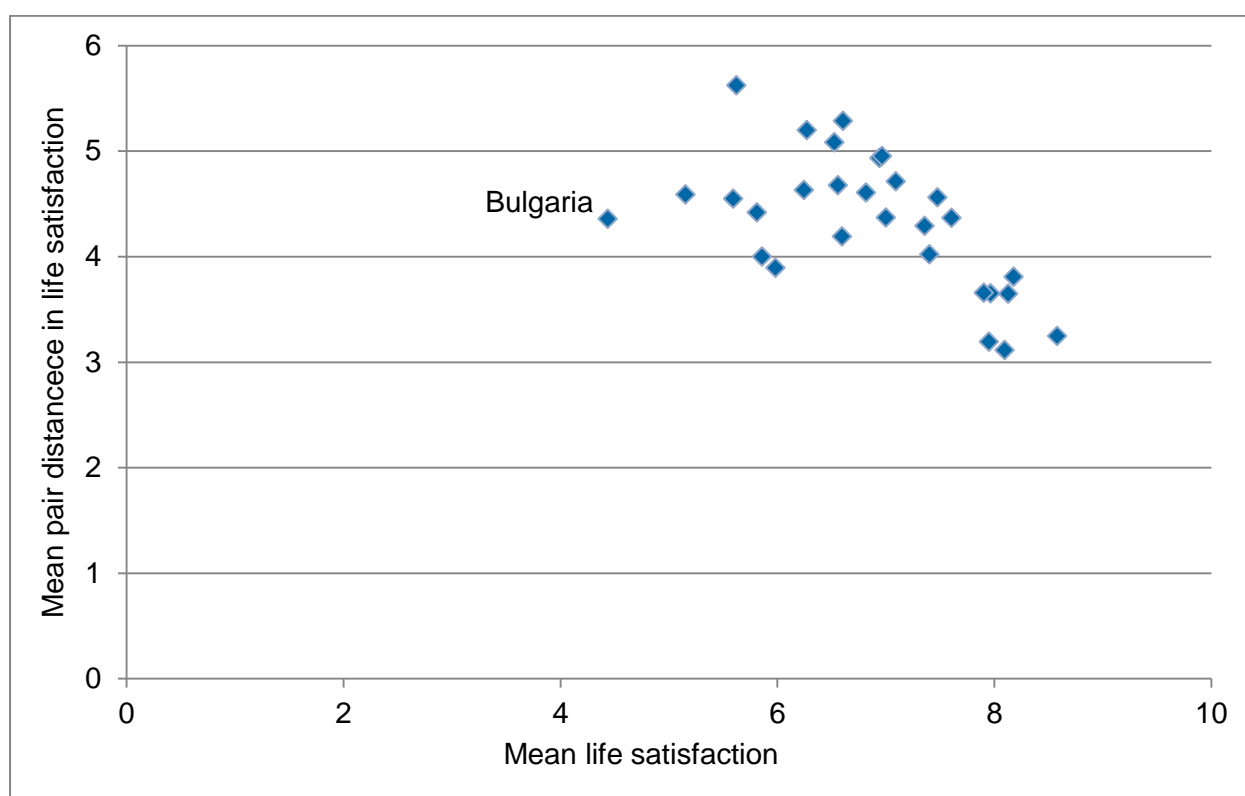


Figure 3. Average wellbeing and wellbeing inequality, European Social Survey, round 6, 2012

Based on this graph, you could reasonably conclude that working to increase average wellbeing might be likely to reduce wellbeing inequalities. However, as can be seen, this association is not perfect – there is some variation within the overall pattern.

For example, the point furthest to the left is Bulgaria. While Bulgaria ranks worse for average life satisfaction, it comes 15th of 29 when on inequality.³⁹ This variation suggests that high average wellbeing and equitable wellbeing do not always go hand in hand. Both objectives therefore require attention.

Bounded scale effects: a possible methodological challenge

The relatively close association between average wellbeing and inequalities in wellbeing also poses a methodological question.

In order to explore this, it is necessary to distinguish between peoples' actual wellbeing (also known as 'latent' wellbeing) and the life satisfaction score that people provide in surveys (measured or observed wellbeing). We use life satisfaction scores because they are a good approximation of wellbeing, but they are not the same thing: one is a number, the other is a state of being.

One criticism of this method for measuring wellbeing is the bounded nature of life satisfaction score – no-one can score below 0 or above 10.⁴⁰ Depending on how wellbeing is conceptualised, this is not necessarily a problem. One could argue that wellbeing is itself bounded – that we cannot achieve limitless improvements in wellbeing, in the way that we could achieve limitless increases in, say, income.

Even if one does take the position that wellbeing is bounded and could not extend infinitely, however, it would still be possible to contend that it was less bounded than a life satisfaction scale, i.e. that respondents get artificially bunched at the top of the scale.

The results on how people use the top of the scale varies somewhat between surveys: in the European Quality of Life Survey for example, almost a fifth of the UK population scores themselves as a 10, while in the European Social Survey the proportion is just 12.4%.⁴¹

In either case, while some of these people may be at the very peak of their possible wellbeing, it seems reasonable to think that at least some are not.

So, if we assume that the life satisfaction scale is at least somewhat restricting the measurement of higher levels of latent wellbeing, this poses a specific challenge to the study of inequalities in wellbeing.

To illustrate let's first picture the distribution in the UK's observed life satisfaction. Figure 4 below shows life satisfaction score for the UK in 2012. Scores range between 0 and 10 (an 11 point scale). Now let's imagine that everyone's latent wellbeing increases by one point. Although the numbers have changed, the *distribution* in latent wellbeing stays exactly the same, so the UK should score the same on measures of inequality in wellbeing. However, as shown on figure 5 this is not the case. Although everyone's latent wellbeing has increased by one point, those

who were already scoring 10 on the life satisfaction scale have nowhere to go because the scale is bounded: no-one can score themselves as having higher life satisfaction than 10. So, rather than scoring an 11 (as shown hatched out on the chart) they continue to score 10. According to the observed data, it look likes inequality in wellbeing has reduced, because more people have become bunched at the top of the scale and the overall distribution is smaller.

As described above, this is compatible with the observed cross-national data, where higher mean wellbeing is associated with lower inequalities in wellbeing.

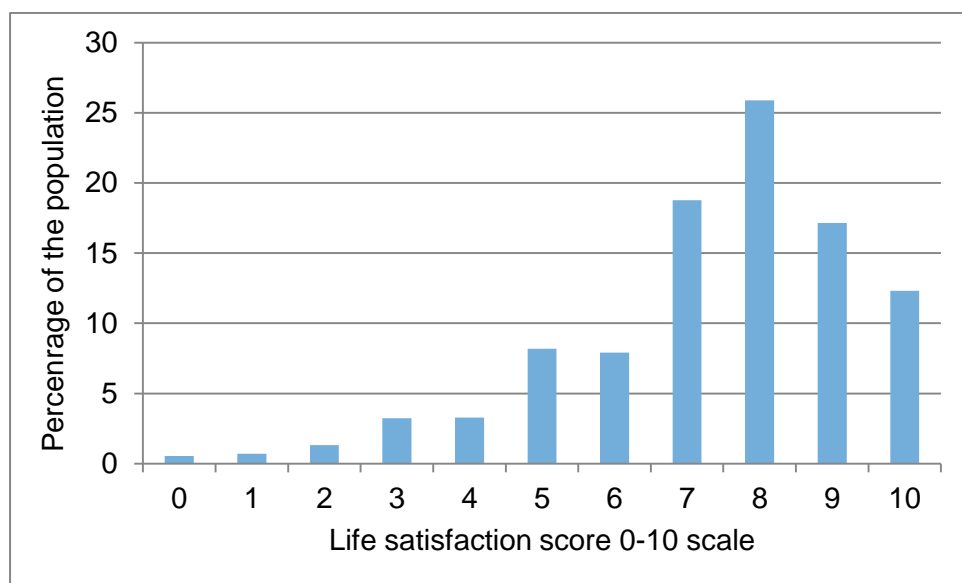


Figure 4. UK distribution in life satisfaction, European Social Survey, round 6, 2012

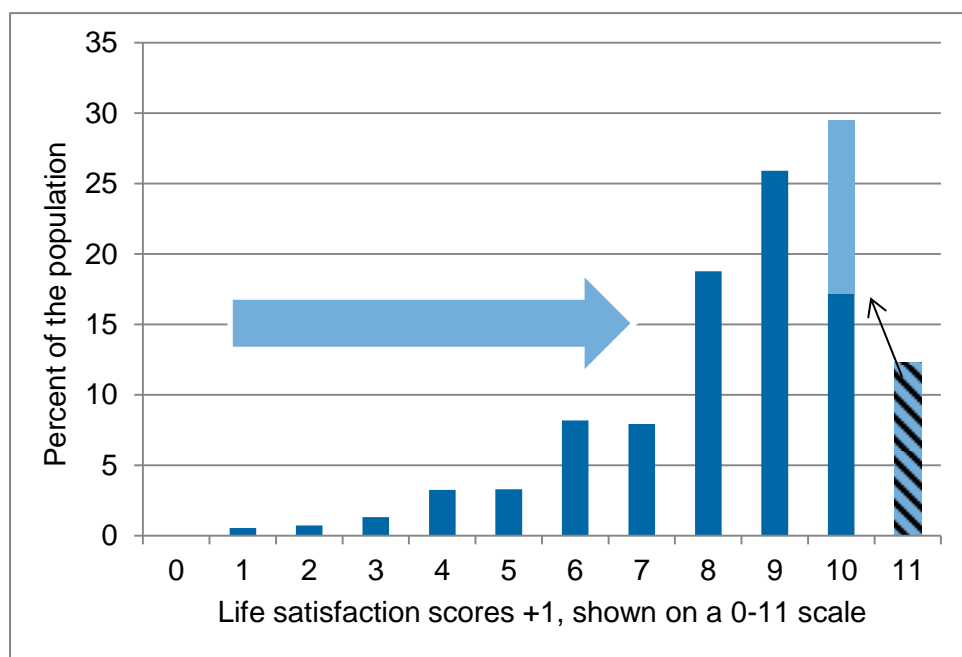


Figure 5. Changes to latent and observed wellbeing distribution if mean moved up by 1 point. European Social Survey, round 6, 2012.

Let's imagine a second scenario: that latent wellbeing becomes more unequally distributed, ie. the mean stays the same, but people who have low wellbeing struggle even more and people who already have high wellbeing, improve even more.

If someone scored three on a life satisfaction scale and they fall to a two, this will increase the observed variation in the overall scale. However, if someone is already a 10, they can't score any higher. Again, their increase in latent wellbeing doesn't increase the overall distribution in life satisfaction.

The distribution in life satisfaction would increase, though not to the extent of latent wellbeing. Meanwhile, mean life satisfaction would reduce, despite the mean in latent wellbeing remaining unchanged.

In this case, changes to the bottom of the wellbeing scale will have more effect on the overall distribution of life satisfaction than changes to the top. This would be likely in the UK, where most people score towards the top of the life satisfaction scale, leaving room for more movement at the bottom than the top. The effect would differ depending on the distribution of the country in question.

A much deeper understanding of these issues will be required if wellbeing inequality is to be used robustly in the policy making process.

However, based on the limited knowledge so far, it seems that, for a distribution such as the UK, it will generally be the case that policy makers will only see an improvement to observed inequality in wellbeing from an intervention that achieves improvements to the bottom.

This should not pose a problem for most people – after all, it would be a strange policy goal to want to reduce the wellbeing of the already well. However, it is worth being explicit about this – it is different to, say, the policy agenda arising from the goal of reducing income inequality, where curbing very high incomes is one of the key policy levers.

Further areas for research on these issues are suggested in the conclusion.

What's the relationship between income inequality and wellbeing inequality?

Reducing economic inequality has long been a concern for many, and interest has increased since the global financial crisis. But why do we care about economic inequality?

For many, it is not inequality in money itself that poses a challenge to social justice, but rather the inequality in power and wellbeing that money can bring. In short, the imperative to reduce economic inequality stems from a belief that by doing so, inequalities in other social outcomes will be reduced.

There is good evidence that this is the case for many outcomes,^{42 43} and good theoretical reasons to expect income inequality and wellbeing inequality to be related.

As described above, there is also strong evidence that, at the individual level, higher income predicts higher wellbeing, although there are diminishing returns, meaning that an increase of £100 improves wellbeing much more for someone on a low than high salary.⁴⁴ Logically, therefore, this would suggest that as income inequality increases, so would inequalities in wellbeing.

It is unsurprising, then, that practically every study testing for drivers of wellbeing inequality has considered income inequality as a candidate. What is more surprising has been the results, many of which seem contradictory.

A number of studies have found little or no association between income inequality and wellbeing inequality. Stevenson and Wolfers⁴⁵ explore inequalities in happiness over time in the US.

Between the 1970s and the 2000s they find an overall decline in inequalities in wellbeing, during a period in which income inequality has substantially increased. They conclude then, that income inequality and wellbeing inequality are not related.

Becchetti et al.⁴⁶ took a similar approach in Germany, examining levels of overall inequality in wellbeing between 1992 and 2007. During this period, overall wellbeing inequality in Germany increased, and although income inequality also increased during this period, it could only account for 3% of the increase in wellbeing inequalities, suggesting that other factors were more important.

Two further papers looking at differences between countries (one of which was an extensive review of 119 countries) found no association between income inequality and wellbeing inequality.^{47 48}

Meanwhile, other studies have found just the opposite. In one cross-country comparison, Ovaska and Takashima⁴⁹ found that income inequality was associated with overall wellbeing inequality (both happiness and life satisfaction), accounting for a third of difference in wellbeing inequality between countries.

In another study, Jan Ott found similar results where levels of income inequality were associated with higher levels of inequality in overall wellbeing, though the associations were small.⁵⁰

So, what should we conclude? Two studies provide some more in-depth analysis which might throw some light on the contradictory results.

During the past forty years, many Western countries have experienced both economic growth (increasing GDP) and rising income inequality. In order to gain a better understanding of the relationship between income and wellbeing inequality Clarke et al.⁵¹ therefore ran tests to check the effect of average incomes separately to income inequality.

They found evidence of two opposing forces: an increase in GDP⁵² generally *decreases* inequalities in wellbeing, while an increase in income inequality generally *increases* inequalities in wellbeing. In most cases, the effect of rising GDP has been more forceful than the effect of rising income inequality, resulting in an overall decrease in inequalities in wellbeing in the countries they surveyed.

The exception is the United States, where they suggest that increases in inequality have been so high that they have cancelled out the effect of rising GDP, with a resulting increase in inequalities in wellbeing.

Delhey and Kohler saw another possible problem with existing analyses. Many of the studies described above used inequality measures which were dependent on the mean wellbeing score, or did not control for mean wellbeing in their analyses. As we saw above, there's a danger this could bias the analyses, particularly if mean wellbeing was increasing during the period in question.

In light of this danger, they ran an analysis explicitly aiming to overcome this bias using a specifically designed measure of inequality. This analysis did find an association between income inequality and wellbeing inequality.⁵³

All in all, it looks as though there could well be an association between income inequality and wellbeing inequality, though more studies which overcome the kinds of methodological issues raised above will be needed before this can be established.

Overcoming these methodological challenges could provide a rich source of enquiry for those interested in income inequality. Is it possible that some methods of reducing economic inequality have more or less effect on inequalities in wellbeing

than others? Does the relationship between economic and wellbeing inequality vary with absolute income levels of society? Are there other variables that mediate the relationship between income and wellbeing inequality?

Even if further research finds that the relationship is weak or non-existent this does not automatically suggest that income inequality is unimportant from a wellbeing perspective.

A number of studies have explored the relationship between income inequality and *average* wellbeing and most (though not all) have discovered a link (see Clark et al., 2008, and Senik, 2009, for surveys).

Furthermore, given that there are diminishing returns of income for wellbeing, if we assume a set level of national income, a more equal distribution of this income would be more efficient in wellbeing terms: producing more wellbeing per pound than a less equal distribution.

Conclusion: the way ahead

This working paper has aimed to make the case for why the burgeoning field of wellbeing should also be concerned with wellbeing inequality.

While we have identified various challenges in the analysis of wellbeing inequalities which need further exploration, we do not need to wait around for all the answers before paying more attention to inequalities in the use of wellbeing in policy.

This does not necessarily require complex inequality analyses – simply being aware of how wellbeing is currently distributed across the population, and which population groups a policy is likely to effect, would be an improvement on many current approaches.

When considering policies or interventions, rather than simply asking ‘does this policy improve wellbeing,’ we should be asking ‘whose wellbeing will this policy improve? Are there losers, as well as winners? Can we ensure the losers are not the already disadvantaged? Are we improving the wellbeing of those most in need?’

Nevertheless, in order to fully incorporate a robust understanding of wellbeing inequalities into policy making, more work does need to be done. We would like to suggest some possible directions for future research:

Further analysis of bounded scale effects

In particular:

- How does the measurement of wellbeing inequality affect the results? Some measures, such as standard deviation, may be more closely associated to the mean, suggesting that they might be particularly affected by bounded scale effects.⁵⁴
- How might analyses overcome potential confounding from bounded scale effects? In particular, is controlling for mean wellbeing satisfactory, or does this depend on the specific distributions under analysis?
- What can we learn about how people are using the top of the life satisfaction scale? Empirical tests could be run to further understand the use of the upper levels of the life satisfaction scale. Life satisfaction scores have been validated in part through comparison with other measures of wellbeing, such as more in-depth, multi-question life satisfaction questions, patterns of change in the scales during and after significant life events such as death of a loved one, as well as prediction of future outcomes (such as mental health).⁵⁵

It may be useful to interrogate these associations specifically for those scoring a 10 on the life satisfaction scale, to see whether these associations hold as tightly.

Explore how wellbeing inequality measures may be affected by cultural response biases

One study has used data from the European Social Survey to explore different kinds of cultural biases in how participants respond to questions. While many kinds of bias did not seem to apply, the authors did find evidence of cultural differences in 'extreme response style' ie. the extent to which respondents use the far ends of the scale.

In this case, they did not find that this had an impact on the results for life satisfaction. Nevertheless, further exploration of this would be useful.

Further analysis of the drivers of inequality between groups

This has so far been largely neglected. This would be aided by better inclusion of demographic data which predict wellbeing. In particular, our analysis of the European Social Survey suggests that wellbeing differs significantly between income groups (more than, say, ethnicity or gender).

However the ONS does not currently collect data on income and education in surveys which also include wellbeing questions, making it hard to conduct more in-depth analysis on UK data.

Review existing studies of the drivers of wellbeing inequality

In conducting this research, there was little material which drew together existing research or assessed its quality. Systematic reviews, with quality analysis undertaken in the light of the kinds of methodological challenges identified here would be helpful in establishing policy-relevant findings as well as research gaps.

We intend this paper to be the start of a conversation, and would love to hear from anyone working on these issues with ideas, questions, or pointers to research that we've missed.

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