

10

## Epilogue

In November 2010, those of us who had bought the hardback edition of *The Spirit Level* were given the opportunity to spend a further £10.99 on a revised paperback which promised “a new chapter responding to their critics”. More of a counter-attack than a defence, this new chapter sadly addressed very few of the substantive points made in this book. Nevertheless, as a crystallisation of Wilkinson and Pickett’s response to criticism in the previous six months, it remains of interest and deserves comment.

The main themes of the new postscript are that (a) *The Spirit Level* is a summary of well-established, peer-reviewed evidence which is considered uncontroversial in academic circles, and (b) despite not being politically motivated themselves, Wilkinson and Pickett have been the victims of a co-ordinated attack by right-wing ideologues.

Neither of these claims stands up against the facts.

### Consensus?

A key plank in Wilkinson and Pickett’s defence is the notion that they are merely informing the general public about issues that have long since been agreed upon by the academic

## Epilogue

community. Since most people will never read any of the studies in the field, this has been largely successful as a public relations exercise, but it is a gross distortion.

It also represents something of a U-turn for the two epidemiologists. Wilkinson and Pickett's sudden insistence that they are reflecting the scientific consensus is at odds with the way they promoted their book when it was first published. In an interview with the couple in March 2009, a journalist from the *Guardian* reported that: "For a while, Wilkinson and Pickett wondered if the correlations were too good to be true. The links were so strong, they almost couldn't believe no one had spotted them before."<sup>1</sup> This could just about be excused as shoddy journalism were it not for Wilkinson and Pickett's eagerness to take the credit for what they described as their "discoveries" in *The Spirit Level* itself. The book's preface leaves the reader in little doubt that these discoveries are genuinely new and exciting, hence the comparisons with Joseph Lister and Louis Pasteur. "The reason why the picture we present has not been put together until now is probably that much of the data has only become available in recent years," they write, adding that "it could only have been a matter of time before someone came up with findings like ours."<sup>2</sup>

The fact of the matter, as discussed in Chapter 1 of this book, is that there has been a large amount of research into health and inequality spanning three decades. Richard Wilkinson has been a key figure in this field, but his views do not represent the consensus. Nor could they, since there is emphatically no consensus. The only honest way to describe the state of the literature on health and inequality is to say that it is mixed and conflicting. Researchers are broadly divided into three groups. There are those, like Wilkinson, who believe that there is a solid correlation between inequality and health and that this represents a causal link. There are those who believe that there is a statistical correlation but that it is not causal, and there are those who believe there is no link at all.

## Epilogue

Only the first of these positions is reflected in *The Spirit Level*, and the reader is given the false impression that academics have firmly established that inequality leads to poor health. Wilkinson and Pickett accuse their critics of not being familiar with the “extensive research literature”, but it is precisely because we *are* familiar with it that we know how grievously it is misrepresented in *The Spirit Level*. In the new postscript, Wilkinson and Pickett say “there are around 200 papers in peer-reviewed academic journals testing the relationship between income inequality and health”.<sup>3</sup> ‘Testing’ is the key word. There is no hint of how many of these studies have not found a relationship, nor of how many found a statistical relationship but concluded that it was not causal.

Their source for the ‘200 studies’ claim is, as so often in the book, one of their own papers. This article, from 2006, assessed 169 results from 155 studies on inequality and health (plus some other studies related to violence). By Wilkinson and Pickett’s own reckoning, 88 of these were supportive of their theory (including six of their own studies) while 81 were either unsupportive or provided conflicting results.<sup>4</sup>

Wilkinson and Pickett stress that many peer-reviewed articles have offered at least partial support to their theories about income inequality. This is true—at least in the area of health—just as it is true that there are many peer-reviewed articles that beg to differ. Hence the long-running academic debate about inequality which *The Spirit Level* has done much to inflame but little to resolve. This debate has already been discussed in Chapter 1, but it might be useful to quote from some other researchers in the field:

All along, however, critical questions were being asked about the quality and interpretation of the data. In an early exchange, serious criticisms of the selection of countries, the quality of the data, and the lack of control for confounding in [Wilkinson’s] *BMJ* paper of 1992 were only half countered. Although many aspects of this debate are still unresolved, it has recently

## Epilogue

become clear that the findings of that paper were an artefact of the selection of countries.<sup>5</sup>

—*British Medical Journal* editorial, 2002

This paper extends previous studies by examining long time series for 12 of the world's richest countries rather than one or two. Our findings are consistent with those of Deaton and Paxson (2001) and Lynch et al. (2004b), not with those of Wilkinson (1989, 1996) or Sen (1999). In our preferred specifications we find only small and statistically insignificant relationships between income inequality and mortality. This holds true regardless of whether we measure mortality using life expectancy at birth, infant mortality, homicide, or suicide.<sup>6</sup>

—Leigh & Jencks, 2007

The study found limited evidence of an association between income inequality and worse self rated health in Britain, which was greatest among those with the lowest individual income levels. As regions with the highest income inequality were also the most urban, these findings may be attributable to characteristics of cities rather than income inequality. The variation in this association with the choice of income inequality measure also highlights the difficulty of studying income distributions using summary measures of income inequality.<sup>7</sup>

—Weich et al., 2002

Estimates of the effect of income on health (the absolute income hypothesis) are likely to be biased. Tests of the relative income hypothesis are contaminated by the non-linearity of the individual health income relationship any association between income distribution and population health could be entirely due to it, rather than to any direct effect of relative income on individual health.... However, whilst Rodgers (1979) found that income distribution had a significant negative association with life expectancy in almost all of his regression, we have found that the association is sometimes positive and sometimes negative and is never statistically significant.... The findings should however be a further warning against using aggregate level studies as evidence for the relative deprivation hypothesis.<sup>8</sup>

—Gravelle, 2000

Across Canadian health regions, health status in populations was a function of absolute income but not relative income.<sup>9</sup>

—Vafaei et al., 2010

It can be firmly concluded, however, that there is insufficient evidence supporting Wilkinson's hypothesis once individual's income and its differential

## Epilogue

impact are taken into account... There are substantial international variations in self-reported health, but they are not linked to the degree of income inequality... Wilkinson's argument regarding contextual influences was based on a statistical artefact.<sup>10</sup>

—Jen et al., 2009

Those with a healthy scepticism will have noticed that I have only quoted studies that support one side of the debate. It's a slippery and misleading trick and it is exactly what Wilkinson and Pickett do throughout *The Spirit Level*. The difference is that I made it clear from the outset that there are many conflicting studies. Readers of *The Spirit Level* would be hard-pressed to guess that there was any debate at all.

In their new postscript and in response to an article I co-wrote for the *Wall Street Journal*, Wilkinson and Pickett cited a 2009 study of self-reported health in the *British Medical Journal* which, they say, “leave[s] little room for doubt as to the veracity of these relationships [and] shows unequivocally that inequality is related to significantly higher mortality rates.”<sup>11</sup> With so many studies to choose from, it is reasonable to expect Wilkinson and Pickett to cite one which strongly supports their position. But while the *BMJ* study is more supportive than most, it can hardly be called unequivocal. It begins by noting that:

Empirical studies have attempted to link income inequality with poor health, but recent systematic reviews have failed to reach a consensus because of mixed findings.

And concludes:

The results suggest a modest adverse effect of income inequality on health, although the population impact might be larger if the association is truly causal... The findings need to be interpreted with caution given the heterogeneity between studies.

It says much about how weak the alleged ‘consensus’ is that the study Wilkinson and Pickett use as killer proof that

## Epilogue

inequality causes poor health did not find a strong relationship and acknowledged that the “modest” association was weak enough to imply a lack of causality. If this is “unequivocal” evidence, the reader is entitled to ask what the rest looks like.

Other researchers who have reviewed the evidence have not been so generous. For example:

The undeniable absence of a strong or consistent relationship between inequality and health stands in stark contrast to previous claims.... Contrary to the claims of previous researchers, there is no strong empirical support for the contention that inequality is a determinant of population health, let alone one of the most important determinants.<sup>12</sup>

This article reviews 98 aggregate and multilevel studies examining the associations between income inequality and health. Overall, there seems to be little support for the idea that income inequality is a major, generalizable determinant of population health differences within or between rich countries.<sup>13</sup>

Much of the literature, both theoretical and empirical, needs to be treated skeptically, if only because of the low quality of much of the data on income inequality. Although there are many remaining puzzles, I conclude that there is no direct link from income inequality to mortality; individuals are no more likely to die or to report that they are in poor health if they live in places with a more unequal distribution of income.<sup>14</sup>

The last quoted paragraph comes from a review of the literature conducted by Angus Deaton of Princeton University, one of the world’s most respected economists, whose summary of the evidence has twice as many citations in the scientific literature as Wilkinson and Pickett’s 2006 paper. Despite this, the postscript to *The Spirit Level* finds Wilkinson and Pickett stating that “it is now extremely difficult to argue credibly that these relationships don’t exist. Indeed, those who do so are almost always those who are making political attacks rather than any kind of academic criticism.”<sup>15</sup> This statement is entirely insupportable. In 2009, *The Oxford Handbook of Economic Inequality* evaluated the evidence for the inequality/health hypothesis and concluded:

## Epilogue

The preponderance of evidence suggests that the relationship between income inequality and health is either non-existent or too fragile to show up in a robustly estimated panel specification. The best cross-national studies now uniformly fail to find a statistically reliable relationship between economic inequality and longevity.<sup>16</sup>

Having to resort to appealing to authority is regrettable, but since Wilkinson and Pickett are so eager to bill themselves as “epidemiologists with decades of experience in analysing the social determinants of ill health”, it needs to be said that each chapter of *The Oxford Handbook of Economic Inequality* is written by a team of distinguished professors who are regarded as international experts in their field. The implication that the work of these eminent scholars is “ill-founded and politically motivated criticism” is risible. Unlike Wilkinson and Pickett, none of these academics have formed any political pressure groups and do not have a long history of demanding radical wealth redistribution.

As Sanandaji *et al.*, have noted, the idea that Wilkinson and Pickett took their message directly to the public only after winning the debate in academia is one of *The Spirit Level*'s most enduring myths:

The general public—the target audience for *The Spirit Level*—cannot be expected to be aware of the state of research in the field. Wilkinson and Pickett exploit the trust of their readers and give them the impression that their claims represent consensus science, when the opposite is closer to the truth.<sup>17</sup>

*The Spirit Level*'s endemic misrepresentation of the academic literature is made no less worrisome by its authors' apparent inability to distinguish between a study which agrees with their hypothesis and one which merely mentions the word ‘inequality’. In response to criticism from Sanandaji *et al.* that their book focused on their own work while ignoring heavyweight academics, Wilkinson and Pickett wrote:

## Epilogue

Other ‘heavyweight’ economists, including Nobel laureates, have also written about the significance of inequality for wellbeing and human capital formation.<sup>18</sup>

As proof, they cite a study by James Heckman, winner of the Nobel Prize for Economic Sciences. Heckman is the co-author of a study titled ‘The Economics and Psychology of Inequality and Human Development’<sup>19</sup> but nothing in that paper—or in any of his work—implies support for Wilkinson and Pickett’s inequality hypothesis. When Sanandaji asked Heckman how he felt about having his study cited by the two social epidemiologists, he said bluntly: “This is a misrepresentation of my work.”<sup>20</sup> As Sanandaji explains:

Note Wilkinson and Pickett’s choice of words. They write that Heckman has “written” about inequality and health, which is of course technically true. But what they don’t tell the readers is that while he has indeed written about these variables, he has not found any evidence supporting the claims of Wilkinson and Pickett.<sup>21</sup>

Whether it be contemporary academics like James Heckman and Robert Putnam or—almost unbelievably—outspoken opponents of socialism such as Alexis de Tocqueville, Wilkinson and Pickett routinely cite the work of other scholars in a context which suggests that they agree with their hypothesis. Throughout *The Spirit Level*, they refer to research that links stress and poverty to certain conditions as proof that inequality causes those same conditions. But the material effects of poverty are entirely different from the ‘psychosocial’ effects of inequality, and *The Spirit Level* conspicuously fails to demonstrate that income inequality is a major cause of stress. It is all well and good citing studies which show, for example, that some people overeat when stressed, or that obesity is more common amongst lower socioeconomic groups, but these valid observations in no way prove that inequality causes obesity. Without evidence that inequality causes the stress that leads to poor health outcomes, *The Spirit Level* is a series on non-sequiturs.



## Epilogue

In some cases, the studies cited say the exact opposite of what Wilkinson and Pickett claim. As discussed earlier in this book, they attempt to explain the higher rate of suicide in more equal countries as a trade-off for a lower homicide rate. The problem with this is two-fold: less equal countries *don't* have higher homicide rates, and the countries studied in *The Spirit Level* show *no* evidence of an inverse relationship between homicide and suicide.

Responding to this on their website, Wilkinson and Pickett write: "In fact, there are several pieces of research which show that homicide rates are inversely related to suicide." But the first study they cite as supporting evidence states quite clearly:

Our analysis indicates, overall, the correlation between homicide and suicide rates across all nations is very weak and statistically insignificant.<sup>22</sup>

The shard of truth here is that homicide tends to be more common in very poor countries, while suicide tends to be more common in rich countries. But, as shown in Chapter 4 of this book, there is no correlation between homicide and suicide amongst the rich countries studied in *The Spirit Level*. And that, of course, is the relevant comparison group when discussing Wilkinson and Pickett's hypothesis.

Either Wilkinson and Pickett are relying on readers not checking their references or they genuinely believe that any study that mentions the word 'inequality' in any context is supportive of their case. This was highlighted again when Kate Pickett was interviewed on BBC Radio 4's *More or Less* programme. It would be hard to find a less politically motivated radio show than *More or Less*—a programme dedicated to discussing the use and abuse of statistics in the modern media. Wisely deciding against passing judgement on such a voluminous topic in a half-hour magazine show, presenter Tim Harford opted for an interview with Pickett which, in its quiet way, was as devastating as anything written about *The Spirit Level* in 2010.

## Epilogue

In this excerpt, Pickett uses the usual ‘consensus’ defence, before being asked about a study she and Wilkinson reference in *The Spirit Level* to support their claim that “researchers at Harvard University showed that women’s status was linked to state-level income inequality.”

KP: We wrote a book that’s intended to be a synthesis of a very vast body of research. Not only our own, but those of other people... There is a consistent and robust and large body of evidence showing the same relationship.

TH: That’s an interesting point that you make. Often, in response to critics, you have referred not to your own book, not to your own data, but to other published research. I’d really like to focus on the research that’s presented in *your* book. It’s very easy to say ‘there are 50 papers, there are 200 papers, that support our research’ but we don’t really know how you’ve selected those papers.

KP: We actually have completed a systematic review of all of the studies of income inequality and health, and we reference that in our book. We do examine things systematically and certainly—when we are doing our own research, publishing in peer-reviewed journals—we have to be aware of all the literature in the field. But that doesn’t mean that every paper in the field has good methods, comes to the right conclusion, studies the right thing.

TH: I absolutely agree. One of the papers that you refer to in support of your argument on women’s empowerment and women’s status which was published in 1999 by Kawachi and some other authors, you claim supports your findings on women’s status and income inequality. I’ve looked at their abstract. It doesn’t seem to attack that question *at all*. It’s simply on another subject—a somewhat related subject but not on the subject of income inequality.

KP: They’ve definitely published and we may have inadvertently put the wrong reference into that document [*laughs nervously*]. But Kawachi and Kennedy have certainly published finding a relationship between income inequality and women’s status. The paper is ‘Women’s Status and the Health of Women and Men: a view from the States’ and it was published in *Social Science and Medicine* in 1999.

TH: That’s the one I’m looking at.<sup>23</sup>

## Epilogue

The only claim in *The Spirit Level* that has generated anything approaching “a very vast body of research” is that related to health and inequality. Since their book was published, Wilkinson and Pickett have admitted that the correlation between life expectancy and inequality disappears when different measures of inequality are used. They have also said that “we accept that the inequality/health relationship is one of the weaker associations demonstrated in *The Spirit Level*.”<sup>24</sup>

The best that can be said of the health/inequality hypothesis is that it remains unresolved and the scatterplot presented on page 82 of *The Spirit Level* is unlikely to change that. Richard Wilkinson published a similar scatterplot in the *BMJ* in 1992 and the peer-reviewed literature shows that he was accused of cherry-picking and data-mining at the time. It is no great surprise that he has received similar criticism now that he has filled an entire book with the same type of evidence.

But while there is an ongoing controversy amongst academics regarding the question of inequality and health, the bulk of *The Spirit Level* involves theories which have little or no support in the scientific literature. Wilkinson admitted as much in an interview with the magazine *International Socialism*:

“There are about 200 papers on health and inequality in lots of different settings, probably 40 or 50 looking at violence in relation to inequality, and very few looking at any of the other things in relation to inequality. In a way, the new work in the book is all these other variables—teenage births, mental illness, prison populations and so on—and the major contribution is bringing all of that into a picture that had previously been just health and violence.”<sup>25</sup>

What, then, is left of the idea that *The Spirit Level* is a “synthesis of a very vast body of research”? Wilkinson himself concedes that “very few” studies have looked at anything other than health in relation to inequality. Although Wilkinson and Pickett now portray themselves as standing on the shoulders of giants, in almost every important respect they stand alone.

## Epilogue

### Conspiracy?

Having hastily reinvented themselves as bearers of a consensus, rather than the pioneers they had been in 2009, it is a simple matter for Wilkinson and Pickett to portray those who have put their claims to the test as deniers, right-wing extremists or paid lackeys of industry. It is an impressive trick for a long-standing member of the Socialist Health Association to write a book which concludes with a rousing political call-to-arms while forming two left-wing pressure groups and penning articles in the *Guardian* about how “broken Britain is Thatcher’s bitter legacy” to accuse other people of being “politically motivated”. This unlikely defence has, however, been remarkably successful.

Wilkinson and Pickett’s first response to the criticisms made in Peter Saunders’ *Beware False Prophets* was from page one of the manual of knee-jerk student politics. They called him a racist and described his publishers at the Policy Exchange, the manifestly moderate centre-right think tank, as being from the “far-right”. This can hardly be described as a slip of the tongue, since Wilkinson has repeated the slur whilst touring his book in Canada (“then the attacks started coming from the far-right”). Wilkinson can hardly be unaware that the term “far-right” is used almost exclusively to describe neo-Nazis and fascists. That he immediately resorted to using such language about a fellow Emeritus Professor and a former colleague at the University of Sussex was an early sign that the debate about *The Spirit Level* was going to be ugly.

It was also a sign that Wilkinson and Pickett would cast their net far and wide in seeking to disparage their opponents. In the new postscript, they write about “the bans on smoking in public places (implemented in Scotland, parts of the USA and Canada, Rome, Ireland, and England); which in each case have been followed by declines in death rates and have saved thousands of lives.”

## Epilogue

This requires a little background information. In recent years, a number of studies have been published purporting to show a large drop in the heart attack rate in the aftermath of a smoking ban. In Scotland, for example, it was claimed that the rate of acute coronary syndrome fell by 17% following the implementation of smoke-free legislation. Oddly, however, the study was based on extrapolations from a selection of hospitals, rather than the admissions records for all Scottish hospitals, which were freely available. When the full figures from the NHS were examined, it became clear that there had not been a drop of 17%, or anything like it.

Today, several years after the ban came into force, it is quite apparent that the smoking ban had no effect on the rate of acute coronary syndrome in Scotland. A number of other studies have also claimed to find a drop in heart attacks following the enactment of smoke-free legislation, but whenever hospital admissions data have been publicly available there has, without exception, been no indication of a significant decline. A recent study—the largest ever conducted on the subject—found that “large short-term increases in myocardial infarction incidence following a smoking ban are as common as the large decreases reported in the published literature”. The disproportionate number of studies finding a decline in numbers is, the authors suggest, the result of publication bias and retrospective data-mining.<sup>26</sup>

I was one of a number of journalists to write about the Scottish ‘heart miracle’ and similar studies elsewhere. When the Scottish hospital records were released in 2007, the BBC reported it with the headline ‘The facts get in the way of a good story’.<sup>27</sup> *The Times* included it in its end-of-the-year ‘Worst Junk Stats of 2007’ feature.<sup>28</sup>

If this seems wildly off-topic, it is. Wilkinson and Pickett’s reason for going off on this tangent is to mark me down as some sort of tobacco industry lobbyist just for having written about such issues. They are wise enough not to risk libel by making the

## Epilogue

allegation explicit, but the implication is allowed to hang in the air.

Upon this thread of innuendo, Wilkinson and Pickett construct an elaborate fantasy involving two unassuming and impartial social scientists under siege from industry-funded “merchants of doubt” who are trying to “give the impression that crucial areas of science affecting public policy are controversial, long after the implications of the science were quite clear.” (Why the tobacco industry would want to discredit *The Spirit Level*, of all books, can only be guessed at. One would think they had bigger fish to fry, but conspiracy theorists are able to overlook such logical conundrums.)

Wilkinson and Pickett’s combination of paranoia and self-aggrandisement falters for the simple reason that critics of *The Spirit Level* are not “free market fundamentalists” and they are certainly not all right-wing. The left-wing journalist Gerry Hassan has written about what he calls “the Fantasyland of *The Spirit Level*”:

Yet, it is almost impossible to compare these countries on equality; they are very different in their cultures, values and histories. Wilkinson and Pickett claim that ‘more equal societies almost always do better’—a universalist, sweeping statement—which cannot be substantiated by most of their data.... Part of the success of *The Spirit Level* is liberal guilt, part the retreat of the left, part wish-fulfilment and projection.<sup>29</sup>

John Goldthorpe, Emeritus Professor of Sociology at Oxford University, said: “As I read through the book, I have to say that my reaction was one of increasing dismay.”<sup>30</sup> Also a left-winger, Goldthorpe’s review of *The Spirit Level* can hardly be attributed to “free market fundamentalism.”

Wilkinson and Pickett [WP] have no time for nicely balanced judgements. They believe that the evidence they present shows beyond doubt that more equal societies ‘do better’, and they are also confident that they have the right explanation for why this is so... Their case is by no means so securely established as they try to make out... it has been called into question by other

## Epilogue

leading figures in the field—a fact that WP might have more fully acknowledged... WP's inadequate, one-dimensional understanding of social stratification leads to major problems in their account of how the contextual effect is produced.<sup>31</sup>

John Kay, Professor of Economics at London Business School, prefaced his review of *The Spirit Level* by saying that he was “sympathetic to its basic stance.” Nevertheless, he found it difficult to take the book’s methodology and conclusions seriously when he reviewed it in the *Financial Times*:

A larger source of irritation is the authors’ apparent belief that the application of regression methods to economic and social statistics is as novel to social science as it apparently is to medicine. The evidence presented in the book is mostly a series of scatter diagrams, with a regression line drawn through them. No data is provided on the estimated equations, or on relevant statistical tests. If you remove the bold lines from the diagram, the pattern of points mostly looks random, and the data dominated by a few outliers.

... An obvious conclusion is that there are many societies which perform well in terms of their own criteria. America, Sweden and Japan are just different from each other. Their achievements are not really commensurable. But Wilkinson and Pickett are not content with this relativist position.<sup>32</sup>

Andrew Leigh describes himself as “about as anti-inequality an economist as you’ll find”. Formerly a Professor of Economics at the Australian National University, and now an Australian Labour Party politician, Leigh said of his own research into equality: “I had begun the project secretly hoping to find that inequality was bad, and wound up reluctantly reporting no such thing.” When asked his opinion of *The Spirit Level*, he wrote that “John Kay’s view in the *FT* comes closest to my own.”<sup>33</sup>

“He didn’t read the book thoroughly, obviously,” was Kate Pickett’s response when told about Kay’s review. Another person who apparently didn’t read it properly was Christian Bjørnskov, Professor of Economics at the University of Aarhus, who reviewed it in *Population and Development Review*:

## Epilogue

The bottom line is that this is a well-written, stimulating polemic. It nevertheless suffers from the same problems as one-trick ponies: if the one trick does not impress you, the show is a failure. Wilkinson and Pickett's trick simply does not hold up to empirical scrutiny. When assessing this book as a contribution to the debate on the "right" level of income differences in modern society, it is a highly interesting, sympathetic attempt at addressing some of the important problems of Western societies. Yet, when assessing this book from a scientific point of view, one is forced to conclude that it is a failure.<sup>34</sup>

Robert Putnam, author of *Bowling Alone* (see Chapter 3) has also expressed his discomfort with *The Spirit Level*. When asked his view of their work by journalist Shane Leavy, Putnam replied:

I have a mixed view about *The Spirit Level*. On the one hand, I believe that inequality is bad for society in many ways, just as that book argues. On the other hand, Pickett and Williamson's [sic] work has been heavily (and I believe correctly) criticized as methodologically flawed. (For example, they don't really show that the relationship between inequality and other bad things is causal, though they assume it is.) I hope that they (or others) will pursue that basic hypothesis in ways that are more scientifically persuasive.<sup>35</sup>

These criticisms, and others like them, are manifestly not politically motivated. While there was no shortage of positive reviews from journalists, particularly on the left (*The Guardian*, *The Independent*, *New Statesman*, *Socialist Review* all provided rave reviews), many respected academics from both left and right have expressed serious concerns.

It suits Wilkinson and Pickett's narrative to portray critics as being professional 'merchants of doubt' from the 'far-right'. It helps to marginalise those who find fault with the book while deterring their natural supporters from reading the critiques. It is, however, another fiction.



## Epilogue

### Confounders?

*The Spirit Level* relies on the premise that countries are fundamentally the same, with income inequality being the main variable that distinguishes them. Wilkinson and Pickett effectively disregard other variables such as absolute income, culture, history, demography, ethnicity, geography, law, politics and climate. Throughout *The Spirit Level*, it is taken for granted that such factors have little or no bearing on their findings and so there is no attempt to adjust the figures for confounding factors, nor to seriously discuss alternative explanations.

In the new postscript, Wilkinson and Pickett group all these other variables together and dismiss them as “cultural differences” which, they say, have a negligible effect on their findings. To illustrate this, they say that Portugal and Spain perform very differently despite being culturally similar, while Japan and Sweden perform similarly despite being culturally different. This is simply not true. In most of the graphs, Portugal is actually closer to Spain than Japan is to Sweden.<sup>36</sup>

More telling would be a comparison between Japan (the most equal country) and Hong Kong or Singapore (the least equal countries). Despite the huge disparities in income inequality, these three societies perform much the same across nearly all criteria (imprisonment being the main exception). The obvious explanation is that these Asian societies are culturally similar and that culture, not inequality, is the main determinant.

Ignoring other variables and confounding factors would be a flaw in any study but when entire countries are under examination, this flaw becomes overwhelming. Tim Harford asked Pickett about their failure to consider other variables on *More or Less*. Her response was revealing. She and Wilkinson did not “believe” that factors other than inequality have an effect on a country's performance, so they did not go to the trouble of studying them.

## Epilogue

TH: All of your studies are what are called bivariate analyses. In other words, they're all income inequality plotted against some other variable. Now, my understanding of best practice in social sciences is that you would always control for other variables. You would include 2, 3, 4, 5, 6 other variables and...

KP: Well, you wouldn't do that arbitrarily. You would do that if you believed those variables were potential alternative explanations of the relationship you're looking at.

TH: So, if I understand your statement correctly, you didn't include any multiple variable analyses because you just think that actually none of these variables are of interest—none of them are potential alternative explanations and you can just do the simple income inequality versus x analyses?

KP: That's right, but of course, again, other researchers have conducted studies that *do* control for more, where, as well as examining the effect of income inequality at the level of the whole society, people include individual's own levels of income or levels of education in those analyses and, again, those bear out our findings in relation to health.

TH: We come again to...you're basically rowing back from *your* analysis and saying...

KP: No. Indeed I'm not...

TH: "Don't look at our analysis, look at these other people because they support us."

KP: We believe that to control for individual income is actually *over*-controlling, so we would not consider that best practice.<sup>37</sup>

Wilkinson and Pickett may not *believe* that individual income explains any of the differences between the countries they study, but while this is taken for granted in *The Spirit Level*, it is not unreasonable to take the view that social outcomes in Portugal, for example, would improve if its national income was the same as Norway's (which would require a threefold increase).

Pickett is, however, correct in saying that other researchers have controlled for other variables. Shibuya *et al.*, for example,

## Epilogue

controlled for income in their study of inequality in Japan and concluded:

After adjustment, individual income was more strongly associated with self-rated health than income inequality.<sup>38</sup>

Fiscella and Franks controlled for income in their study of inequality in the USA and found:

In this nationally representative American sample, family income, but not community income inequality, independently predicts mortality. Previously reported ecological associations between income inequality and mortality may reflect confounding between individual family income and mortality.<sup>39</sup>

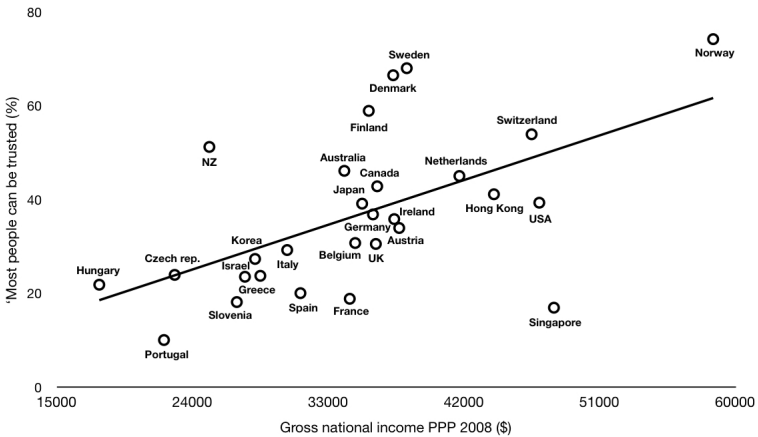
Absolute income is a crucial confounding factor in studies of income inequality. Much of the debate about inequality and health revolves around the question of whether we can truly disentangle the effects of inequality from the effects of low income. Wilkinson and Pickett completely overlook this issue, and they never remark on the important observation that the poorest countries in their list (Portugal, Greece and New Zealand) all happen to be ‘less equal’. Nor do they comment on the fact that the perennially underachieving US states of Alabama, Louisiana and Mississippi also happen to be amongst the very poorest.

From the outset, income is assumed to have no role to play in *The Spirit Level*. After asserting that economic growth has “largely finished its work”, Wilkinson and Pickett simply assume that further wealth would not benefit the citizens of the countries they study (another glaring ecological fallacy, incidentally). It is assumed that absolute income has no effect because—as they show on page 12—life expectancy is no longer correlated with national income. But they do not test every criteria against income. If they did, they would find that several key outcomes are much more closely correlated with income than with inequality. This is true even of their cherished survey about trust, as Figures 10.1 and 10.2 show.

## Epilogue

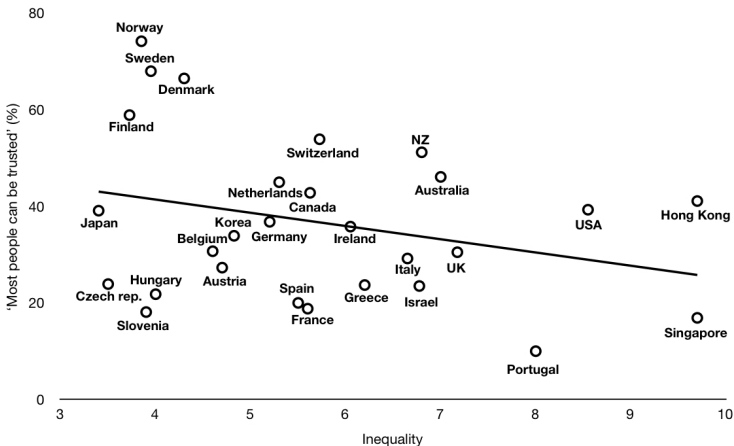
$R^2 = 0.316$

Figure 10.1. Trust/Gross National Income



$R^2 = 0.085$

Figure 10.2 'Most people can be trusted' (%)



Having breezily dismissed income as a third variable, Wilkinson and Pickett turn a blind eye to all other explanations for a country's performance. Indeed, the only examples of them mentioning real-world differences occur when the 'more equal' countries fail to live up to their billing of 'almost always' doing

## Epilogue

better. For example, Wilkinson and Pickett are eager to explain Finland's high homicide rate by pointing to its high level of gun-ownership while the USA's high homicide rate is blamed squarely on inequality. When Japan's foreign aid contributions turn out to be "lower than expected", they attribute it to the country's "withdrawal from the international stage following the Second World War". Britain's "higher than expected" foreign aid spending, meanwhile, is explained by its "historical, colonial ties to many developing countries." All this may be true but Wilkinson and Pickett only seem awake to cultural and historical differences when it suits their argument.

They can hardly be unaware that other variables have been shown to explain differences between countries far more convincingly than inequality. In their 2006 review of the literature, they identified twenty-one studies which "started off with supportive findings but then lost them as a result of the various control variables."<sup>40</sup> Income is one of those variables, but other recognised confounders include spending on health care, which has been found to explain the correlation between inequality and infant mortality:

The association of higher income inequality and higher infant mortality disappears when we control for health care expenditure. Our results indicate that the correlation between infant mortality and income inequality arises as income inequality is high in countries where public investment in health care is low.<sup>41</sup>

Although income inequality was positively associated with low birth weight and infant mortality, the association with infant mortality disappeared with the addition of sociodemographic covariates.<sup>42</sup>

Levels of education have also been shown to explain correlations with inequality:

Multiple regression analysis of the 50 US states and District of Columbia for 1989-90 indicates that the relation between income inequality and age adjusted mortality is due to differences in high school educational attainment:

## Epilogue

education absorbs the income inequality effect and is a more powerful predictor of variation in mortality among US states.<sup>43</sup>

Race is another important variable which is never adequately addressed in *The Spirit Level*. For example, one of the few studies looking at inequality and obesity acknowledged that:

Race is known to be significantly correlated with weight status, and is also associated with inequality... As race is a potential confounder of the relationship of interest, we stratify all analyses by race as well as sex.<sup>44</sup>

Quite rightly so. To any truth-seeking epidemiologist, controlling for a known confounder would *always* be “best practice”. The results of this study are worth repeating, since they are ignored in *The Spirit Level*, in favour of Pickett’s own research:

We do not find a positive association between inequality and the likelihood of clinically relevant outcomes such as overweight and obesity. Indeed, the direction of association between inequality and weight status is generally *negative* among subgroups (though significant only for white women)... for non-Hispanic white women, living in a metropolitan area with greater income inequality is associated with lower BMI, lower odds for being overweight, and lower odds for being obese. [Italics in the original]

Race has been shown time and again to be a major confounder in studies of inequality, to the extent that this one variable explains the *entire* correlation between inequality and poor health. This has been shown to be true in the USA:

In the results presented below, we show that, once we control for the fraction of the population that is black, there is no relationship in 1980 nor in 1990 between income inequality and mortality across either states or cities... That the estimated effects of income inequality are potentially confounded by the effects of race has been recognized since the first papers on the topic. Blacks have higher mortality rates than whites and, on average have lower incomes, so that in places with a substantial black population, both income inequality and mortality tend to be higher. <sup>45</sup>

## Epilogue

### In Canada:

We replicate the finding that, net of the racial/ethnic composition of the population, the effects of income inequality are not significant.<sup>46</sup>

### And in New Zealand:

There is no convincing evidence of an association of income inequality within New Zealand with adult mortality. Previous ecological analyses within New Zealand suggesting an association of income inequality with mortality were confounded by ethnicity at the individual level.<sup>47</sup>

The well-established importance of race as a confounding factor provided Wilkinson and Pickett with the excuse to land their lowest blow. In his book *Beware False Prophets*, Peter Saunders demonstrates that health and social outcomes are more closely correlated with the ethnic make-up of US states than with their levels of income inequality. For this, Wilkinson and Pickett accused him of a “seriously racist slur”. It was, they said, “racist because it implies the problem is inherently the people themselves rather than their socioeconomic position”.<sup>48</sup>

It implies nothing of the sort. If Wilkinson and Pickett think it is racist to say that there are a host of cultural and historical reasons why blacks tend to do worse than whites in the USA then there are plenty of black community leaders and black politicians who are racist. No serious discussion of modern-day America can ignore the legacy of slavery and segregation, as well as the more subtle forms of ongoing discrimination which continue to hold African-Americans back. Black Americans have, on average, higher rates of obesity, higher homicide rates and lower life expectancy. It should, therefore, be no surprise that states with large black populations tend to do worse under these criteria.

There is no doubt that racial inequality contributes to income inequality. Wilkinson and Pickett argue instead that income inequality is, at heart, the cause of racial inequality.

## Epilogue

Aside from being counterintuitive, this cannot be so because the correlation between race and health and social problems is stronger than the correlation with income inequality.

A significant clue lies in the pages of *The Spirit Level* itself. Wilkinson and Pickett's discussion of mental health is a mass of contradictions. Having warned of the dangers of comparing apples and oranges, they proceed to do just that by cobbling together results from different studies which even they coyly admit are "not strictly comparable". They attribute their failure to find a correlation between inequality and mental illness in the USA to the fact that mental illness does not have a social gradient, but this does not deter them from reporting a correlation between inequality and mental illness on an international level.

They then mention, almost in passing, that rates of mental illness are evenly distributed between different races. In light of their failure to find a correlation with mental illness in US states, this should have been a Eureka moment but, as Saunders writes:

[T]hey fail to draw the obvious conclusion from their failure to find a relationship with inequality, which is that *they only get state-level correlations with income inequality when there are underlying correlations with race to generate them*. [Italics in the original].<sup>49</sup>

Since there is no relationship between race and mental health, they cannot find a relationship between inequality and mental health. But since there are relationships between race and many other criteria, they find correlations with inequality. But those correlations are statistical associations resulting from Wilkinson and Pickett's failure to adjust for race. They are not causal. Inequality is a symptom, not a cause.

Wilkinson and Pickett never adequately address the question of causality. There are many important confounders such as income, race, education and material deprivation which are *correlated* with inequality, but are not *caused* by inequality. Conversely, many social problems such as crime, drug abuse and



## Epilogue

gang formation *do* cause inequality because young people growing up in environments with gangs, drug abuse and high levels of crime are less likely to succeed in society. We can address those issues by fostering job creation or crime reduction in neighbourhoods with social problems. But, by Wilkinson and Pickett's logic, inequality is the *cause* of these problems, which leads us to the improbable conclusion that societal malaise can be alleviated by reducing income in the surrounding neighbourhoods.

There is plenty of research—all of it ignored in *The Spirit Level*—showing that inequality does *not* have an independent effect on health and social problems once other variables have been controlled for. It should go without saying that countries differ from one another in many ways that have nothing to do with income inequality. That these differences will lead to different outcomes should be equally obvious. Wilkinson and Pickett justify their refusal to consider other variables in the postscript, saying “including factors that are unrelated to inequality, or to any particular problem, would simply create unnecessary ‘noise’ and be methodologically incorrect.”<sup>50</sup> With this one sentence, every historical, cultural, religious, political, legal, geographical, climatic and demographic difference between whole societies is dismissed as ‘noise’. Again, they are *assuming* that these factors are “unrelated to inequality” without putting that assumption to the test. It is no wonder Wilkinson and Pickett fail to identify confounding factors. They are simply not looking for them.

### Consistency?

The new postscript to *The Spirit Level* finds Wilkinson and Pickett accusing their critics of “selectively removing countries on the grounds that they were outliers.” Outliers do indeed play an important part in several of *The Spirit Level's* graphs. The correlation between inequality and homicide rests entirely on

## Epilogue

the USA being an extreme outlier. The correlation between inequality and obesity depends entirely on Japan and the USA being outliers (not to mention the exclusion of Singapore, Hong Kong and South Korea, all of which have similar rates of obesity to Japan). The correlation with trust depends entirely on the Nordic nations being outliers.

The significance of this should not need underlining. To take homicide as an example, there is no evidence of a relationship between inequality and homicide when 22 of the countries are studied. The 23rd country—the USA—has a much higher rate and pulls the regression line upwards dramatically. Using this distorted regression line as evidence that inequality causes murder means ignoring data from 22 countries in favour of data from just one. There are many reasons why the USA has a high murder rate, but if inequality was the root cause, we would expect to see it affecting the other countries. It doesn't, and excluding the USA as an outlier demonstrates the lack of causation.

If we were presented with a graph showing low levels of participation in basketball in 22 countries but a much higher figure for the USA, few of us would conclude that there was a true causal relationship between inequality and basketball. Americans just play a lot of basketball. And yet, for several of *The Spirit Level's* graphs, outlying data of this type are used as proof of a causal relationship despite the great majority of the countries being totally unaffected by the supposed cause.

Wilkinson and Pickett feign ignorance about the importance of outliers. In their postscript, they portray testing for outliers as an underhand trick to exclude unfavourable data. It is, of course, nothing of the kind. The point of testing for outliers is not to “selectively remove countries” and then present the result as the ‘real’ graph, but to see if the relationship holds up without the outlier being present. In *Beware False Prophets*, Peter Saunders explains how and why statisticians use box plots to identify outliers. He then shows, as I do in this book, that the

## Epilogue

trend line for homicide is being thrown out by a single extreme outlier.

It is fantastically implausible to think that Wilkinson and Pickett are not aware of the importance of outliers in statistics. In fact, we know that they are because when they find a reasonably strong statistical relationship (for rates of imprisonment) they write: “Even if the USA and Singapore are excluded as outliers, the relationship is robust among the remaining countries.”<sup>51</sup> They make no such guarantee for their other graphs, for the simple reason that they are not robust enough to withstand this basic test.

One of the dangers of not recognising outliers is that your trend line will become skewed and no longer reflect reality. Wilkinson and Pickett focus on their trend line to such an extent that they forget what the actual data are telling them. In the last chapter of *The Spirit Level*, Wilkinson and Pickett claim that if Britain reduced income inequality to the same level as Sweden, Finland, Japan and Norway, its murder rate would fall by 75%. This prediction goes far beyond what the data show. (Even if the association was real, their correlation coefficient tells them that inequality accounts for less than half the difference, and yet they assume it accounts for 100% of the difference—a basic statistical howler.)

Worse still, they are basing their prediction entirely on their trend line, which tells them that Britain *should* have a much higher murder rate than it does. But that trend line has become hopelessly skewed by the USA. As Wilkinson and Pickett’s own graph shows, Britain actually has a lower murder rate than Sweden and Finland and has a lower murder rate than the average of those four ‘more equal’ nations.

The irony of Wilkinson and Pickett accusing their critics of picking and choosing which countries to study will not be lost on readers of this book. Wilkinson was being criticised for his selective use of data long before *The Spirit Level* hit the shelves and his latest choice of countries raises the same questions. Their

## Epilogue

justification for confining their analysis to 23 countries is that “these countries are on the flat part of the curve at the top right in Figure 1.1 on p. 7, where life expectancy is no longer related to differences in Gross National Income.” Quite so, and it was that very graph which first alerted me to the fact that Wilkinson and Pickett had excluded several countries. South Korea, Hungary, Slovenia and the Czech Republic all appear on that graph as being as rich or richer than Portugal. They are all on the “flat part of the curve”. It was not me, but Wilkinson and Pickett, who arbitrarily decided that Portugal was ‘rich enough’ to merit inclusion. All I have done in this book is include countries of comparable or greater wealth than Portugal as shown in Wilkinson and Pickett’s own graph. Without a convincing justification for why places like the Czech Republic and South Korea cannot be considered “rich market societies”, we must ask the next question: why do these societies conspicuously fail to fit Wilkinson and Pickett’s theory? The United Nations classes these countries as being of ‘very high human development’, why doesn’t *The Spirit Level*?

Their insistence on never having “picked problems to suit our argument” is undermined by, for example, their focus on state aid at the expense of private philanthropy, or by their emphasis on imprisonment rather than crime. Their claim to “never pick and choose data points to suit our argument” is at odds with references 2 and 6 in *The Spirit Level* which show one year’s data being used for one graph and another year’s data being used for the next, even though the subject matter—life expectancy—is the same.

As for using “the same measures of inequality” (as they said they did in an article in *Prospect* magazine<sup>52</sup>), they address this early in *The Spirit Level*, saying:

To avoid being accused of picking and choosing our measures, our approach in this book has been to take measures provided by official agencies rather than calculating our own.

## Epilogue

This is no great claim to integrity. It would be very odd if they started developing their own bespoke measure of inequality. But if they really wished to “avoid being accused of picking and choosing” they would have used the same official measure throughout. In fact, they use no fewer than *five* different measures of inequality in *The Spirit Level*. Having correctly explained to the reader that the Gini coefficient is “the most common measure” which is “favoured by economists”, they proceed to ignore the Gini in favour of comparing the top and bottom 20% when making international comparisons. They then switch to the Gini coefficient when looking at US states and then use a completely different measure when comparing working hours (p. 229). They then adopt a measure which compares the bottom and top 10% (p. 240) and, finally, in their new edition, measure inequality in reference to the top 1% (p. 296).

The effect of this chopping and changing can be seen by comparing the graph on page 240 to the graph on page 296 (of the new edition). The first graph shows that inequality in the USA has fallen since its peak in the early 1990s; the second graph shows that inequality in the USA rose sharply in the 1990s and peaked in 2008. Wilkinson and Pickett’s aim in the postscript is to demonstrate a correlation between inequality and the financial crashes of 1929 and 2008. They write that “both crashes happened at the two peaks of inequality”. Either they have forgotten, or they are hoping the reader has forgotten, that they wrote in the previous chapter that inequality in the USA “peaked in the early 1990s”.

Whilst there is nothing wrong with using the share of wealth held by the top 1% as a measure of inequality, this is the only time it is used in *The Spirit Level*. This is perhaps unsurprising, since under this measure Norway and Denmark are less equal than the USA.<sup>53</sup> It does, however, demonstrate how Wilkinson and Pickett switch reference points to suit whatever argument they are making at the time.

## Epilogue

### Conclusions

Wilkinson and Pickett's new postscript will no doubt play well with readers who were convinced by the rest of *The Spirit Level*. Their insistence that they stick to "a strict set of criteria, applied with no departures or exceptions" has a hollow ring in light of their frequent switching between data sets. It also fails to address the point that the selection of countries was flawed and arbitrary from the outset, even if they *had* stuck rigorously to it thereafter.

A new edition of any book affords the author an opportunity to make corrections and include newly available data. Since *The Spirit Level* appeared in hardback, new statistics about trust, homicide, life expectancy, obesity and several other issues have been published by official agencies, most of which further weaken the correlations upon which Wilkinson and Pickett rely. No attempt has been made to incorporate these data in the new edition, nor have any criticisms being accepted, even on basic, irrefutable points of fact. Instead, they have used a reprint as an opportunity to create a contrived fairy-tale in which "free market fundamentalists" and "merchants of doubt" have conspired to make incontrovertible scientific evidence appear questionable.

This is the sheerest fiction. Questions have been raised about the bold conclusions of *The Spirit Level* because it is riddled with methodological errors, apparent cherry-picking, flawed reasoning and wishful thinking. Wilkinson and Pickett's misrepresentation of the academic literature was brazen in *The Spirit Level* and has become near-absolute with the appearance of the new postscript. Far from being the subject of a co-ordinated attack by nefarious vested interests, their book has been criticised by everyone from Swedish economists, Irish psychologists and British sociologists—as well as numerous journalists, bloggers and reviewers—for the simple reason that they have read it. As a best-seller, it has transcended what Wilkinson calls the "left-wing ghetto". And amongst its large

## Epilogue

readership have been many rational people whose jaws dropped a little more at the turn of every page.

### Introduction

- (1) 'Revenge for past failings is a luxury the poor can't afford', Polly Toynbee, *The Guardian*, 4/12/09
- (2) Polly Toynbee speaking at The Policy Exchange meeting 'The Future of the Left', Westminster, 18/3/10
- (3) 'The way we live now', Lynsey Hanley, *The Guardian*, 14/3/09
- (4) 'Books of the year', *The Guardian*, 22/11/09
- (5) 'In an unequal society, we all suffer', Y. Alibhai-Brown, *The Independent*, 23/3/09
- (6) 'The Spirit Level: Why more equal societies almost always do better', John Carey, *The Sunday Times*, 8/3/09
- (7) 'Last among equals', *The New Statesman*, Roy Hattersley, 26/3/09
- (8) In the USA, it was more modestly subtitled 'Why greater equality makes societies stronger'. The title itself remained confusing to American readers who know spirit levels as bubble levels.
- (9) *Hansard*, 11/01/10
- (10) *The Spirit Level: Why more equal societies almost always do better*, Richard Wilkinson & Kate Pickett, Allen Lane, 2009, p. 33; the comparison with Pasteur and Lister is made on page xi.

### Methodology

- (1) Unless otherwise stated, figures for gross national income (GNI) in this book come from the World Bank (2008) (<http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf>), using purchasing power parity in international dollars.
- (2) 'Child wellbeing and income inequality in rich societies: ecological cross sectional study', K. Pickett & R. Wilkinson, *British Medical Journal*, 335, 1080, 16/11/07; 'The problems of relative deprivation: Why some societies do better than others', R. Wilkinson & K. Pickett, *Social Science & Medicine*, 65 (2007), pp. 1965-78
- (3) For some reason, Wilkinson and Pickett use older figures for national income on page 9 than on page 7. Both graphs show South Korea, Slovenia and the Czech Republic to be richer than Portugal. Hungary is shown to be richer than Portugal on page 7 but not on page 9. Hong Kong is shown on neither.
- (4) The '50 richest countries' Wilkinson and Pickett picked their final 23 from World Bank's World Development Indicators report and used data from 2002. Since the World Bank released more up-to-date figures in 2007, the authors' decision to use figures from 2002 list is odd. In international



dollars, the most recent data show that Portugal has slipped out of the top 50. It sits in 59th place, with the Czech Republic in 55th place, Slovenia in 46th place and Hungary in 68th place. Using the alternative Atlas methodology, Slovenia is 47th, Portugal is 50th, the Czech Republic is 54th and Hungary is 66th. South Korea and Hong Kong are well inside the top 50, whichever measure is used. Regardless of whether they fit within Wilkinson and Pickett's somewhat arbitrary top 50 (Portugal scrapes in at 50th in the source they used), all these countries are manifestly comparable in terms of both wealth and development. See also the UN Human Development Report 2006, p. 331 and UN Human Development Report 2009, p. 171.

- (5) UN Human Development Report 2006, p. 335. As in *The Spirit Level*, I have used the average for the reporting years 2003-06 (<http://www.equalitytrust.org.uk/why/evidence/methods>).

## 1. Bad for our health?

- (1) 'Survival in Academy Award-Winning Actors and Actresses', D. Redelmeier & S. Singh, *Annals of Internal Medicine*, 134, 2001; pp. 955-62
- (2) 'Income distribution and life expectancy', Richard Wilkinson, *British Medical Journal*, 18/1/92, Vol. 304; pp. 165-8
- (3) 'Dear David Ennals', Richard Wilkinson, *New Society*, December 1976
- (4) <http://www.sochealth.co.uk/Black/black.htm>
- (5) *Towards Equality in Health: Income and Health*, Richard Wilkinson, Socialist Health Association, 1991
- (6) 'Income distribution and life expectancy: a critical appraisal', Ken Judge, *British Medical Journal*, 1995, 311; pp. 1282-5
- (7) 'Income inequality, individual income, and mortality in Danish adults: analysis of pooled data from two cohort studies', M. Osler, *British Medical Journal*, 2002, 324; p. 13
- (8) 'Income, income distribution, and self-rated health in Japan: cross sectional analysis of nationally representative sample', K. Shibuya, *British Medical Journal*, 2002, 324; pp. 16-19
- (9) 'Education, income inequality, and mortality: a multiple regression analysis', A. Muller, *British Medical Journal*, 2002, 324; pp. 23-25
- (10) 'Social capital - is it a good investment strategy for public health?', Lynch et al., *Journal of Epidemiology and Community Health*, 2000, 54; pp. 404-408

## Notes

- (11) 'Poverty or income inequality as predictor of mortality: longitudinal cohort study', K. Fiscella & P. Franks, *British Medical Journal*, 1997, 314; p.1724
- (12) 'Income inequality, the psychosocial environment, and health: comparisons of wealthy nations', Lynch et. al, *The Lancet*, 2001, 91; pp. 385-91
- (13) 'Income distribution and life expectancy', Richard Wilkinson, *British Medical Journal*, 1992, 304; pp. 165-8
- (14) 'Social capital - is it a good investment strategy for public health?', Lynch et al., *Journal of Epidemiology and Community Health*, 2000, 5; pp. 404-408
- (15) *The Spirit Level*, p. 81; 'The big idea', R. Smith, *British Medical Journal*, 1996; 312: Editor's choice
- (16) 'Income inequality and population health', *British Medical Journal*, Johan Mackenbach, 2002, 324; pp. 1-2
- (17) 'Income inequality and mortality: importance to health of individual income, psychosocial environment, or material conditions', Lynch et al., *British Medical Journal*, 29/4/00; pp. 1200-04
- (18) 'Neurohumoral Features of Myocardial Stunning Due to Sudden Emotional Stress', Wittstein et al., *New England Journal of Medicine*, Vol. 352 (6), 10/02/05; pp.539-548
- (19) 'Income inequality and mortality: importance to health of individual income, psychosocial environment, or material conditions', Lynch et al., *British Medical Journal*, 29/4/00; pp. 1200-04
- (20) 'Global status report on alcohol 2004', World Health Organisation
- (21) 'Alcohol policies in EU member states and Norway', E. Osterberg & T. Karlsson (ed.), European Commission, 2003
- (22) World Development Indicators Database ([http://www.nationmaster.com/graph/hea\\_smo\\_pre\\_mal\\_of\\_adu-health-smoking-prevalence-males-adults](http://www.nationmaster.com/graph/hea_smo_pre_mal_of_adu-health-smoking-prevalence-males-adults)). The figure for Portugal comes from 1999. Figures from Greece and Hong Kong come from 2000.
- (23) <http://www.iotf.org/whatisiotf.asp>; 'What is IOTF?'
- (24) A more recent study found obesity prevalence in Sweden to be much higher, at 22.8% ('What is the accurate prevalence of obesity in Sweden in the 21st century? Methodological experiences from the Skaraborg project', Maria Nyholm et al., *Obesity*, 2008, 16 (4); pp. 896-8)
- (25) 'Epidemiology of overweight and obesity in a Greek adult population: the ATTICA study', D. Panagiotakos et al., *Obesity Research*, Vol. 12, No. 12, 12/12/04; pp. 1914-20
- (26) 'Validity of self-reported height and weight for measuring prevalence of obesity', N. Ashtar-Daneshi, *Open Medicine*, Col. 2, No. 3, 2008; 'A comparison of self-reported and measured height, weight and BMI in

- Australian adolescents', Z. Wang, *Australian and New Zealand Journal of Public Health*, 2002, 26 (5); pp. 473-8; 'The "true" prevalence of obesity', A. Kuskowska-Wolk, *Scandinavian Journal of Primary Health Care*; 1989, 7; pp. 79-82
- (27) The difficulties of measuring obesity between countries cannot be overstated. The IOTF, OECD and WHO all provide very different figures. While there is no reason to believe the IOTF to be more reliable than these other organisations, their data was used in *The Spirit Level* and have been used here. The figure for Austria is strangely low (12%)—the IOTF cites a figure of 22% but states that this is 'not nationally representative'. The Canadian figure used in *The Spirit Level* (15%) is also low and comes from a self-reported survey. The IOTF's current estimate (from a 2004 survey) is used here. The IOTF's estimate for Sweden is for the town of Goteburg only and should be treated with caution. The figure for Norway should also be treated cautiously, a later study found prevalence of 18.25%, but the IOTF states that this was of a 'limited area'. Slovenia is excluded since the only available figure is self-reported. It is unclear where Wilkinson and Pickett got their higher figure for Portugal from; the ITOF consistently uses a figure of around 14%. <http://www.iotf.org/database/GlobalAdultsAugust2005.asp> and <http://www.iotf.org/media/eco10pressrel.htm>.
- (28) 'The SuRF Report 2: Surveillance of chronic disease risk factors: Country-level data and comparable estimates' World Health Organisation, 2005
- (29) *The Spirit Level*, p. 92
- (30) Life expectancy at birth, *United Nations Human Development Report 2004*, p. 139 (data is from 2002)
- (31) *The Spirit Level*, p. 7
- (32) Life expectancy at birth, *United Nations Human Development Report 2006*, p. 283 (data is from 2004)
- (33) Life expectancy at birth, *United Nations Human Development Report 2009*, p. 171 (data is from 2007)
- (34) 'Why Cubans live longer than Americans', 28/1/10, *Big Think*, (<http://bigthink.com/ideas/18465>); Cuba has a lower life expectancy in all the relevant UN Human Development Reports (2004, 2006, 2009). The figures given here are from the (most recent) 2009 report.
- (35) Life expectancy at birth, *United Nations Human Development Report 2009*, p. 171 (data is from 2007)
- (36) *The Spirit Level* (2nd edition), p. 280
- (37) 'Reexamining the evidence of an ecological association between income inequality and health', J. Mellor & J. Milyo, *Journal of Health Politics, Policy and Law*, Vol. 26, No. 3, June 2001

## 2. Messing with our minds

- (1) ABC National Radio. Interview with Oliver James, 22/3/07
- (2) *Affluenza*, Oliver James, Vermillion, 2007, p. xiv & 237
- (3) *Affluenza*, pp. vii-xii ('Are you infected with Affluenza?')
- (4) *The Selfish Capitalist: Origins of Affluenza*, Oliver James, Vermillion, 2008, p. 4
- (5) *Unfair to Middling*, S. Lansley, TUC, 2009; 'Real compensation, 1979 to 2003: analysis from several data sources', J. R. Meisenheimer II, *Monthly Labour Review*, May 2005; pp. 3-22.
- (6) 'Income inequality and the prevalence of mental illness: a preliminary international analysis', K. Pickett, R. Wilkinson and O. James, *Journal of Epidemiology and Community Health*, 60 (7), July 2006; pp. 646-7
- (7) The Canadian figure of 19.9% comes from the 2003 ICPE survey ('Mental health in Ontario: Selected findings from the Mental Health Supplement to the Ontario health survey: methodology', D. R. Offord, Toronto; Queen's Printer for Ontario, 1994). The UK figure of 23% comes from a 2001 Department of Health survey ('Psychiatric morbidity among adults living in private households, 2000: Technical report', N. Singleton, Office of National Statistics; p. 32). It unclear where the Australian figure of 23% comes from. Wilkinson and Pickett cite the 2001 Australian Health Survey, but this document doesn't mention such a figure. The 2007 Australian National Survey of Mental Health and Wellbeing does, however, give a 12 month prevalence figure of 20% (National survey of mental health: Summary of results, Australian Bureau of Statistics, 2007; p. 7). New Zealand's figure of 20.7% comes from its 2006 health survey ('Te Rau Hinengaro: the New Zealand Mental Health Survey', *Australian and New Zealand Journal of Psychiatry*, 2006, 40 (10); pp. 2581-90). The Singapore figure comes from 'Studying the Mental Health of a Nation - A Preliminary Report on a Population Survey in Singapore', C. Fones et al., *Singapore Medical Journal*, 1998, Vol. 39 (6), pp. 251-255. All other figures come from the WMH survey.
- (8) ABC National Radio. Interview with Oliver James, 22/3/07. As this quote indicates, Oliver James is dismissive of genetic explanations for human behaviour. The title of *The Selfish Capitalist* deliberately parodies Richard Dawkin's *The Selfish Gene*.
- (9) 'Size and burden of mental disorders in Europe - a critical review and appraisals of 27 studies', Hans-Ulrich Wittchen, *European Neuropsychopharmacology*, 15 (2005), p. 361; 'Why does the burden of disease persist? Relating the burden of anxiety and depression to effectiveness of treatment', G. Andrews, *Bulletin of the World Health*

## Notes

- Organisation*, 2000, 78 (4); pp. 446-54; 'The epidemiology of generalized anxiety disorder in Europe', R. Lieb et al., *European Neuropsychopharmacology*, August 2005, 15(4); pp. 445-52
- (10) 'Prevalence and severity of mental disorders', K. Demyttenaere et al., *Journal of the American Medical Association*, 2/6/04, Vol. 291, 21; pp. 2581-90 (To maintain scale, this graph excludes Colombia because it is a huge outlier with inequality of 25.3. WMH shows a 12 month mental illness prevalence in Colombia of 12.8%.)
- (11) 'Cross-national comparisons of the prevalences and correlates of mental disorders', WHO International Consortium in Psychiatric Epidemiology, *Bulletin of the World Health Organisation*, 2000
- (12) Ibid. See also 'Prevalence of psychiatric disorder in the general population: results of The Netherlands Mental Health Survey and Incidence Study (NEMESIS)', R. Biji, *Social Psychiatry and Psychiatric Epidemiology*, Dec. 1998, 33(12); pp. 587-95
- (13) 'Prevalence, co-morbidity and correlates of mental disorders in the general population: results from the German Health Interview and Examination Survey' (GHS), F. Jacobi, *Psychological Medicine*, May 2004; 34(4); pp. 597-611
- (14) 'Size and burden of mental disorders in Europe - a critical review and appraisals of 27 studies', Hans-Ulrich Wittchen, *European Neuropsychopharmacology*, 15 (2005), p. 357-376
- (15) Demyttenaere et al., p. 2587. Dr Ronald C. Kessler, who co-directed the WMH study, accepted its limitations upon release, saying: "I'm sorry it's so fuzzy, but that's the way it is." The very low prevalence figure for Nigeria was particularly odd, since the country had suffered a great deal of ethnic violence. "It sounds like Nigeria is a paradise," said Kessler, "but I know there are camps there where lots of people have PTSD [post traumatic stress disorder]." ('Large study on mental illness finds global prevalence', Donald G. McNeil, *New York Times*, 2/6/04). The most likely explanation for the low prevalence of recorded mental illness in Nigeria and other developing countries, is that the population is largely unaware of the range of disorders that exist.
- (16) As per reference (7), plus 'Mental disorders on the island of Formentera: prevalence in general population using the Schedules for Clinical Assessment in Neuropsychiatry (SCAN)', M. Roca et al., *Social Psychiatry and Psychiatric Epidemiology*, August 1999, 34(8); pp. 410-5 (Spain). Although a limited area, the authors report that their figure is "similar to those found in most studies in Spain."; 'A Norwegian psychiatric epidemiological study', E. Kringlen et al., *American Journal of Psychiatry*, 2001, 158; pp. 1091-98 (Norway); 'Prevalence of mental disorders among adults in Finland: basic results from the Mini Finland Health Survey', V.

## Notes

- Lehtinen, *Acta Psychiatrica Scandinavica*, Vol. 81 (5), 1990, pp. 418-25 (Finland)
- (17) *Affluenza*, p. 512
- (18) USA: 8.7% (Vasiliadis, 2007) and 6.6% (Kessler, 2003), Canada: 8.2% (Vasiliadis, 2007) and 7.2% (Wang, 2009), Australia: 6.7% (Andrews, 2000) and 7.4% (Hawthorne, 2008), Norway: over 7% (Ayuso-Mateos, 2001), European average: 8.3% (Wittchen, 2005) and 8.56% (Ayuso-Mateos, 2001), Finland: 9.3% (Lindeman, 2000)
- (19) Wittchen, p. 361; 'Why does the burden of disease persist? Relating the burden of anxiety and depression to effectiveness of treatment', G. Andrews, *Bulletin of the World Health Organisation*, 2000, 78 (4); pp. 446-54; 'The epidemiology of generalized anxiety disorder in Europe', R. Lieb et al., *European Neuropsychopharmacology*, August 2005, 15 (4); pp. 445-52
- (20) 'The 12 month prevalence and risk factors for major depressive episode in Finland: representative sample of 5993 adults', S. Lindeman, *Acta psychiatrica Scandinavica*, 2000, 102 (3); pp. 178-84.
- (21) 'Do Canada and the United States differ in prevalence of depression and utilization of services?', H. Vasiliadis, *Psychiatric Services*, January 2007, 58, pp. 63-71
- (22) Ibid.
- (23) Wittchen (2005)
- (24) Ibid.
- (25) 'A Norwegian psychiatric epidemiological study', E. Kringlen et al., *American Journal of Psychiatry*, 2001, 158; pp. 1091-98
- (26) 'Prevalence of generalized anxiety disorder in general practice in Denmark, Finland, Norway, and Sweden', P. Munk-Jorgensen, *Psychiatric Services*, 57 (12), December 2006; p. 1738-44
- (27) 'Depressive disorders in Europe: prevalence figures from the ODIN study', J.L. Ayuso-mateos et al., *British Journal of Psychiatry*, 2001, 179, pp. 308-16
- (28) 'Prevalence, diagnosis, and treatment of depression and generalized anxiety disorder in a diverse urban community', R.C. Gwynn, *Psychiatric Services*, June 2008, Vol. 59, No 6; pp. 641-7
- (29) 'Prevalence of mental disorder in an urban population in central Sweden', J. Halldin, *Acta Psychiatrica Scandinavica*, Vol. 69 (6), 1984; pp. 503-18
- (30) Demyttenaere et al., p. 2588
- (31) 'On being sane in insane places', D. L. Rosenhan, *Science*, 1973, Vol. 179, no. 4070; pp. 250-8
- (32) 'DSM-III and the revolution in the classification of mental illness', R. Mayes & A. Horowitz, *Journal of the History of the Behavioural Sciences*, Vol. 41(3), Summer 2005; p. 263

## Notes

- (33) *The Trap: What Happened to Our Dreams of Freedom?*, BBC Television, 2006 (Dir: Adam Curtis)
- (34) *The Loss of Sadness: How psychiatry transformed normal sorrow into depressive disorder*, A. Horwitz and J. Wakefield, OUP, 2007; p. vii-viii
- (35) 'Prevalence and treatment of mental disorders, 1990 to 2003', R. Kessler, *New England Journal of Medicine*, Vol. 352 (24), June 2005; pp. 2515-23
- (36) Wilkinson and Pickett are somewhat inconsistent when discussing the supposed rise in anxiety over time. On page 35, they say that: "We are not suggesting that [the rises in anxiety] were triggered by increased inequality." This is because their data show these rises to predate the rise in inequality. But on page 68 and elsewhere, they claim that anxiety is strongly related to inequality.

### 3. The pursuit of happiness

- (1) *Happiness: Lessons from a new science*, R. Layard, Penguin, 2005; p. 228
- (2) 'Does economic growth improve the human lot?', R. Easterlin, in Paul A. David and Melvin W. Reder (eds), *Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz*, New York: Academic Press, Inc., 1974.
- (3) For example in 'Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox', B. Stevenson & J. Wolfers, *Brookings Papers on Economic Activity*, Spring 2008 and 'Wealth and happiness revisited: Growing wealth of nations does go with greater happiness', M. Hagerty and R. Veenhoven, *Social Indicators Research*, vol. 64, 2003; pp. 1-27. Blanchflower and Oswald (2004) report that: "...once the British equations control for enough personal characteristics (including whether unemployed or divorced), there is some evidence of a statistically significant upward movement in well-being since the 1970s."
- (4) *Happiness*, p. 125
- (5) *Happiness*, p. 82
- (6) World Values Survey, most recent data used in each case: [www.worldvaluessurvey.org](http://www.worldvaluessurvey.org)
- (7) *The Spirit Level*, p. 8
- (8) World Values Survey
- (9) Ibid.
- (10) Ibid.
- (11) Ibid.
- (12) Ibid.

## Notes

- (13) 'E Pluribus Unum: Diversity and community in the twenty-first century. The 2006 Johan Skytte prize lecture', R. Putnam, *Scandinavian Political Studies*, Vol. 30 (2), 2007; 'The downside of diversity', Michael Jonas, *Boston Globe*, 5/8/07.
- (14) *The Spirit Level*, p. 54
- (15) *The Spirit Level*, p. 207
- (16) 'Well-being over time in Britain and the USA', D. Blanchflower & A. Oswald, *Journal of Public Economics*, 88, July 2004
- (17) 'Percentage of new marriages which end in divorce, in selected countries (2002)', Americans for Divorce Reform; *The Spirit Level*, p. 138
- (18) *League Table of Teenage Births in Rich Countries*, UNICEF, 2008; 'Monitoring ICPD Goals - Selected Indicators', United Nations Population Fund, 2009; pp. 81-84
- (19) *The Spirit Level*, p. 123
- (20) *League Table of Teenage Births in Rich Countries*, UNICEF, 2008; p. 5
- (21) *Ibid.* p. 11
- (22) Prior to 2007, abortion was only legal in cases of rape or if the mother's life was in danger. 'Portugal will legalise abortion', BBC News, 12.02.07. Wilkinson and Pickett's figure for Portugal comes from the pre-legalisation era.
- (23) *League Table of Teenage Births in Rich Countries*, UNICEF, 2008; p. 16
- (24) *Ibid.*, p. 13
- (25) Abortion rates in 2007 were 20.2, 17.0 and 0.2 per 1,000 women in Sweden, Britain and Portugal respectively (United Nations Statistics Division). Wilkinson and Pickett claim that teenagers "defer sexual activity" in more equal countries, but there is no evidence for this (p. 126, *The Spirit Level*).
- (26) *An overview of child well-being in rich countries*, UNICEF, 'Percentage of young people living in single-parent families (age 11, 13 and 15)', p. 23
- (27) *Happiness*, p. 67
- (28) 'The Affluent Society Revisited' in *The Affluent Society*, John Kenneth Galbraith, Pelican, 1987; pp. xv-xvi
- (29) *UN Human Development Report 2006*, p. 352
- (30) *The Narcissism of Minor Differences*, Peter Baldwin, OUP, 2009; p. 12
- (31) 'Welfare-to-work and the new deal', Richard Layard, Centre for Economic Performance, January 2001
- (32) *The Economist Intelligence Unit's quality-of-life index*, 2005



#### 4. Crime and punishment

- (1) *Ninth United Nations Survey of Crime Trends*, United Nations Office on Drugs and Crime, except Norway (2003), Belgium and New Zealand (2002), France and USA (2000) taken from *Seventh and Eighth UN Survey of Crime Trends*. There are no recent figures available for Austria or Greece.
- (2) See, for example, David Runciman in the *London Review of Books* ('How messy it all is'), John Crece in *The Guardian* ('The Theory of Everything') and Boyd Tonkin in *The Independent* ('The Spirit Level')
- (3) *Ninth United Nations Survey of Crime Trends*, United Nations Office on Drugs and Crime, 'Grand total of recorded crimes.' All figures are for 2004, except Austria, Japan and USA (2002), New Zealand, Korea and Spain (2000). Greece's most recent figure—2000—is anomalous so the 1999 figure has been used. *Seventh and Eighth UN Survey of Crime Trends*. There are no recent figures available for Australia.
- (4) All figures are most recently available (2006). *Tenth United Nations Survey of Crime Trends*, except England & Wales (2005), Australia, Belgium, Hungary, Israel and Korea (2004) and USA (2002). *Eight and Ninth UN Survey of Crime Trends*. There is no recent data available for France.
- (5) *The Burden of Crime in the EU: A comparative analysis of the European Crime and Safety Survey (EU ICS) 2005*, Jan van Dijk; pp. 106-7
- (6) *Ibid.*, p. 25
- (7) *Ibid.*, p. 39
- (8) *Ibid.*, p. 65
- (9) *Ibid.*, p. 111
- (10) *Tenth United Nations Survey of Crime Trends*
- (11) 'Sweden tops European rape league' *The Local*, 27/4/09
- (12) *The Burden of Crime in the EU: A comparative analysis of the European Crime and Safety Survey (EU ICS) 2005*, Jan van Dijk; p. 37; Wilkinson and Pickett's only concession to this inconvenient truth is to say that: "Homicide and assaults were most closely associated with income inequality, and robbery and rape less so." (*The Spirit Level*, p. 135).
- (13) *The Spirit Level*, p. 147
- (14) *Prison population statistics*, Gavin Berman, House of Commons Library, 12 November 2009; p. 2; The male prison population rose from 38,040 in 1970 to 42,991 in 1993, a negligible increase when population growth is accounted for.
- (15) *A century of change: Trends in UK statistics since 1900*, House of Commons Research Paper 99/111, 21 December 1999; p. 14
- (16) *Crime in England and Wales 2008/09*, A. Walker (ed.), July 2009; 'Prison population statistics', SN/SG/4334; House of Commons Library; 12/11/09

## Notes

- (17) *Freakonomics*, S. Levitt & S. Dubner, Penguin, 2005; pp. 115-45
- (18) Between 1995 and 1999, the US homicide rate fell by 28%, compared to just 4% in Canada. Europe saw its own crime rate peak in 1995. Most types of crime have declined in European countries since (Belgium is one notable exception) but more sporadically and less steeply than in the USA.
- (19) *The Spirit Level*, p. 142
- (20) *Crime in the United States by Volume and Rate per 100,000 Inhabitants, 1989–2008*, U.S. Department of Justice — Federal Bureau of Investigation, [www.fbi.gov](http://www.fbi.gov)
- (21) ‘Using the P90/P10 Index to Measure U.S. Inequality Trends with Current Population Survey Data: A View from Inside the Census Bureau Vaults’, R. Burkhauser et al., *Review of Income and Wealth*, March 2009, Vol. 55, Issue 1, pp. 166-85
- (22) *United Nations Surveys of Crime Trends and Operations of Criminal Justice Systems, covering the period 1990-2002*, ‘Total recorded intentional homicide, completed’; pp. 53-56 (eleven year average - as used in *The Spirit Level*).
- (23) As Wilkinson claimed in an interview in March 2010. ‘Want the good life? Your neighbors need it, too’, Brooke Jarvis, *Yes Magazine*, 4/3/10. ([www.yesmagazine.org](http://www.yesmagazine.org)) In *The Spirit Level*, Wilkinson and Pickett claim that the homicide rate is “many times higher” in the least equal countries (p. 181).
- (24) *Tenth United Nations Survey of Crime Trends*, United Nations Office on Drugs and Crime. Portugal’s murder rate was 1.66 and 2.15 per 100,000 in 2005 and 2006 respectively.
- (25) *Black Homicide Victimization in the United States*, Violence Policy Center, January 2010; p. 2 (Data are from 2007); Wilkinson and Pickett state that there are no “ethnic disparities in rates of crimes committed” in the USA. To prove this point, they say that 25% of white Americans have committed a violent crime by the age of 17, compared to 36% of black Americans. They fail to note that this statistic shows that black youths are nearly 50% more likely to commit a violent crime (*The Spirit Level*, p. 150).
- (26) *United Nations Surveys of Crime Trends and Operations of Criminal Justice Systems, covering the period 1990-2002*, ‘Total recorded intentional homicide, attempted’; pp. 57-60
- (27) ‘Suicide rates per 100,000 by country, year and sex’, World Health Organisation, 2009 ([http://www.who.int/mental\\_health/prevention/suicide\\_rates/en/index.html](http://www.who.int/mental_health/prevention/suicide_rates/en/index.html)).

## 5. Infant mortality

- (1) 'Infant mortality rate as an indicator of population health', D. Reidpath & P. Allotey, *Journal of Epidemiology and Community Health*, 2003, 57; pp. 344-346
- (2) 'Income Distribution and Infant Mortality', Robert J. Waldmann, *The Quarterly Journal of Economics*, MIT Press, Vol. 107(4), 1992; pp. 1283-302
- (3) 'A reply to Ken Judge: mistaken criticisms ignore overwhelming evidence', R. Wilkinson, *British Medical Journal*, Vol. 311, 11/11/98; p. 1285
- (4) 'Income distribution, infant mortality, and health care expenditure', T. Tacke & R. Waldmann, Centre for Economic and International Studies, *Research Paper Series* No. 146, June 2009
- (5) 'Last among equals', Roy Hattersley, *The New Statesman*, 26/3/09. It seems that Hattersley spotted that Portugal, Singapore and the USA were the only countries that were more unequal than Britain and, convinced by *The Spirit Level's* hypothesis, simply assumed they would have higher infant mortality rates.
- (6) *European Perinatal Health Report*, 2008
- (7) 'Portugal slashes infant mortality rate', *The Portugal News*, 16/12/06
- (8) 'World Population Prospects: The 2008 Revision', United Nations, New York, 2009
- (9) 'Infant mortality in Central Europe: effects of transition', *Gaceta Sanitaria*, Vol. 20 (1), Jan/Feb 2006; pp. 63-66
- (10) *The Spirit Level*, p. 184
- (11) 'Comparability of published perinatal mortality rates in Western Europe: the quantitative impact of differences in gestational age and birthweight criteria', W.C. Graafmans, *BJOG : an international journal of obstetrics and gynaecology*, 2001, 108(12); pp.1237-45.
- (12) *Behind international rankings of infant mortality: How the United States compares with Europe*, US Department of Health and Human Services, NCHS Data Brief No. 23, November 2009; p. 5
- (13) 'Answers prove elusive as C-section rate rises', Rita Rubin, *USA Today*, 8/1/08
- (14) 'High Percentage of Premature Births Contributing to Nation's High Infant Mortality Rate, Report Shows', Bill Hendrick, WebMD Health News, 3/11/09; <http://www.webmd.com/baby/news/20091103/preemies-raise-us-infant-mortality-rate>
- (15) Figures for IVF use are hard to come by, but a rough estimate would be that IVF is ten times more common in the USA than in England. The USA had a rate of 236 IVF cycles per 100,000 in 2005. In 1998, there was

## Notes

- uproar about the lack of IVF treatment in England compared to Scotland. The rate in Scotland was then said to be 21.5 per 100,000.
- (16) 'The impact of the increasing number of multiple births on the rates of preterm birth and low birthweight: an international study', B. Blondel et al., *American Journal of Public Health*, August 2008, Vol. 92 (8); pp. 1323-30; 'Infant mortality statistics from the 2005 period linked birth/infant death data set', T.J. Mathews and Marian F. MacDorman, *National Vital Statistics Reports*, Vol. 57 (2), 30/7/08; p. 5
- (17) 'Births: Final data for 2003', J. Martin, *National Vital Statistics Reports*, Vol. 54 (2), 8/9/05
- (18) 'Epidemiology and causes of preterm birth', R. Goldenberg, *The Lancet*, 5/2/08, Vol. 371; pp. 75-84
- (19) 'The differential effect of traditional risk factors on infant birthweight among Blacks and Whites in Chicago', *American Journal of Public Health*, 1990, Vol. 80; pp. 679-81; 'Familial patterns in birth characteristics: impact on individual and population risks', A. Winkvist, *International Journal of Epidemiology*, 1998 (27); pp. 248-254
- (20) 'Ethnic disparity in stillbirth and infant mortality in Denmark 1981-2003', S. Fredstead Villadsen, *Journal of Epidemiology and Community Health*, 2009; 63: pp.106-12
- (21) 'Health of Children in Australia: A Snapshot', 2004-05; Australian Bureau of Statistics; 15/2/07; 'Patterns, trends, and increasing disparities in mortality for Aboriginal and non-Aboriginal infants born in Western Australia', 1980-01: populations database study', C. Jane Freemantle et al., *The Lancet*, Vol. 367 (9524); 27/5/06; pp.1758-66
- (22) 'Fetal and infant deaths 2003 & 2004', New Zealand Health Information Service, D. Keylard & J. Whakaari, August 2007; 'Rates of infant mortality higher among indigenous children in Canada, the US, Australia, and New Zealand', B. Kermode-Scott, *British Medical Journal*, 338, 2/4/09; p. 1379
- (23) 'Infant mortality and congenital anomalies from 1950 to 1994: an international perspective', *Journal of Epidemiology and Community Health*, 2000, Vol. 54; pp. 660-6
- (24) 'Incidence of congenital anomalies among white and black live births with long-term follow-up', R. Christianson et al., *American Journal of Public Health*, 1981, 71 (1); pp. 1333-41; 'Racial disparities in mortality among infants with Dandy-Walker Syndrome', H. Salihu et al., *Journal of the National Medical Association*, Vol. 101 (5), May 2009; 'Infant mortality statistics from the 2005 period linked birth/infant death data set', T.J. Mathews and Marian F. MacDorman, *National Vital Statistics Reports*, Vol. 57 (2), 30/7/08, Centers for Disease Control

## Notes

- (25) 'Sudden infant death syndrome and postneonatal mortality in immigrants in England and Wales', R. Balarajan et al., *British Medical Journal*, 18/3/89, Vol. 298; pp. 716-20
- (26) 'Large differences in infant mortality by ethnic group', Office for National Statistics press release, 24/6/08
- (27) 'Epidemiology and causes of preterm birth', R. Goldenberg, *The Lancet*, 5/2/08, Vol. 371; pp. 75-84

## 6. Selfish capitalists?

- (1) *The Spirit Level*, p. 60
- (2) OECD, Net Official Development Assistance in 2008 (Overseas Development Aid/Gross National Income) (<http://www.oecd.org/dataoecd/25/42/42472714.pdf>)
- (3) 'Charitable giving to humanitarian organizations in Spain', Arthur C. Brooks, *Hacienda Pública Española / Revista de Economía Pública*, 165, (2/2003): pp. 9-24
- (4) 'Giving to charity remains high in United States', Jeffrey Thomas, *America.gov*, 17/6/09
- (5) Private charity work in the developed world (eg. building hospitals and schools) arguably brings greater benefits than the foreign aid that is often misused or misappropriated. Dambisa Moyo makes a convincing case for viewing the whole system of aid as "an unmitigated political, economic, and humanitarian disaster for most parts of the developing world." (*Dead Aid*, 2009, p. xix)
- (6) 'International comparisons of charitable giving', Charities Aid Foundation, November 2006; p. 2
- (7) *The Index of Global Philanthropy and Remittances*, Hudson Institute (2009)
- (8) 'The Recycling Olympics', Planet Ark, 2004. (Average percentage recycling of paper/cardboard, aluminium cans, glass and steel cans.)
- (9) *The Spirit Level*, p. 227
- (10) Kvinna inför rätta för kastad stekpanna, Sveriges Radio, Daniel Sundbaum, 8/6/08; 'The Recycling Myth', Per Bylund, von Mises Institute, 4/2/08. Bylund, a Swede now living in the USA, writes: "People are annoyed, but do not really react. Swedes generally complain a lot (about *everything*), but they do not resist; they are used to being pushed around by powerful government."

## 7. Ending growth

- (1) Adam Smith, *The Theory of Moral Sentiments*, 1759, p. 230
- (2) From 'Unto This Last' (1862); cited in *Status Anxiety*, p. 211
- (3) *The Affluent Society*, J.K. Galbraith, Penguin, 1987, p. 128
- (4) *The Affluent Society*, p. 127
- (5) *The Spirit Level*, p. 225
- (6) 'It's money that matters', *Boston Globe*, Jenna Russell, 21/2/10
- (7) Adam Smith, *The Wealth of Nations*, book 5, chapter 2
- (8) 'Estimated prevalence of compulsive buying behaviour in the United States', L. Koran, *American Journal of Psychiatry*, 2006 (163); pp. 1806-12
- (9) *The Spirit Level*, p. 3
- (10) *All Consuming*, Neal Lawson, Penguin, 2009, p. 60
- (11) *Affluenza*, p. 75
- (12) Ibid.
- (13) *Austerity Britain*, David Kynaston, Bloomsbury, 2007, p. 633
- (14) *Happiness*, p. 44
- (15) *The Spirit Level*, p. 219
- (16) *All Consuming*, p. 212
- (17) Ibid., p. 211
- (18) *The Spirit Level*, p. 218
- (19) See also 'Bring back ration books - for booze', Janet Street-Porter, *The Independent*, 18/3/09 and 'Should we bring back rationing?' BBC website, 7/1/10
- (20) 'Ration Me Up no. 1: a visit to The Ministry of Trying to Do Something About It', Andy Wimbush, NEF triple crunch blog, 29/10/09
- (21) 'Ration Me Up: a message from the Minister', 20/11/09, <http://thomasmatthews.com>
- (22) 'Bring on the recession', George Monbiot, *The Guardian*, 9/10/07
- (23) 'Bring on the recession and purge our tortured souls', Tim Lott, *The Independent*, 31/8/08
- (24) 'Aah, what a relief the boom has turned to bust', India Knight, *The Sunday Times*, 7/9/08. Similarly, Knight's *Sunday Times* colleague Rachel Johnson wrote an article based on the assumption that "the middle-class family has a combined income of £100,000." In fact, the median middle class family income is well under half of that. ('Haves and have-yachts', Rachel Johnson, *The Sunday Times*, 18.2.07; 'The misinterpreted middle', *The Economist*, 27/3/10, p. 27))

## 8. The Great Transition

- (1) *The Affluent Society*, p. 71
- (2) *The Affluent Society*, p. 72; Alain de Botton concurs, saying “We envy only those whom we feel ourselves to be like; we envy only members of our reference group.” (*Status Anxiety*, p. 47)
- (3) *The Spirit Level*, p. 222
- (4) *Affluenza*, p. 42
- (5) Tony Blair; interview with Jeremy Paxman, BBC *Newsnight*, 2001
- (6) *The Affluent Society*, p. 73
- (7) Michael Marmot, *Status Syndrome*, Bloomsbury, 2004, pp. 99-100
- (8) *What's Left?*, Nick Cohen, Fourth Estate, 2007, p. 196
- (9) *The Selfish Capitalist*, p. 44
- (10) ‘This week the average British house price is predicted to hit £200,000’, *The Telegraph*, Ross Clark, 11/3/07
- (11) *All Consuming*, p. 194
- (12) *The Spirit Level*, p. 221
- (13) *Affluenza*, p. 481
- (14) *Happiness*, p. 152
- (15) *Happiness*, p. 229
- (16) *All Consuming*, p. 133
- (17) *The Selfish Capitalist*, p. 227
- (18) *Ibid.*, p. 224
- (19) *Ibid.*, p. 210
- (20) *Ibid.*, p. 217
- (21) *Ibid.*, p. 219
- (22) <http://www.equalitytrust.org.uk/why/remedies>
- (23) *The Spirit Level*, p. 247
- (24) *Ibid.*, p. 247-8
- (25) Richard Wilkinson speaking at Birkbank College, 25/4/09;  
<http://www.youtube.com/watch?v=zEQpOXo3j34> (retrieved 26/2/10)
- (26) *The Spirit Level*, p. 254
- (27) *The Spirit Level*, p. 264
- (28) ‘Japan’s gender inequality puts it to shame in world rankings’, Tomoko Otake, *The Japan Times*, 24/2/08. A graph showing gender equality against inequality is shown at [www.spiritleveldelusion.com](http://www.spiritleveldelusion.com). There is no association.
- (29) ‘Total tax revenue as percentage of GDP’, OECD (2006 data) (<http://www.oecd.org/dataoecd/48/27/41498733.pdf>). Data for Singapore, Slovenia, Israel and Hong Kong come from the Heritage Foundation ([www.heritage.org](http://www.heritage.org)).

## 9. The Spirit Level fallacy

- (1) 'Do Oscar Winners live longer than less successful peers? A reanalysis of the evidence', *Annals of Internal Medicine*, M. Silvestre et al., Vol. 145, no. 5, Sept. 2006; pp. 361-3
- (2) 'Longevity of popes and artists between the 13th and the 19th century' (letter), M. Carrieri and D. Serraino; *International Journal of Epidemiology*, 2005; 34: pp. 1435-1444
- (3) 'Statistical fallibility and the longevity of popes: William Farr meets Wilhelm Lexis', James Hanley, *International Journal of Epidemiology*, Vol. 35 (3), 2006; pp. 802-5
- (4) 'Last among equals', Roy Hattersley, *The New Statesman*, 26/3/09
- (5) Peter Armitage, 'Fisher, Bradford Hill, and randomization', *International Journal of Epidemiology*, 32, 2003; pp. 925-8
- (6) Durkheim E 1897 *Le suicide*. F. Alcan, Paris. English translation by J A Spalding, 1951, Free Press, Collier-MacMillan, Toronto, Canada
- (7) 'Experimental evidence of dietary factors and hormone-dependent cancers', *Cancer Research*, K. Carroll, 1975, 35; pp. 3374-83
- (8) CIA World Factbook (<https://www.cia.gov/library/publications/the-world-factbook/rankorder/2176rank.html>)
- (9) 'Gross national income per capita 2008, Atlas method and PPP', World Bank
- (10) *The Spirit Level* uses the 2003 Programme for International Student Assessment (PISA) report and excluded the science scores. I have used the 2006 PISA report and included maths, reading and science. The general pattern remains very similar (*The Spirit Level*, p. 106)
- (11) Based on the distance of each country's capital city from the North pole. Europe and North America only. This criterion is obviously, and deliberately, both arbitrary and spurious.
- (12)
- (13) *Alexis de Tocqueville on Democracy, Revolution, and Society*, Alexis de Tocqueville, p. 375-6
- (14) *The Spirit Level*, p. 31 and p. 44
- (15) *What's Left?*, Nick Cohen, Fourth Estate, 2007, p. 194
- (16) Alain de Botton, *Status Anxiety*, 2004, Hamish Hamilton, p. 302
- (17) Lynch et al. 'Income inequality and mortality'
- (18) 'Does economic growth improve the human lot?', Robert Easterlin, in Paul A. David and Melvin W. Reder, (eds), *Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz*, New York: Academic Press, Inc., 1974; pp. 89-121



## 10. Epilogue

- (1) 'The Theory of Everything', John Crace, *The Guardian*, 12.3.09
- (2) *The Spirit Level*, p. x
- (3) *The Spirit Level*, p. 278 (second edition)
- (4) 'Income inequality and population health: A review and explanation of the evidence', Richard Wilkinson and Kate Pickett, *Social Science & Medicine*, 2006, 62 (7), pp. 1768-84
- (5) 'Income inequality and population health', Johan Mackenbach, *British Medical Journal*, 5 Jan 2002
- (6) 'Inequality and mortality: Long-run evidence from a panel of countries', Andrew Leigh and Christopher Jencks, *Journal of Health Economics* 26 (2007); pp. 1-24
- (7) 'Income inequality and self rated health in Britain', S Weich, G Lewis, S P Jenkins, *Journal of Epidemiology and Community Health*, 2002
- (8) 'Income, income inequality and health: what can we learn from aggregate data?', H. Gravelle, *Social Science & Medicine*, Volume 54 (4), 2000; pp. 577-589
- (9) 'Relationships between income inequality and health: a study on rural and urban regions of Canada', Vafaei et al., *Rural and Remote Health*, 10, 2010
- (10) 'Compositional and contextual approaches to the study of health behaviour and outcomes' Jen et al., *Health & Place*, Vol. 15 (1), March 2009; pp. 198-203
- (11) 'In Defense of The Spirit Level', R. Wilkinson and K. Pickett, *Wall Street Journal*, 21.7.10
- (12) 'Reexamining the Evidence of an Ecological Association between Income Inequality and Health', Mellor and Milyo, *Journal of Health Politics, Policy and Law*, Vol. 26, No. 3, June 2001
- (13) 'Is income inequality a determinant of population health? Part 1. A systematic review', J. Lynch et al., *Millbank Quarterly*, 2004; 82 (1); 5-99
- (14) 'Health, inequality, and economic development', Angus Deaton, *Journal of Economic Literature*, Vol. 41 (1), pp. 113-58, March 2003
- (15) *The Spirit Level*, p. 279
- (16) 'Health and economic inequality' in *The Oxford Handbook of Economic Inequality* (eds. W. Salverda et al.), Andrew Leigh, Christopher Jencks, Malcolm Wiener, Timothy Smeeding, 2009
- (17) 'The Spirit Level: Response', Sanandaji et al., <http://www.taxpayersalliance.com/home/2010/07/>
- (18) 'Response to critics', R. Wilkinson and K. Pickett, <http://www.equalitytrust.org.uk/docs/response-to-tax-payers-alliance.pdf>

## Notes

- (19) 'The Economics and Psychology of Inequality and Human Development', F. Cunha, J. Heckman, *Journal of the European Economic Association*, 2009; 7(2): pp. 320-364
- (20) 'The Spirit Level: Response', Sanandaji et al.
- (21) *Ibid.*
- (22) 'Correlating homicide and suicide', Bills & Guohua, *International Journal of Epidemiology*, Vol 34 (4), 2005; pp. 837-845
- (23) *More or Less*, BBC Radio 4, 27.08.10
- (24) 'In Defense of The Spirit Level', R. Wilkinson and K. Pickett, *Wall Street Journal*, 21.7.10
- (25) 'Interview: Reviving the spirit of equality', R. Wilkinson and Iain Ferguson, *International Socialism*, Issue 27
- (26) 'Changes in U.S. hospitalization and mortality rates following smoking ban', Shetty et al., *Journal of Policy Analysis and Management*, Vol. 30 (1), Winter 2011; pp. 6-28
- (27) <http://news.bbc.co.uk/1/hi/magazine/7093356.stm>
- (28) 'The worst junk stats of 2007', *The Times*, A. Dilnot & M. Blastland, 22.12.07
- (29) 'The Spirit Level lacks all balance to be correct', *The Scotsman*, G. Hassan, 31.7.10
- (30) 'The Spirit Level: Britain's new theory of everything?', BBC Radio 4, 12.10.10
- (31) 'Analysing social inequality', J. Goldthorpe, *European Sociological Review*, 2009
- (32) 'The Spirit Level', John Kay, *Financial Times*, 23.3.09
- (33) 'Look at the changes, not at the levels', Andrew Leigh, <http://previousleigh.wordpress.com/2009/12/14/look-at-the-changes-not-at-the-levels/> (14.12.09) (Leigh also notes that countries that see the biggest increases in inequality also see the biggest improvements in health.)
- (34) 'Richard Wilkinson and Kate Pickett: The Spirit Level: Why Greater Equality Makes Societies Stronger', *Population and Development Review*, vol. 36 (2010), pp. 395-397
- (35) E-mail from Robert Putnam to Shane Leavy. 'The Spirit Level vs Robert Putnam' (14.1.11) <http://shaneleavy.blogspot.com/2011/01/spirit-level-vs-robert-putnam.html>
- (36) Spain is closer to Portugal than Japan is to Sweden under the following criteria: imprisonment, obesity, women's status, recycling, working hours, patents, ambition, foreign aid, child well-being, education and trust. The reverse only applies to teen births, drug use, homicide and (by the finest of margins) infant mortality and life expectancy.
- (37) *More or Less*, BBC Radio 4, 27.08.10

## Notes

- (38) 'Individual income, income distribution, and self rated health in Japan: cross sectional analysis of nationally representative sample', K. Shibuya et al., *British Medical Journal*, 5.1.02
- (39) 'Poverty or income inequality as a predictor of mortality: longitudinal cohort study', Kevin Fiscella and Peter Franks, *British Medical Journal*, Vol. 314, 14 June 1997; p. 1724
- (40) 'Income Inequality and Health: a review and explanation of the evidence', Richard Wilkinson and Kate Pickett, *Social Science & Medicine*, 2006, 62(7), pp. 1768-1784.
- (41) 'Income distribution, infant mortality, and health care expenditure', Tilman Tacke, Robert J Waldmann, *CEIS Research Paper* No. 146, 9.3.09. (This finding was made by the same researcher—Waldmann—who first found the statistical correlation between inequality and infant mortality in the early 1990s and who was cited by Wilkinson at the time.)
- (42) Primary care, infant mortality, and low birth weight in the states of the USA', L. Shi et al., *Journal of Epidemiological & Community Health*, 58, 2004; pp. 374-80
- (43) 'Education, income inequality, and mortality: a multiple regression analysis', Andreas Muller, *British Medical Journal*, 5.1.02; 324
- (44) 'Income inequality and weight status in US metropolitan areas', V. Change & N. Christakis, *Social Science and Medicine*, p. 92
- (45) 'Mortality, inequality and race in American cities and states', A. Deaton & D. Lubotsky, *Social Science & Medicine*, 56, 2003; pp. 1139-53. See also: 'The convoluted story of international studies of inequality and health', Angus Deaton, *International Journal of Epidemiology*, Vol. 31 (3), 2002; pp. 546-9); See also: 'Mortality, inequality and race in American cities and states', *Social Science & Medicine*, Vol. 56 (6); pp. 1139-50
- (46) 'Income inequality, race, and child well-being: An aggregate analysis in the 50 United States', McLeod et al., *Journal of Health and Social Behavior*, Vol. 45 (3) Sept. 2004; pp. 249-64
- (47) 'No association of income inequality with adult mortality within New Zealand: a multi-level study of 1.4 million 25-64 year olds', T. Blakeley et al., *Journal of Epidemiology and Community Health*, Vol. 57 (4), 2003; pp. 279-84
- (48) 'Peter Saunder's sleight of hand', R. Wilkinson & K. Pickett, *The Guardian*, 9.7.10
- (49) *Beware False Prophets*, Peter Saunders, Policy Exchange, 2010; p. 98
- (50) *The Spirit Level*, p. 285
- (51) *The Spirit Level*, p. 148-9
- (52) 'In defence of equality', R. Wilkinson & K. Pickett, *Prospect*, 10.08.10  
<http://www.prospectmagazine.co.uk/2010/08/in-defence-of-equality/>

## Notes

- (53) 'Long-run changes in the concentration of wealth', H. Ohlsson, J. Roine and D. Waldenström, World Institute for Development Economics Research, Research paper No. 2006/103. The top 1% owns 21% in the UK, 25.4% in Norway, 27.2% in Denmark and 20.8% in the USA.



## Index

- Abortion, 58, 60, 74-5, 134  
Advertising, 6, 29, 41, 42, 100, 103, 120-1  
*Affluenza*, 29-34, 40, 42, 44, 47, 99, 105, 107, 117, 120-1  
Alcohol, 17-20, 38, 42, 133, 138-9  
Alibhai-Brown, Yasmin, 7  
Anti-consumerism, 30, 99, 101, 104, 105, 111, 114-4, 119, 143  
Anxiety, 17, 29, 30, 37-45, 100, 102, 104, 141-4  
  
Beckham, David, 6, 106, 114  
Bipolar disorder, 37  
Black report, 14  
Blair, Tony, 30, 114  
(de) Botton, Alain, 142, 144  
Brown, Gordon, 106  
Burglary, 71  
  
Capitalism, 6, 30, 101-4, 116, 120, 125, 134-5, 141  
Carlyle, Thomas, 100  
Castro, Fidel, 122  
Charities Aid Foundation, 93, 95  
Charity, 52, 91-5, 140, 142, 143  
Chavez, Hugo, 122  
Chomsky, Noam, 122  
Climate change, 108, 110  
Cohen, Nick, 115, 142  
Communism, 114, 116, 120  
Community life, 52-5, 64  
Congenital abnormalities, 88-90  
Cot death, 85, 88, 90  
Crime, 67-75  
  
Depression, 6, 17, 29, 30, 37-8, 40-47, 104  
*Diagnostic and Statistical Manual of Mental Disorders*, 39-43  
Divorce, 56, 61, 110, 133, 135, 138  
Durkheim, Emile, 132  
Easterlin paradox, 47, 147  
Ecological fallacy, 132  
Elitism, 104-7  
Emerson, Ralph, 142  
  
Ennals, David, 14  
Epidemiology, 131-2, 138  
Equality Bill, 8  
Equality Trust, 8, 122  
  
Fisher, Ronald A., 131  
Foreign aid, 91-95  
  
Galbraith, J.K., 61, 100-3, 113, 117, 122  
Generalised anxiety disorder, 30, 37, 38, 41-42  
Gun ownership, 75, 77, 78, 140  
  
Hanley, Lynsey, 7  
Happiness, 45-65, 116-20, 133  
Harford, Tim, 158-9, 166-7  
Hattersley, Roy, 7, 8, 82, 130  
Heckman, James, 156  
Hilton, Paris, 6  
Homicide, 67-8 73-79, 133  
Horwitz, Allan, 43  
  
Infant mortality, 81-90  
Intellectual property, 123-4  
International Consortium in Psychiatric Epidemiology, 34-38  
International Obesity Task Force, 21, 22  
  
James, Oliver, 29-33, 36, 42, 44-49, 51, 99, 104-7, 111, 114, 117, 120-2, Judge, Ken, 12  
  
Klein, Naomi, 9  
Knight, India, 111  
Kynaston, David, 117  
  
Lawson, Neal, 99, 103, 105-6, 108, 117, 120, 122  
Layard, Richard, 30, 45-48, 51, 56, 61, 63, 99, 108, 111, 116-9, 122, 129, 141  
Levitt, Steven D., 74  
Life expectancy, 13-27  
Livingstone, Ken, 8, 9

## Index

- Lott, Tim, 110, 111  
Luxury taxes, 107-8  
Lynch, John, 18, 146
- Marmot, Michael, 17, 30, 99, 115, 140-1  
Marxism, 100, 115, 116, 123  
Mental illness, 29-44  
Monbiot, George, 110  
Moore, Michael, 122
- National Health Service, 119  
New Economics Foundation, 109
- Obesity, 19-22, 133  
Oscar winners, 13, 129-30, 140
- Premature births, 85-88  
Prison, 67-70, 71-5, 91-2, 133, 138  
*Prozac*, 41  
Psychiatric revolution, 39-44  
Putnam, Robert, 55, 156, 165
- Quality-of-life index, 63-4
- Rape, 72-4  
Rationing, 107-10, 119, 120, 122, 140  
Reagan, Ronald, 29, 44  
Recycling, 96-97  
Rosenhan, David, 40
- Second World War, 107-8  
*The Selfish Capitalist*, 31, 33, 44, 116, 121-2  
Shopaholics, 103-4  
Single-parent households, 60-1  
Smith, Adam, 99, 102, 120  
Smoking, 18-1, 30, 119, 133  
Socialism, 14, 20, 113-16, 142  
Socialist Health Association, 14  
Spitzer, Robert, 39-40, 43-44  
Status, 13, 17, 18, 100-2, 129, 142-4  
Stress, 17, 18, 31, 41, 42, 90  
Sugar, Alan, 106  
Suicide, 65, 78, 79, 132, 133, 135, 140  
Tacitus, 99  
Taxes, 6, 7, 14, 20, 46, 94-5, 107-8, 116-27, 134, 140  
Teen births, 56-61, 87, 122, 132-5, 140  
Thatcher, Margaret, 29, 44  
Theft, 70-4, 115, 124, 138  
(de) Tocqueville, Alexis, 117, 145-6  
Toynbee, Polly, 7  
Trade unions, 53, 124  
Traditional values, 59, 131, 135  
Trust, 6, 18, 54-5, 71, 91, 132
- Unemployment, 60-3, 74, 110, 111, 119  
UNICEF, 57, 59, 60, 83
- Wages, 17, 31-2, 61-2, 115-16, 120, 121, 126  
Wakefield, Jerome, 43  
Waldmann, Robert, 82  
World Health Organisation, 26, 32, 34  
World Mental Health Survey Consortium, 34-6, 38  
World Values Survey, 11, 46-9, 51-5, 64





## Quick links

### **Rates of inequality, life expectancy and unemployment**

<http://hdr.undp.org/en/>

### **Gross national income**

<http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf>

### **Smoking rates**

[www.nationmaster.com](http://www.nationmaster.com) (Smoking prevalence, males > % of adults)

### **Alcohol consumption per capita**

[www.faslink.org/WHO\\_global\\_alcohol\\_status\\_report\\_2004.pdf](http://www.faslink.org/WHO_global_alcohol_status_report_2004.pdf)

### **Obesity prevalence**

<http://www.who.int>

### **Infant mortality**

[www.un.org/esa/population/publications/wpp2008/wpp2008\\_highlights.pdf](http://www.un.org/esa/population/publications/wpp2008/wpp2008_highlights.pdf)

### **Happiness, trust and community associations**

[www.worldvaluessurvey.org/](http://www.worldvaluessurvey.org/) (go to 'Online data analysis')

### **Divorce**

[www.divorcemag.com/statistics/statsWorld.shtml](http://www.divorcemag.com/statistics/statsWorld.shtml)

### **Teen births**

[www.unicef-irc.org/publications/pdf/repcard3e.pdf](http://www.unicef-irc.org/publications/pdf/repcard3e.pdf) and

[www.unfpa.org/swp/2009/en/pdf/EN\\_SOWP09\\_ICPD.pdf](http://www.unfpa.org/swp/2009/en/pdf/EN_SOWP09_ICPD.pdf)

**Crime and imprisonment:** <http://www.unodc.org/> (search for 'CTS surveys')

**Foreign aid:** [www.oecd.org/dataoecd/25/42/42472714.pdf](http://www.oecd.org/dataoecd/25/42/42472714.pdf)

### **Charitable giving**

<http://gpr.hudson.org/>

[www.ief.es/Publicaciones/revistas/Hacienda%20Publica/165\\_charitable.pdf](http://www.ief.es/Publicaciones/revistas/Hacienda%20Publica/165_charitable.pdf)

### **Recycling**

<http://recyclingnearyou.com.au/documents/TheRecyclingOlympics-2004.pdf>

### **Education**

[www.oecd.org/dataoecd/15/13/39725224.pdf](http://www.oecd.org/dataoecd/15/13/39725224.pdf)